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TRAVELS

IN

HUNGARY, &c.

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A Hungarian Nobleman & Peasant in their national Dresses.

London. Published by G.G & J. Robinson Pater noster Row. July 1st 1796.

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TRAVELS

IN

HUNGARY,

WITH

A SHORT ACCOUNT OF

VIENNA

IN THE YEAR 1793.

By ROBERT TOWNSON, L. L. D.

F. R. S. EDINB. ETC. ETC. ETC.

PUBLIC

ILLUSTRATED WITH A MAP AND SIXTEEN OTHER COPPER-PLATES.

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DEDICATION.

TO

THE RIGHT HONOURABLE

HENRY DUNDAS,

ONE OF HIS MAJESTY'S PRINCIPAL SECRETARIES OF STATE,
ETC. ETC. ETC.

SIR,

TO Britain, as the miſtreſs of India, the reſt of Europe look up for knowledge of that fine country; and our fame, both as a great nation and as a ſcientific people, requires that this expectation ſhould not be diſappointed. When, through the valour of our arms and the wiſdom of our public councils, ſcience is advanced and uſeful knowledge increaſed, the diſaſters of conqueſts are forgotten by the philanthropiſt and peaceful philoſopher, and the foreigner then participating in our good fortune breathes forth wiſhes for Britain's proſperity.

Such

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Such I flattered myſelf were the ſentiments of the Britiſh Eaſt India Company; and I expected it would have made a point of honour to encourage uſeful diſcoveries in its own vaſt territories ſo exuberant in nature's choiceſt productions; and would have been eager, in the preſent tranquillity of peace, to patroniſe an undertaking which ſhould have this in view. Under theſe impreſſions I planned a Tour of Diſcovery through this country, principally with the deſign of exploring its mineralogy and phyſical geography, which we are hitherto totally ignorant of, and I ſolicited your protection and the Company's patronage in its favour. Unfortunately, I think, for Science, it met with the diſapprobation of the Court of Directors, and conſequently was laid aſide. But from you, Sir, as the head of India affairs, as might be expected from the miniſter of an enlightened country, and as the repreſentative of a city which may with peculiar propriety be conſidered as the ſeat of Science, it met with approbation and ſupport: and to ſhew how highly I value this patronage, I preſume to inſcribe to you the following

Work,

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Work, a ſmall tribute of gratitude indeed, but the greateſt an author can pay.

I cannot avoid ſtill indulging the hope, from the obvious advantages which may reſult from ſuch an enterpriſe, from the protection it met with from you, from the entire approbation it received of the enlightened Chairman Mr. David Scott, and from the favourable opinion entertained of it by thoſe converſant in India affairs, and men of ſcience in general, that its execution may yet form one of the diſtinctions of your adminiſtration. Then, when Science has made known the natural riches of this extenſive country, Britain will have an additional reaſon to glory in being its poſſeſſor.

I have the honour to be, with ſentiments both of public and private gratitude,

SIR,

Your moſt obedient humble ſervant,

ROBERT TOWNSON.

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PREFACE.

THOUGH ſo many Tours have appeared of late, Hungary has never been the ſubject of one of them; it is nevertheleſs a country, though ſo circumſtanced as to be of little political importance to Britain, worthy of our attention: its conſtitution, its people, and their manners, and its natural productions, are all remarkable.

I know that the preſent work, the corrected notes of a five months' Tour, does not ſupply this deficiency; on the contrary, I am conſcious that on ſome very important matters I have only ſlightly touched; yet even this ſmall pittance of information on a country ſo little known, and yet in itſelf ſo highly intereſting, will, I hope, be thought not too inſignificant to be laid before the public. Had I drawn up this Tour in Hungary, where I could eaſily have obtained information when my own notes were too ſhort or obſcure, a far more intereſting work would probably now have appeared; but in the turbulent times that have ſuc-

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ceeded, it has been very difficult to obtain any information through correſpondents. An abſence likewiſe of eight years from Britain will, I hope, be received as an excuſe for ſome inaccuracies of language.

I have purpoſely ſaid but little on the mines of this kingdom: a fuller account would have led me into too much detail not to have been tedious to every one but the profeſſed miner.

I think I need make no apology for annexing the map; it muſt be pleaſing to every reader to ſee at one view all the principal natural and artificial productions of the country, and the different nations which inhabit it, expreſt on a map, beſides what is generally marked upon them. I am not the author of it, and the only merit I can claim is that of having adapted it to the Engliſh reader, by tranſlating what admitted of tranſlation, and of making ſome trifling alterations in it. I have, for inſtance, as far as my information extended, diſtinguiſhed the hot mineral waters from the cold; I have altered the denomination of Diamond to Rock Cryſtal, *Pelecanus baſſanus* to *Pelecanus Onocrotalus*, and *Mus noricus* to *Marmota alpina*, as theſe appellations were certainly erroneous. I have added three or four new ſigns, and extended the plan of the author by ſignifying more of the productions, as horned cattle, horſes, ſheep, hogs, honey, ſilk, corn, &c. &c. by figures of theſe objects, and not by letters;

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ters; and other ſigns I have improved. I have marked the ſeat of the CUMANIANS, JAZYGERS, and HAYDUKES, and added the poſt-roads, and my own route. In the explanation of the ſigns, which conſiſted of three languages, the Latin, German, and Hungarian, I have omitted the German and added the Engliſh. The *petrography* is wholly by me.

It will probably be thought that ſome of the productions ſhould have been omitted as too trifling, and that others might have been added. Mr. Korabinſky, the author of it, who does not pretend to be a man of ſcience or a naturaliſt, has only given it that degree of perfection his humble ſituation permitted; and I would rather be cenſured for altering too little than too much.

Though ſo many things are noted on this map, I hope it will not be found confuſed; for though the petrography, as well as the nations, are marked by colours, yet the ſubjects of each may be eaſily diſtinguiſhed, as the nations are denoted by a mere outline, whilſt the petrography is waſhed. And if through careleſſneſs in colouring the petrography, a doubt ſhould ariſe what is deſigned by any colour, the figures 1 to 13, which I have added to the colours, will, through the correſponding figures in the table of colours, clear up the doubt. Had I had opportunities of obſerving the nature of the rocks through a more

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extenſive tract of country, it would have been worth while to have made a ſeparate map on this ſubject; but circumſcribed as my obſervations have been, I think it is not. When mineralogy and phyſical geography ſhall be more cultivated, which one day they certainly will, theſe maps will become common, and their union will give an eaſy and viſible repreſentation of the coating of our globe, that is, of its rocks and ſtrata and their relative ſituations. This is not merely a matter of curious ſpeculation, but, as different minerals are peculiar to certain ſtrata, of real utility, conveying important knowledge in the ſtatiſtics of a country.

The poſt-roads I have taken from another map on a ſmaller ſcale; I could, therefore, often, only draw a ſtraight road from one principal town to another, without being able to aſcertain whether the different ſmaller towns or villages through which I have conducted the roads, are really thus ſituated upon them. As public roads are indicative of the ſtate of improvement of a country, they ought not to be omitted in maps of this nature.

In regard to the Appendix, I beg it may be underſtood, that the obſervations there are only ſuch as occurred on examining and determining the inſects and plants I collected in this Tour. It may ſerve as a fragment towards a *Fauna* and *Flora* of this

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kingdom; and may contain ſome additions to the *Syſtema Naturæ*, and afford ſome hints to ſyſtematic writers on entomology and botany.

When I began to deſcribe the foſſils, I intended to have prefixed a ſhort mineralogical terminology to this work; but being now engaged in writing THE ELEMENTS OF MINERALOGY, which will ſoon appear, I muſt omit this. The deſcriptions are but few, and I have made uſe of language which I think will be intelligible to every ſcientific reader; only in regard to ſize I have uſed two or three arbitrary denominations: theſe I have applied as they are defined by Mr. Werner in the article of Cryſtals, as *Fragmenta mediocria*, that is, from two inches to half an inch; *minora*, from half an inch to an eighth; *parva*, from an eighth to the ſmalleſt ſize viſible; *minima*, not diſtinguiſhable without a magnifying glaſs.

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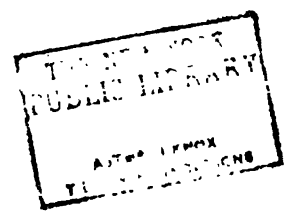
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A

SKETCH OF A TOUR

THROUGH

A PART OF HUNGARY.

CHAP. I.

VIENNA—ITS LEARNED INSTITUTIONS—PUBLIC LIBRARIES—CABINET OF MEDALS—IMPERIAL AND OTHER VALUABLE COLLECTIONS OF MINERALS AND NATURAL CURIOSITIES—THE MARKETS—PUBLIC AMUSEMENTS—IMPERIAL BOTANIC GARDEN, AND MENAGERIE.

WINTER had set in when I reached Vienna; and as I was there assured the difficulties the traveller had to encounter in Hungary, the next country I meant to visit, were, for the want of civilization, very great; I thought it prudent to wait here, till the return of fine weather should render the wants of the traveller fewer.

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Though Vienna is not famed in the other parts of the Empire for its learned inſtitutions, or for being the ſeat of men of letters; yet a city like this, the capital of a government like that of the Auſtrian monarchy, cannot be without theſe inſtitutions, its learned men and *amateurs*.

I muſt paſs over its univerſity, and college of ſurgery and medicine; its academies for the nobility, the clergy, and for the fine arts; the ſchool for the deaf and dumb, and even the *Normal* School, being too little acquainted with ſome of them, and finding nothing remarkable in the others. Only of the firſt I would obſerve, that it is on the old plan, where the ſtudents are not left to follow the courſe of ſtudy they or their friends may think proper, but one fixed by the univerſity. Within theſe few years, moſt of the lectures are delivered in the German language, but thoſe on pathology, therapeia, and materia medica are ſtill in Latin; and in this language the ſtudents are examined at the end of the week, on the ſubjects which have been lectured on during that time. But the Normal School is of too uſeful a nature not to ſay for what end it was eſtabliſhed; it is deſigned to form teachers or inſtructors for the provincial towns and villages; that is, teachers for the ſchools and *gymnaſia*.

Here is no academy of ſciences, and I believe there never was one. This is remarkable in ſo large a city as Vienna. A great deal has been

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been ſaid upon the advantages and diſadvantages of learned ſocieties. If it were left to be decided by the travelling literati, it would, notwithſtanding the diſadvantages ariſing from literary cabals and intrigues, which often happen in them, particularly where a ſeat leads to honours and emoluments, be decided in their favour. This deficiency of a place of rendezvous for men of letters was lately ſupplied by the public-ſpirited and hoſpitable Baron Born, who, beſides being at all times, when not occupied in the buſineſs of his office, of eaſy acceſs, particularly to ſtrangers, had his public days. Since his death Profeſſor Jacquin has a tea party on the Wedneſdays; but it is ill attended.

In collections Vienna is very rich. The Imperial library, beſides containing 5 or 6000 volumes printed in the 15th century, rare manuſcripts, and a very extenſive and valuable collection of prints, is well furniſhed with uſeful modern books. It is open three or four hours every morning to the public, and the librarian and inferior aſſiſtants are very attentive and obliging.

The library of the univerſity is open for two or three hours morning and afternoon; during which time the librarians always labour under a *Carus* *, a diſeaſe common to univerſity librarians.

* *Carus* eſt ſomnus altiſſimus, vix, aut ne vix, excitabilis, ſine ſtertore, cum reſpiratione tacita pacatiſſima; ſemiapertis oculis plerumque dormiunt omnino immobiles.

SAGAR. Syſt. Morborum.

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The richneſs of the Imperial Cabinet of Medals is well known.

Its collections in natural hiſtory are ſtill more valuable. The private collections of ſeveral amateurs would in other countries be thought fine public muſeums. In profeſſor Jacquin's collection of minerals are found the moſt ſplendid ſpecimens of the rareſt foſſils. Mr. Fichtel, known to the mineralogical world by his account of the Petrifactions and Salt-mines of Tranſylvania, and his Mineralogical Remarks on the Carpathian Mountains, and ſome ſmaller works, has a very rich collection. His native and mineralized gold ores of Hungary and Tranſylvania are very fine. Geognoſy being a favourite ſtudy with him, he has collected together a great many of the Mountain-ſoeks; the moſt remarkable of which are his volcanic, or pſeudo-volcanic, productions from the diſtrict of Tokay. If many of theſe are not volcanic, I can find no oryctognoſtic character to diſtinguiſh them from thoſe I have ſeen in collections formed in indiſputable volcanic countries; and which I have myſelf, in my travels in Italy, Sicily, and its neighbouring iſlands, collected in their native places. Cruel wars (but without bloodſhed) have been carrying on for ſome years in Germany, between the two parties, the Neptuniſts and Volcaniſts. On the ſide of the latter this excellent man has ranged himſelf; and it ſeems when he takes his pen in hand he has *il Veſuvio in petto*.

I have generally obſerved a ſneer in the countenances of the mineralogiſts of this city, when on the topic of his late diſcovery of a kind

kind of Zeolite, which forms, according to his account, entire hills. Truly it differs much from the hitherto known Zeolites in its external appearances, being nearer allied to the Pitchſtone (*Pechſtein*); but not in its chemical characters: though I believe we ſhall find many of the black Pitchſtones to have more of the properties of Zeolite than of the Miſnia Pitchſtone. But when I ſpeak of the Tokay diſtrict, I ſhall be more particular on this foſſil.

He poſſeſſes the greateſt foſſil thigh-bone of an elephant that probably exiſts. It is exactly five feet, Engliſh meaſure, in length, and four feet round the knee: it was found in Tranſylvania. The great thigh-bone in the Imperial collection is only four feet long: and that of the ſkeleton of the elephant in the muſeum of the univerſity of Vienna, which is eight feet and a half from the ground to the end of the ſpinal proceſs of the higheſt of the dorſal vertebræ, is only three feet two inches: to what an immenſe animal muſt not this have belonged!

The Count Wrbna, an excellent mineralogiſt, and well verſed in metallurgy and mining, has a no leſs valuable collection. He has ſpecimens of cryſtallized red ſilver ore of ſurpriſing beauty, and intrinſic value. It is principally to him we are indebted for the red Shorl of Rhonitz in Hungary. He was at conſiderable expence in digging for it, to ſupply his own collection and thoſe of his friends.

Mr. Sonnelfels has a ſmall collection, chiefly of ſhowy ſpecimens. I think

I think it was here I saw a piece of green Sal Gemmæ, which I was informed was from Saltzburg.

The collection of Miss Raab, formed chiefly by donations from Mr. Born, who published a *catalogue raisonné* of it in 1790, is composed of small chosen specimens. It was to be disposed of for three thousand ducats. Some of the preceding are likewise to be disposed of, if a large sum be offered. Forming mineral collections, in Germany, is often a pecuniary speculation. Professors Haidinger, Jordan, and Poda have small collections; and small collections in such hands are more interesting to see, than splendid ones with people ignorant of the science.

There are more private collections; but they are mostly repetitions of the same things, chiefly the produce of the Austrian hereditary dominions, so rich in mines; and are all in much greater perfection and profusion in the Imperial collection, which is certainly the first in Europe, that is, in Fossils, Shells, and Lithophytes. Those objects which are liable to become a prey to moths and other insects, have no place here. Hungary and Transylvania have sent hither their native and mineralized gold ores, their Opals and petrified wood. Of the *Opalus nobilis*, or true Opal, there is a specimen of the size of the fist: it is known to have been in Vienna for these two hundred years, and has, like most large Opals, several small cracks. Of that particular kind of petrified wood almost peculiar to Hungary, the *Opalus ligneus*,

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ligneus, there are trunks of trees. Carniolia has paid its tribute in its quickſilver ores; Carinthia, in its *Plumbum flavum*, and *Zincum cryſtallinum*; Styria, in its *Flos ferri*; Bohemia, in its cryſtallized Tin and Tungſtein; Moravia, in its *Lep dolites*; Galicia, in its Salt. In ſhort, the moſt ſplendid ſpecimens of the whole hereditary mines are found here. But it is not confined to indigenous foſſils. The rareſt Siberian foſſils, and the volcanic productions of Italy, are found here in profuſion. There is a ſlab of the elaſtic ſtone (*arenareus flexilis*), above two feet long, eighteen inches broad, and nearly one and a half thick: it was bought at Liſbon. One of the intereſting, but not ſplendid ſpecimens is a block of the *Porphyrius ſchiſtoſus*, with balls of the ſame, perfectly round, four or five inches diameter, nidulating in it. But to mention all the foſſils of this ſuperb collection, would be to give the nomenclature of mineralogy.

The Lithophytes and Shells are likewiſe very numerous and valuable. The collection of Florentine Moſaics, in an adjoining room, is not to be equalled.

This fine collection is conducted on a liberal plan; it is open to the public every Tueſday morning, and I believe every day of the week to the cognoſcenti who will be at the trouble of making themſelves known to the directors.

The collection of the univerſity is very poor in foſſils. The zoological

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zoological part is good, but going to decay. I noticed a fine Elephant, well prepared; one or two Lions, two Leopards, a Tiger, the Mexican Cat (*Felis pardalis*), *Vivera Genetta* & *Narica*, the ſhort-tailed Opoſſum and Kangurugh (*Didelphis brachyura et gigantea*), a Wild Boar and Mexican Hog (*Sus Aper et Taiaſſa*), the Blue Antelope, White-faced Antelope, Barbary Antelope, and Chamois (*Antelope leucophea, pygarga, Dorcas, et rupicapra*); a Hyæna, a Sloth (*Bradypus tridactilus*), the Spotted Ape, Silky Monkey, &c. &c. (*Simia Diana, Roſalia, Aygula, Petauriſta*). The Birds are numerous and in good order, but the Amphibia are few. Here is a fine ſkeleton of an Elephant and of a Dromedary, both are without the ſutures of the *os intermaxillare*; likewiſe one of an Oſtrich. In the collection of anatomical preparations there are two fine ſkeletons of a Lion and Lioneſs, and both are without theſe ſutures.

The Secretary of Mareſchal Laſcy, Mr. Pittoni a druggiſt, Mr. Mark, and two or three more whoſe names I have forgotten, have ſmall collections of inſects.

Tombacher, a very honeſt man, but poor, ſells inſects. As his prices are low, and many of the inſects are not found in our iſland, I think it may be agreeable to our entomologiſts to have a copy of his catalogue of coleoptera, with their prices. It is in Auſtrian money: A Gulden is about two ſhillings, and ſixty Creutzers make a Gulden. His addreſs is *Mattheus Tombacher, Inſeckten Handler, auf der Wieden, Vienna.*

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No.	Names.	Price. fl.	cr.
1	Ceramb. alpinus		30
2	——— Heros *		15
3	Lamia textor *		15
4	Saperda Carcharias		15
5	Ceramb. Cerdo *		2
6	Lamia ſutor *		15
7	Prionus coriarius *		15
8	——— ſcabricornis *		50
9	Ceramb. ædilis		5
10	Lept. calcarata		2
11	Canth. fennicum		2
12	Lept. 4 faſciata *		5
13	——— rubra *		3
14	Lamia morio var. Æthiops		3
15	—— morio var. fulvus		3
16	——— pedeſtris		3
17	Stenoc. elytr. rubris		15
18	Lept. teſtacea var. *		4
19	Callid. arcuatum		3
20	——— arietis *		3
21	——— ornatum *		10
22	——— florale		5
23	Lept. humeralis		20
24	Callid. myſticum *		2
25	——— plebeium		2
26	——— clavipes *		5
27	Lept. 4-maculata *		5
28	Rhag. mordax		2
29	—— bifaſciatum		3
30	—— indagator? *		4
31	Stenoc. tot. ater		20
32	Callid. Bajulus *		1
33	Saperda Cardui		5
34	Lamia lineata *		30
35	Saperd. populnea *		5
36	Canth. livida		2
37	—— fuſca		1
38	Pyrochroa coccinea		5
39	Lycus ſanguineus *		2
40	Spondylis bupreſtoides *		5
41	Callid. confuſum *		15
42	Lept. punctata		10
43	Callid. violaceum *		5
44	Donacia craſſipes		10
45	Lept. attenuata		5
46	Id. var. *		5
47	Lept. nov. ſp.		10
48	Ciſt. cervina *		3
49	Lept. dimidiata		3
50	Ceramb. nebuloſus		5
51	Lept. 2-punctata *		3
52	Lept. 6-guttata		3
53	—— uſtulata		3
54	—— nigra *		5
55	—— meridian.		10
56	Necyd. cœrulea		3
57	Stenoc. merid. var.		15
58	Lept. livida *		2
59	—— melanura		2
60	Canth. melanura		3
61	Necyd. uſtulata		3
62	——— Podagrariæ *		3
63	Canth. 2-punct.		3
64	Lept. ſanguinol.		4
65	—— collaris		4
66	Idem. var.		3
67	Carab. crepitans		2
68	Donac. craſſip. var.		10
69	Canth. rufficollis		3
70	Leptura ſtrigilata?		3
71	—— lurida		5
72	Necyd. rufa		5
73	Ceramb. carbonar.		3
74	Lept. ſanguinol. *		4
75	—— atra *		3
76	Callid. detritum *		15
77	Lamia curculionoides *		3
79	Callid. ſtriatum Laicharting		2
80	Lytta ſyriaca *		4
81	—— erytroceph. *		3
82	Canth. livida *		3
83	Helops lanipes *		2
84	Mylabr. Cychorei		3
85	Clerus formicarius.		3
86	——— formicaroides		3
87	Necyd. ſcladonia		5
88	Synodendron cylindricum		10
89	Chryſ. tenebricoſa *		3
90	Bupreſt. mariana *		5
91	——— lugubris		10
92	——— Querci		5
93	——— ruſtica		5
94	——— chryſoſtigma *		3
95	——— rutilans *		5
96	——— quadripunct.? *		15
97	——— 2-guttata *		5
98	——— viridis *		5
99	——— maculata		20
100	——— tæniata		10
101	——— cyanea		6
102	——— berolinenſis		10
103	Bupreſt. 4-punctata *		3
104	——— Rubi		5
105	——— læta *		6
106	——— Salicis		10
107	Pyrochroa coccin. v. *		3
108	Lamia Kaehleri		40
109	Callid. ſanguineum *		3
110	Crioceris merdigera *		2
111	Clerus apiarius		2
112	Saperda ferrea		5
113	Ceramb. varius	1	
114	——— hiſpidus		5
115	——— nebuloſus		5
116	Lept. virens *		3
117	Saperd. tremula *		20
119	Lept. cerambiciform.		2
120	Saperd. occulata		15
121	Lucan. parallel. *		2
122	Byrhus gigas	1	
123	Scarab. quadridens		20
124	Lucan. caraboides *		5
126	Chryſom. ſpecioſa		3
127	Crypt. 4-punctatus *		2
128	——— longipes *		2
129	——— 4-punct.? var.		2
130	——— 3-dentatus *		4
131	——— longimanus		2
133	Apate Capucinus		5
134	Chryſ. Adonidis *		5
135	Crioceris Capreæ		3
136	Cryptocep. 6-punct. *		4
137	Chryſ. ſacra *		5
138	—— 6-punct. *		2
139	Coccin. 14-gutt.		2
140	——— conglobata??		2
141	——— 6-puſt. *		2
142	Chryſ. alni *		2
143	Crypt. 2-punct. *		2
144	Scarab. ruffipes		3
145	Cryſom. ſtaphylaea		3
146	——— faſtuoſa		3
147	——— prætioſa		3
148	Canth. nigra		3
149	Chryſom. obſcura		3
150	Opatrum crenatum		5
151	Galeruca coccinea		3
152	Crypt. ſericeus *		3
153	——— violaceus, var. *		3

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No.	Names.	Price. fl.	cr.
154	Crypt. cupreus, var.		3
155	—— ſcopolinus		5
156	—— auritus		3
157	—— cyaneus *		3
158	—— bipuſtulatus.		3
159	—— violaceus		3
160	—— Moræi *		3
161	Chryſ. glorioſa		2
162	—— aucta		3
163	—— limbata *		3
164	—— 20-punct. *		8
165	—— ſanguinol.		2
166	Diaperis Boleti *		3
167	Chryſ. ænea		5
168	Crypt. Coryli *		3
169	Chryſ. Morio		3
170	—— 10-punctata *		3
171	—— hæmoptera		5
172	—— marginata		2
173	Byrrhus pilula *		2
174	Trichius hemipter. *		4
175	Chryſ. Tanaceti *		2
176	—— Tanac. var.		2
177	Carab. ſpinipes		5
178	—— veſtitus		5
179	—— pallens		5
180	Anthrib. albiroſtris		5
181	—— albinus *		3
182	Carab. Mulleri?		2
183	—— 6-punct.		3
184	—— chalybeat.		2
185	—— aterrimus *		2
186	—— chalyb. var.		2
187	—— nov. ſp.		5
188	—— nov. ſp.		10
189	—— leucophth. *		2
190	Nicroph. Veſpillo		3
191	Carab. fabuloſus		5
192	—— cephalotes *		10
193	—— marginatus		10
194	—— vulgaris		3
195	—— hortenſis		30
196	—— nitens		40
197	—— inquiſitor *		5
198	—— ſycophanta *		5
199	—— granulatus *		5
200	—— granulatus?		5
201	—— purpuraſcens *		5
202	—— coriaceus *		10
203	—— piloſus		5
204	Elaphrus riparius		5
205	Scarab. ſcutellaris		5
206	Elater cupreus		10
207	—— murinus *		3
208	—— germanus		2
209	—— aterrimus		5
210	—— æneus		2
211	—— obſcurus		5
212	—— ſanguinol.		5
213	—— ſanguineus		5
214	—— id. var.		3
215	—— obſcurus		5
216	—— aterrimus		10
217	—— flavipes		3
218	—— marginatus		3
219	—— caſtaneus		5
221	Sylpha groſſa		5
222	—— thoracica *		5
223	—— lævigata		2
224	—— reticulata		2
225	—— rugoſa *		3
226	Trox fabuloſus *		4
227	Opatrum fabuloſum *		3
228	Sylpha 4-punct. *		5
229	Caſſida ferruginea *		2
230	—— limbata		5
231	—— affinis, var.		3
232	—— viridis *		3
233	Scarab. Schreberi *		2
234	Lethrus cephalotes		40
235	Scarab. naſicorn.		10
236	—— lunaris *		3
237	—— juvencus		5
238	Hiſter unicolor		10
239	Scarab. nov. ſp.		20
240	—— foſſor		3
241	—— ſubterran.		3
242	—— pillular. *		2
243	—— Schæfferi *		3
244	—— taurus *		5
245	—— flavipes *		2
246	Hiſter bimacul. *		2
247	—— 4-maculat.		2
248	—— unicolor		2
249	Chryſ. Lemur		3
250	Scarab. fimetar. *		2
251	—— luridus *		2
252	Spherid. ſcarabacoides		2
254	—— ſcybalarius *		2
255	—— bimaculatus		12
256	Scarab. ovatus		3
257	—— nuchicornis		2
258	—— ſordidus *		2
259	Carab. crux major		3
260	Curcul. Nucum		10
261	Cicindela campeſt. *		2
262	—— viennenſis		3
263	—— germanica		3
264	Curc. varioloſus		5
265	—— ſulciroſtris		2
266	—— id. var.		3
267	—— tenebricoſus		3
268	—— chryſopterus		2
269	—— punctatulus		3
270	—— gemmatus *		3
271	—— elegans		5
272	—— leopardicus		3
273	—— Colon *		2
274	—— cinereus		2
276	—— danubialis		3
277	—— palliatus		2
278	—— viridis		2
279	—— id. var. 1		2
280	—— id. var. 2		2
281	—— argentatus		3
282	—— juniperinus		3
283	—— Jaceæ		3
284	—— triſtis		10
285	—— marginellus		5
286	—— violaceus		3
287	—— nov. ſp.		3
288	—— argent. var.		3
289	Atellabus curculion. *		5
290	Curc. Scroſulariæ *		2
292	—— notatus		5
293	Crioceris Aſparagi		2
294	—— Betulæ		3
295	—— argent. var.		2
297	Curc. argent. var.		2
298	—— Bacchus *		2
299	—— Populi? *		3
300	—— purpureus?		3
301	—— bimacul.??		3
302	—— id. var. minor		3
303	—— roridus		10
304	—— violaceus?		3
305	—— abbreviatus		4
306	—— æquatus *		3

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No.	Names.	Price. fl.	cr.
307	Curc. Pinetorum?		3
308	—— Aurora		3
309	—— viridi æris		2
310	—— Colon. var.		2
311	—— id. var. 2		2
312	—— crispatus		30
313	—— Vau.		10
314	—— albidus		10
315	—— holosericeus		3
316	—— germanus, fem. *		10
317	—— id. var. *		5
318	—— Momus		2
319	—— Maurus		2
320	—— niger *		5
321	—— Abietis *		5
322	—— ovatus		5
323	—— Lapathi		5
324	—— ovatus, var.		5
325	—— id. var.		2
326	—— paraplecticus		20
327	—— notatus		5
329	—— nubilus		5
330	Curc. cylindricus		5
331	Bostr. typographus *		2
332	Chrys. vulgar. var.		2
333	Melol. Fullo		20
334	Ceton. Eremita *		5
335	—— fastuosa		20
336	—— marmorata *		3
337	—— aurata		2
338	—— viridis		5
339	—— nobilis		8
340	Melol. vulgaris		1
341	—— æquinoctialis		3
342	—— solstitialis		3
343	—— castanea		5
344	Trichius fasciatus *		2
345	Melol. agricola		2
346	—— id. var.		2
347	—— dubia *		3
348	Ceton. hirta *		2
349	—— stictica		2
350	Chrys. Hottontota		5
351	Melol. horticola		2
352	—— argentea		3
353	Melol. Frischii		2
354	—— pulverulenta		3
355	—— ruricola *		3
356	Carab. cyanoceph. *		5
357	Saperda linæola		5
358	Crioceris 12-punctat.		3
359	Malach. æneus		2
360	Coccinella occellata *		10
361	Ptinus Fur		3
362	Malachius 2-pust.		2
363	Mordella fasciata		2
364	Bruchus Pisi		5
365	Buprestis tenebrion *		
366	—— decostigma		
368	Callid. præustum		
369	Saperda scalaris *		
370	Sylpha littoralis		
371	Nicroph. germanicus		
372	Melolont. villosa		
373	Elophor aquaticus		
374	Scar. sacer		

without the prices.

N. B. Those that are marked with an * I found to be correct in the nomenclature: the others I had no opportunity of examining.

The markets next claim the attention of the naturalist; and these, to the Vienna people, who are noted for being addicted *à la gourmandise*, are things of the first moment: a deficiency in livers of geese and small birds might cause a revolution, or be considered as a sufficient cause of delivering up the city if besieged. They are well supplied. I have sometimes seen a score of Wild Hogs, and a dozen of Stags in the game market at the same time, and Hares literally by cart-loads, with abundance of Pheasants and Partridges, and sometimes the Ptarmigan, and the Hazel-Grous, *Tetrao*

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Lagopus & Bonaſia. The ſmall birds are there by myriads: the Brambling, *Fringilla Montifringilla*; Tree-Sparrow, *F. montana*; Siſkin, *F. Spinus*; and Croſs-bill, *Loxia curviroſtra*, were in the greateſt plenty: yet Black-birds, *Turdus Merula*; Thruſhes, *T. viſcivorus*; Field-fares, *T. pilaris*; Red-wings, *T. iliacus*; Green-finches, *Loxia Chloris*; Houſe-ſparrows, *Fringilla domeſtica*; Larks; the common Gull, *Larus cinereus*; the green and greater ſpotted Wood-peckers, *Picus viridis & major*, were here: and even birds unclean, and forbidden by Moſes, as Hawks, Magpyes, Jays, Butcher-birds, and Nutcrackers, *Corvus caryocatactes*. Even the Bull-finch and Robin are not ſpared.

The livers of geeſe are eſteemed a great delicacy: they are eaten ſtewed. Some poulterers have a method of making them grow to an enormous ſize. This is kept a ſecret amongſt the Jews, who are the principal feeders. I have been informed by different people, that the geeſe are only kept in very ſmall pens, where they cannot move, and are crammed chiefly with Indian wheat, and are allowed little or no water. This is as much a ſubject of pathology as of œconomy: to an Engliſh palate they are not ſo good as calves' liver.

Some of the tame hogs that ſupply the Vienna market ought to be particularly noticed; I mean thoſe which come from the Turkiſh frontiers, from Boſnia and Servia. When they arrive at Vienna, though they have performed ſo long a journey, they are ſo fat

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as ſcarce to be able to walk, and can only travel a few miles in a day. They are the handſomeſt of the hog kind, and apparently of a mild diſpoſition. What makes me particularly mention them is their ſkin, which is covered, excluſive of the uſual briſtles, with a coarſe kind of wool, like that of the wild hog.

From hot-blooded animals I will paſs to the cold. Sturgeon is always in the market, but not cheap; it generally ſells for 18 pence a pound: it is caught in the Danube about Offen, and even as low down as Belgrade. The *Silurus Glanus*, often ſix or eight feet long: Carp, which is in the greateſt plenty, is about 6 pence a pound. The var. β, the *Spiegel Karpfe* of the Germans, is very common, and very various in its diſtinguiſhing character, the ſcales. Often in the ſame tub are ſeen, ſome with one row only of large ſcales, others with two rows, and many in which the great ſcales are placed without any order; ſome have many, others have few. Pike, *Eſox Lucius*; Tench, *Cyprinus Tinca*; Barbel, *Cyprinus Barbus*; Perch, *Perca fluviatilis*; Trout; and the Burbot, *Gadus lota*, are likewiſe common.

As an appendage to the fiſh market, is the tortoiſe, frog and ſnail market. There are two ſpecies of Tortoiſes, the *orbicularis*, and the *græca*. The firſt is conſidered as the moſt delicate; it is the food of the opulent: one 7 or 8 inches long coſts about a ſhilling. The latter is chiefly uſed for ſoup, and is ſomething cheaper. When I ſaw theſe animals in the froſty weather, they ſhewed no ſigns of life, and were

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were lying in all directions like ſo many ſtones; when I brought them into my room, they generally remained torpid, till they had been there a couple of hours. The market people know how to diſtinguiſh the males from the females, by the ſternum of the latter being more convex, viewed from without, than in the males; hence they are thicker.

Frogs are another delicacy. Both the edible, *eſculenta*, and the common Frog, *temporaria*, are eaten; but the latter is much leſs eſteemed, as its fleſh is not ſo white. It is the hind legs which are in requeſt: 2 pairs coſt about three halfpence; they are therefore by no means a cheap diſh. The fore legs and livers are moſtly uſed for ſoup.

Theſe poor animals are brought from the country thirty or forty thouſand at a time, and ſold to the great dealers, who have conſervatories for them. Theſe are large holes, four or five feet deep, dug in the ground, the mouth of which is covered with a board, and with ſtraw in ſevere weather. I have often viſited theſe conſervatories in the hard froſt, but never found their inhabitants quite torpid. When I placed them on their backs, they were ſenſible of the change, and had ſtrength to turn themſelves. They get together in heaps, one upon another, inſtinctively, and thereby prevent the evaporation of their humidity: no water is given them. I found many of them dead, and not for want of water, as I found this fluid in their bladder. Many I imagine had died of the injuries they had received during their

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their captivity; others, no doubt, by being arrived at that period at which the powers of life are feeble, and eaſily deſtroyed. There are only three great dealers: theſe ſupply moſt of thoſe who bring them to the market ready for the cook. The Snail, *Helix pomatia*, cloſes the liſt of *maigre* diſhes. It is not eaten through œconomy, as ſeven of them, at the *traiteurs*, are charged the ſame as a plate of veal or beef. They are eaten boiled, fried in butter, and ſometimes ſtuffed with farce meat. The flimineſs remains after being dreſſed, yet they are conſidered as a delicacy!!! but *De guſtibus non eſt diſputandum.* The greateſt quantity and the fineſt come from Suabia. The fondneſs of the good people of Vienna for theſe things is no new capricious taſte; for Dr. Brown, who was here above a century ago, makes the remark in his travels, that, ſince their markets were ſo well provided, "he was ſurpriſed to meet with ſome odd diſhes at their tables, as guinea pigs, divers ſorts of ſnails, and tortoiſes."

The public amuſements of this city, which are numerous, under Thereſa and Joſeph II. were much refined. The two theatres within the city are very magnificent. Madame Vigano from Spain, whilſt I was at Vienna, honoured them with her dancing, and exhibited the fineſt taſte and the greateſt elegance. Her attitudes were ſublime; and her looſe and open Grecian dreſs, which only concealed ſo much of her perſon as to heighten the charms of the beauty ſhe left ex-

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poſed, raiſed into paſſion the admiration of every one poſſeſſed of fine taſte and ſenſibility.

In the ſuburbs there are ſeveral ſmaller theatres: and at one of theſe it was where I heard *Mozart's Sauberflöte*, the ſweeteſt muſic ever compoſed. And of thoſe kinds of reſorts, which ſerve as places of relaxation and debauch to the inferior ranks of life, and to thoſe of groſſer taſte; where muſic, dancing, feaſting, and women of the town, are to be had at cheap rates, this city and its ſuburbs abound. Theſe, the public amuſements, the pleaſures of the table, and what the French call *la phyſique de l'amour*, are the great ſources of the happineſs of the opulent part of the inhabitants of this city, as they are indeed of the inhabitants of other great towns where affluence abounds. But there exiſts a public amuſement here which does not ſhew much refinement of manners, of which we know nothing in our diſſipated metropolis, and which probably ought not to be permitted any where, though indeed ſomething of the kind, on a ſmaller ſcale, is a favourite amuſement with our butcher boys under the name of bull-baiting: it is the *Hetze*, or *le combat des animaux*. It is not the low vulgar alone who come here, but *gentlemen and ladies;* and it is generally a *Sunday evening's amuſement*, as a *delaſſement* after the religious duties of the day.

When, as amongſt the Romans, the ſtrongeſt and the fierceſt animals

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animals of Asia and Africa, in their native wildness were, on particular occasions, turned loose on the arena, it might for once have formed an interesting spectacle, where the sufferings of the combatants might be lost in the novelty of the sight; but where a few dispirited oxen, under the name of wild Hungarian bulls, and half humanized bears, are turned out to be lugged by the ears by dogs, I see nothing but cruelty. The fiercer and rarer animals, when there are any, are too valuable to be fairly exposed; and the havock they would make among the dogs would render this a too expensive amusement: but the inquisitive traveller is often obliged to be present at scenes he does not wish to countenance. I went there to see the *Bos ferus*, or Wild Bull. He came on the arena with great dignity and composure; a good many dogs, I think not less than eight or ten, were set upon him; he did not move, but kept his place, his head to the ground, and with his short horns defended himself admirably well; the sneaking curs that attacked him behind he kicked down:—it would have grieved me much to have seen him overpowered. He had no fierceness, nothing but grandeur in his looks; he was brought young from Poland, and is now tame. Other animals were turned out, but they were all more anxious to get back to their dens than to fight.

From scenes like these, from scenes of misery, where the sufferings of one part of the creation are made the pastime of the other,

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let us turn to that beautiful and peaceful part of nature, the vegetable world. The environs of this city are not leſs rich in the productions of this kingdom, than the city itſelf is in thoſe of the mineral; and the Imperial garden of Schœnbrun I think even ſurpaſſes the Imperial collection I lately deſcribed.

This is only an hour's walk from Vienna; and in the ſevere winter of 1793 I often went there to enjoy the beauties of a tropical climate. What a pleaſing contraſt, when, from being battered with driving ſleet, or covered with ſnow in my way thither, whilſt the vegetable world was dead, and the very earth was hid by ſnow from my ſight, I ſtepped into theſe hot-houſes, rich with odours, and adorned with the rareſt palms!

Theſe hot-houſes, I believe, are the fineſt in Europe. One range is ninety yards long and thirty feet high within; another range is nearly as high, and above a hundred yards long:—part of this is a green-houſe: and three more ranges of hot-houſes, each about eighty yards long, but much lower than the former; and laſtly two or three ſmall green-houſes, in one of which the alpine plants are kept during winter, as Mr. Booſe, the gardener, thinks the Vienna winter too ſevere for them.

The inhabitants of theſe princely buildings are no ways unworthy of them; the rareſt palms and ſhrubs peculiar to the tropics grow

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grow here in their native pride. The *Corypha umbraculifera* extends its large leaves twelve or fourteen feet around; the *Caryota urens* aſcends to the height of ſixteen or eighteen feet; the *Cocos nucifera* and *Elaeis guineenſis* grow with great luxuriancy; and many rare ſhrubs, natives of the ſame favoured climate, though not ſo peculiarly indicative of their country, are here equally exuberant. The *Citharexylum quadrangulare* is twenty feet high; *Bignonia Leucoxylon*, *Malpighia glabra*, and the Coffee Tree, ſixteen feet; and the *Ruitzia laciniata*, *Carolinea princeps & inſignis*, with other leſs rare, twelve to fourteen. The *Rhapis flabelliformis* has a *ſtipes* above ten feet high; the *Hernandia ſonora* and *Helicteres apetala*, with their large leaves, contribute their part to beautify this princely collection. Beſides theſe, I obſerved the following rare ſhrubs: *Urtica baccifera*, *Trichilia ſpondioides*, *Coccoloba pubeſcens & excoriata*, *Tabernæmontana citrifolia grandiflora & perſicarifolia*, *Morus mauritiana*, male and female, the latter in fruit. *Terminalia Catappa*, *Malpighia glandulifera & coccigera*. *Cecropia peltata*, *Daphne umbellata*, *Geoffroya inermis*, *Mimoſa cornigera & ſuga*, *Mirtus balſamifera*, *Jacquinia armillaris & ruſcifolia*, *Amyris maritima*, *Beſleria bivalvis*, *Melicocca bijuga*, *Laugeria odorata*, *Alpinia comoſa*, *Trilix lutea*, *Ehretia exſucca*, *Maranta lutea*, *Samyda ſerrulata*, *Pandanus odoratiſſimus*, *Caſſine capenſis*, *Eugenia Iambos*, *Theophraſta longifolia*, *pinnata & americana*, *Schotia ſpetioſa*, *Triplaris americana*, *Solanum ſtellatum fugax giganteum & aggregatum*, *Euphorbia punicea*, *Phyllanthus nutans*, with ſeveral ſpecies of the *Baniſteria*; three

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ſpecies of *Cluſia*, four of *Brownea*, and the *Cookia* in full flower. Many of theſe ſhrubs are ſcarcely found in any other collection in Europe; and the more humble genera of *Pothos*, *Arum*, and *Zamia*, of which there is here the *craſſinervia*, *grandifolia*, *digitata* & *pinnata* of the firſt genus; the *Colocaſia*, *eſculentum*, *ſeguinum*, & *hederaceum* of the ſecond; and the *integrifolia*, *media*, *anguſtifolia* & *Cycadis* of the laſt, adorn, by their ſingular appearance, this collection.

This is not a catalogue of the rare plants in theſe vaſt conſervatories, but a liſt of a few, which ſtruck me moſt, and which I beſt recollect. But a little ill-natured ſquabble, ſuch as will ſometimes happen, even amongſt the beſt of men, has been the cauſe of a catalogue of the rareſt being publiſhed in Baldinger's Phyſician's Magazine, which I ſhall tranſcribe, as this work, like moſt that are publiſhed in the German language, is little known in our iſland. It is by Dr. Baumgarten, author of the *Flora Lipſienſis*, who, in the 15th number of that magazine, has publiſhed a defence of the botanical eſtabliſhments of Vienna, which were ſeverely criticiſed by an anonymous writer in the preceding volume of the ſame magazine, where Mr. Jacquin is treated with great ſeverity; greater probably than is juſt. But however juſtly he may have cenſured the director of the botanic garden of the univerſity, his cenſure on the Imperial garden, and its ſuperintendant Mr. Booſe,

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appears to me to be very unjuſt. That it ſhould not be permitted to every one to go into the hot-houſes alone, or to help themſelves to ſpecimens, is not an unneceſſary regulation for a garden ſo near one of the moſt populous cities in Europe. But if it be difficult to get admittance into the garden of the univerſity without a *bono mano*, or a well powdered head and embroidered coat (which with the *old* Jacquin, I think, would be but a ſmall recommendation), when love for the ſcience ſhould be conſidered as the firſt claim, it is not ſo in the garden under the inſpection of Mr. Booſe. His time, which is much taken up with this extenſive eſtabliſhment (the Menagerie being likewiſe under his care), and with the numbers of ſtrangers and people of faſhion who come to ſee it, is at the ſervice of every ſcientific man who will call upon him; and ſpecimens of plants likewiſe, if they can be ſpared, without his ever thinking of receiving a gratuity for his trouble. It ſhould be recollected, likewiſe, that though the garden of the univerſity was deſtined for the ſtudy of botany, this was not, and is only conſidered a public garden from the liberal manner in which it is conducted. However, between Mr. Anonymous and Dr. Baumgarten, all the botaniſts at Vienna have been cenſured; for thoſe whom Anonymous commends the Doctor diſcommends, only perhaps to prove that his praiſes are miſapplied. The moſt intereſting thing in this affair is the following catalogue of the rareſt plants of this garden, which the Doctor has inſerted to ſhew how valuable a collection Mr. Booſe has under his care.

Achras

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Achras mammoſa & Sapota. Adanſonia digitata and a new ſp. Ægiphila martinicenſis. Alamanda cathartica. Alpinia comoſa & ſpicata. Amyris maritima & toxifera. Anacardium orientale. Annona muricata, paluſtris, reticulata & ſquamoſa. Aquartia aculeata. Aralia capitata, and others. Arctotis acaulis, annua, calendulacea, with a great many new ſpecies. Areca oleracea. Ariſtolochia anguicida, bilobata, caudata, peltata, &c. Artocarpus integrifolia. Aſparagus capenſis. Aucuba japonica. Averrhoa acida & Bilimbi, &c. Baniſteria, angulata & ciliaris, with a great many new ſpecies. Bauhinia aculeata & porrecta. Bignonia æquinoctialis, cœrulea, capreolata, Leucoxylon, paniculata, Runs & Unguis cati. Boehmeria ramiflora. Bombax Ceiba. Bontia daphnoides. Brownea coccinea, grandiceps, with ſome new ſpecies. Buddleia americana, capitata, ſalicifolia & ſalvifolia. Buttnera microphylla. Burſera gummifera. Bixa orelana. Calamus Rotang. Capparis Breynia, cynophalophora, frondoſa, tenuiſiliqua, verrucoſa, and two unknown ſpecies. Carica Papaya, and ſome new ſpecies. Carolinea inſignis. Caryota urens. Caſſia alata, bacillaris, bipedunculata, Fiſtula, polyphylla, &c. Caſſine Peragua. Cateſbæa ſpinoſa. Cedrela odorata. Celtis micrantha. Cecropia peltata. Ceropegia ſagittata. Ceſtrum auriculatum, Parqui, &c. Chiococca racemoſa. Chironia fruteſcens. Chryſophyllum Cainito. Cinchona caribæa. Ciſſampelos Pareira & ſmilacina. Ciſſus acida & quadrangularis. Citharexylum cinereum, &c. Cluſia flava. Coccoloba excoriata & pubeſcens, &c. Cocos nucifera. Coffea occidentalis. Conocarpus erecta. Convolvulus Batatus, braſilienſis, pentanthas,

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thas, &c. Cordia Sebeſtena. Corypha minor & umbraculifera. Coſtus arabicus. Creſcentia cucurbitina, Cujete & pinnata. Croton pungens & ſebiferum. Cycas circinalis & revoluta. Cynometra ramiflora. Dalechampia ſcandens. Daphne umbellata. Dioſcorea alata, bulbifera & triphyllos. Dioſpyrus Ebenum, &c. Duranta Plumieri, &c. Echites corymboſa. Ehretia tinifolia. Epidendrum ciliare, cochleatum, elongatum, nodoſum, & Vanilla. Ernodea littoralis. Eugenia baruenſis, &c. Euphorbia Caput Meduſæ, Clava, cotinifolia, nudiflora, punicea, &c. Eupatorium Dalea, perfoliatum, &c. Fagara Pterota, &c. tragodes. Flagellaria indica. Ficus benjamina, jamaicenſis, puindica, nymphæifolia, pumila, racemoſa, religioſa, ſtilacea, &c. Galega caribæa. Gardenia florida & Thunbergia. Genipa americana. Geoffroya inermis. Glycina anguſtifolia Jacq. tomentoſa, &c. Gronovia ſcandens. Guajacum officinale. Guettarda ſpecioſa. Guilandina Bonduc, Bonducella & Moringa. Hamellia chryſantha & patens. Hedyſarum umbellatum. Heliconia Bihai & reginæ. Helicteres apetala. Heliocarpus americanus. Hernandia ſonora. Hippomane Mancinella. Hymenæa, Courbaril. Hyptis capitata. Jacquinia armillaris & ruſcifolia. Jatropha Janipha Manihot, moluccana & multifida. Juſticia bracteolata, caracaſſana, coccinea, Ecbolium, pulcherrima, &c. Ixora coccinea. Kirganella mauritiana, Juſſ. Laugeria odorata. Laurus Camphora, Cinnamomum & indica. Lawſonia ſpinoſa. Malpighia coccigera, glanduloſa, with ſome new ſpecies. Mangifera indica. Maranta lutea. Melicocca bijuga. Mimoſa campeſchiana, caracaſſana, cinerea, circinalis, cornigera, fagifolia, glauca, horrida, Inga, Lebbeck, portoricenſis,

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portoricenſis, punctata, ſcandens, ſenſitiva, ſimplicifolia, ſpecioſa, tamarindifolia, Unguis Cati, &c. Morus mauritiana. Myginda Rhacoma. Ochroſta maculata. Olea americana & fragrans. Panax aculeatum. Parkinſonia aculeata. Paſſiflora laurifolia, perfoliata, ſerratifolia, &c. Paullinia cauliflora, hiſpida, mexicana, tomentoſa, and ſome new ſpecies. Phyllanthus Epiphylanthus, nutans, ſpecioſus, &c. Piper aduncum, blandum, cluſiæfolium, cuneifolium, decumanum, Dioſcoriæfolium, Magnoliæfolium, marginatum, medium, Pereſkiæfolium, rugoſum, ſtellatum, umbellatum, & verrucoſum. Piſonia acculeata. Piſtacia narbonenſis & vera, &c. Pitcairnia Bromeliæfolia. Plumieria alba, obtuſa & rubra. Poinciana pulcherrima. Pothus craſſinervia, digitata & grandifolia. Protea argentea, conifera. Leviſanus, faligna, &c. Pſidium pomiferum & pyriferum. Pſoralea bipedunculata, carthaginenſis, emphyſodes, &c. Pteris caudata & ſerrata. Randia aculeata & mitis. Rauwolfia caneſcens, & nitida. Rhamnus colubrinus, ignaneus, Jujuba, &c. Rhapis flabelliformis. Ruizia laciniata. Samyda ſerrulata. Sapindus Saponaria. Sideroxylon maſtichodendron, melanophleum, mite & tenax. Smilax Saſſaparilla. Solandra grandiflora. Solanum aggregatum, auriculatum, campeſchianum, ferox, fugax, giganteum, igneum, macrophyllum, ſtellatum, ſtramonifolium, tetrandrum, verbaſcifolium, &c. Sophora capenſis, microphylla, tetraptera, &c. Spananthe paniculata. Spondias morubina, and a new ſpecies from Otaheite under the name of Evi. Sterculia fœtida, &c. Swietenia Mahagoni. Tabernæmontana atrifolia, grandiflora & perſicariæfolia. Tamus elephantipes. Taxus longifolia.

Terminalia.

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Terminalia Benzoe & Catappa. Theobroma Cacao & Guazuma. Theophraſta americana, longifolia & pinnata. Tournefortia cymoſa, fœtidiſſima & volubilis. Trilix lutea. Triplaris americana. Urtica arboræa, baccifera, &c. Varronia alba, bullata, curaſſavica, &c. Volkameria inermis, &c. The four ſpecies of Yucca. Zamia anguſtifolia, Cycadis integrifolia & media. Beſides theſe there are an immenſe number of bulbous plants from the Cape; and a rich collection of the genera Arum, Arctotis, Erodium, Geranium, Oxalis, and Pelargoium.

What adds greatly to the pleaſure of walking in theſe houſes is, the ſight of a variety of rare birds flying about as in full liberty, and the hearing them ſing, perched on the very trees which afforded them food or ſhelter in their native country. How pleaſing it was to ſee the little Spittacus pullarius perched on a beautiful Mimoſa in full flower, and the Aſtrild, butyracea and other Loxia, playing under the great leaves of the Hernandia ſonora and Helicteres apetala! The Aſtrild is very numerous, having bred here. Some Nightingales are likewiſe kept. Theſe birds deſtroy ants and other inſects which are ſo noxious in hot-houſes. Here is likewiſe a long-tailed Dove or two from the Cape. There are many more Loxia and other rare birds in cages, and two or three Simia, but chained.

At the ſight of ſuch profuſion of Nature's fineſt works, how could I not wiſh, whilſt all without was congealed in ice, and covered with ſnow, to be tranſported to thoſe highly favoured cli-

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mates from whence they came, to ſee them in their native country, and enjoy their Sun! Yet ſo little does the happineſs of nations depend on their natural advantages, not leſs than that of individuals on the ſmiles and frowns of fortune, that ſoon I might, probably, diſguſted with the ſight of human wretchedneſs, wiſh myſelf back in our foggy iſland.

It was, I believe, when I took my farewell of theſe gardens, when the ſap of trees had begun to move, that I met a pair juſt coming out of theſe buildings, whom ſympathizing paſſions had hardly united, but probably diſparity of fortunes. The beau ſeemed of a poor emaciated conſtitution, but anxious to make up to his fair one for natural deficiencies, by extraordinary attention. Her ſparkling eye and roſy countenance indicated a *temperament* that ill adapted her to be the faithful mate of a worn-out fribble. As they paſſed me, I heard him expatiating on the paſſion of the tender lover they had juſt left, the Dove. But what was her reply?—Cutting to the quick!—O cruel fair! thus to treat his tender affection!—Looking him full in the face—"I don't love Doves that only coo."

Near the principal hot-houſe there is a piece of ground for North American plants; in the middle is a baſon, with ſeveral aquatic plants, and the *Aponogeton diſtachion*, a plant from the Cape, is one of them. This winter (1793) was very ſevere, and

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the cold was as great as 17 degrees under 0 of Reaumur; ſo that the branch of the Danube that flows under the walls of this city, was ſo frozen, that it was walked over, as if it had been the high road. The baſon was not ſpared; and I think the ice remained there till about the beginning of March. I took a walk here on the 4th of April, and I found this plant in flower; and about the ſame time another individual of the ſame ſpecies was in bloſſom in the hot-houſe.

Another part of the garden ſupplies the table of the Court.

Adjoining to the garden there is a menagerie, with three or four Camels; they have bred twice, but the young ones died ſoon after birth; two very fine Zebras, a male and a female; a *Quagga*; the Barbary Antelope, *Antelope Dorcas*; Caucaſian Goat, *Capra caucaſica?* two Porcupines; the Braſilian Weaſel, *Vivera Naſua*; Long-noſed Cavy, *Cavia Aguti*; and ſeveral Apes and Monkeys.

Amongſt the birds, I noticed the Oſtrich, and Creſted Curaſſow, *Crax Alector*; the Crowned Pigeon, *Columba coronata*; ſeveral ſpecies of *Ardea*, as the Numidian Crane, *A. Virgo*; Common Crane, *A. Grus*; White Stork, *A. Ciconia*; Black Stork, *A. nigra*; Night Heron, *A. Nycticorax*; Common Heron, *A. major*; Little Egret, *A. Garzetta*; and Bittern, *A. Stellaris*. Several ſpecies of Parrots, amongſt which were the Red and Blue Maccaw, *Spittacus Macao*; and the Great Red-creſted

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Cockatoo, *S. molluccenſis*; ſeveral Eagles and Vultures; two or three individuals of the great Eagle Owl, *Strix Bubo*; the Minor Grakle, *Gracula religioſa*; and ſeveral of the duck kind. All this belongs to the Imperial ſummer reſidence of Schœnbrun; but it is more the public's than the Emperor's, being open to the curious at all times, and more particularly on the Sunday for the common people. It is under the care of Mr. Booſe, who during his reſidence at the Cape, and in America, collected a great part of it which he brought over with him. He ſeems to fulfil his charge, both to his maſter and to the public, with great zeal and propriety; he is particularly attentive to ſtrangers, and ſpeaks three or four modern languages. I am, like other travellers, indebted to him for civilities, and for ſeveral ſpecimens of rare plants. He has about twenty men under him. There is another gardener now at the Cape, who from time to time ſends over freſh plants: he is ſoon to return accompanied by his ſpoils.

I muſt, out of gratitude, mention the names of thoſe to whom we are indebted for this magnificent eſtabliſhment: to Francis I. as founder, to whom we owe the Imperial muſeum; and to Thereſa, Joſeph II. and the preſent Emperor for ſupporting and enlarging it. Under Joſeph one of the fineſt hot-houſes was built, and the gardener, who is now at the Cape, ſent out; and I have the pleaſure to inform the friends of natural hiſtory, that the preſent emperor having learned in converſing with the gardener, that the plants were too crowded, hinted that another hot-houſe ſhould ſoon be built, not-

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withſtanding the preſent war. It is at his particular deſire that Dr. Hoſt, a very zealous and learned botaniſt, and author of ſeveral papers in the *Collectanea* of Mr. Jacquin, has within theſe few years formed a ſmall garden for the plants of his hereditary dominions. The doctor has brought together a valuable collection of Alpine plants from the Carinthian, Styrian, and other Alps; in winter he covers them over with a little moſs, which he finds to anſwer very well.

The botanical garden of the univerſity I only ſaw in winter. There are two or three more gardens worth viſiting, but this was not the ſeaſon to ſee the productions of Flora.

News-mongers and loungers are not without their reſources; Vienna teems with coffee-houſes, and all of them have billiard-tables and newſpapers. The following is a liſt of newſpapers, magazines, &c. moſt of which are to be found at one coffee-houſe or another, and all to be bought at the poſt-office.

A LIST

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A LIST of Home and Foreign Newſpapers and Journals, which are to be had at the General Poſt-Office at Vienna, poſtage free, with their prices.

	Yearly. fl.	cr.
ENGLISH.		
Lloyd's Evening Poſt	46	
The London Chronicle	46	
* The Monthly Review	24	
ITALIAN.		
Il nuovo Poſtiglione di Venezia	16	
Il Corriere di Cabinetto da Milano	12	
* Ephemeridi litterarie di Roma ed Antologia	10	
Gazetta univerſale di Fiorenza	16	
Notizie del Mondo di Venezia	16	
L'Oſſervatore Trieſtino	12	
Mercurio Italiano di Vienna	9	
FRENCH.		
Courier du bas Rhin	20	
——— de Londre	46	
Gazette d'Amſterdam	20	
——— de Bruxelles	20	
——— de Deux-ponts	22	
——— de Cologne	20	
* ——— de France	16	
——— de Leyde originale	18	
* ——— nationale, ou le Moniteur	50	
* ——— univerſelle, ou Papiers nouvelles, de tous les pays et de tous les jours	30	
——— de Varſovie politique et litteraire	40	
* Nouvelles Eccléſiaſtiques d'Utrecht	12	
JOURNALS.		
* Eſprit des Journaux	20	
* Journal de Paris, qui paroit tous les jours	26	
* Journal general de France	26	
* ——— encyclopédique	20	
* ——— des Modes & du Gout	20	
* Mercur de France	20	
FOREIGN AND HOME GERMAN NEWSPAPERS.		
* Amaliens Erholungsſtunden	12	
Anzeiger Gothaiſcher	12	
* Archenholz Minerva, 24-vol.	24	
Augſburger Maſchenbauriſche	12	
——— Moyſche	12	
Baſsler	12	
Bayreuther	12	
Berliner	16	
* ——— Monathſchrift	12	
* Braunſweiger neues Journal	14	
Brünner	8	
Paſſauer, oder Kourier an der Donau	8	
Peſter	10	
Peterſburger deutſche	24	
——— ruſſiſche	34	
Prager deutſche	10	
——— böhmiſche Kramer	6	
Preſsburger	12	
Kemptner neueſte Weltbegebenheiten	12	
Köllner deutſche	12	
* Kanſtädter ökonomiſches Wochenblatt	10	
Konſtanzer	8	
* Drunter und Drüber, oder wie gehet es in der Welt zu?	8	
Erlanger	8	
Frankfurter Ober-Poſtamtszeitung	10	
——— Riſtretto	10	
* Göttinger gelehrte	16	
Gratzer Bauernzeitung	10	

Gratzer

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	Yearly. fl.	cr.
Gratzer Leikamiſche	10	
—— Merkur	10	
—— Damenzeitung	5	
—— Bürgerzeitung	8	
—— Zeitung für Studenten	4	30
Hamburger Korreſpondent	14	
—— neue	14	
—— Journal	10	
Hanauer	12	
Hermannſtädter	8	
Journal der neuen Staatsverfaſſung von Frankreich	22	
* Journal des Luxus und der Moden	12	
* Jenaer Litteraturzeitung	14	
Leipziger politiſche Zeitung	14	
Miniſterialzeitung	10	
Münchner	10	
* Merkur, deutſcher	10	
Neuwiedner Original	12	
—— Nachdruck	9	
Ofner deutſche	12	
Ofner lateiniſche	12	
Regenſpurger Staatsrelazion	10	
—— hiſtoriſche Nachrichten	12	
* —— Staatslitteratur	8	
* Salzburger Staatszeitung	10	
* —— Litteratur	14	
—— Intelligenzblatt	5	
* —— Mediziniſch-chirurg. Monatſchrift	12	

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CHAP.

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CHAP. I.

FROM VIENNA TO ŒDINBURGH—COAL MINE—COUNT SZECHYNY—PRINCE ESTERHAZY—TRAVELLING IN HUNGARY—COUNT FESTITICH—TOWNS OF RAAB—DOTIS—KOMORN.

TAUGHT by experience how much we are obliged to leave undone for want of time, not only in the common concerns of life, but likewiſe in tours of the nature of the one I was going to ſet out upon, I impatiently waited at Vienna for fine weather; and only in fine weather could it be prudent to travel in a country which, according to the accounts current at Vienna, was little better than in a ſtate of nature, and its inhabitants half ſavage; and the weather had hitherto, ever ſince the breaking of the froſt, been cold and gloomy. Indeed ſo ſavage was the character of this people drawn by ſome, that many leſs accuſtomed to travel than myſelf, would have given up their intended tour altogether; and I myſelf, had I not learned to make deductions from popular accounts, would hardly have ventured without a battalion of grenadiers for protection. If I came back alive I was told I ought to think myſelf fortunate.

On

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On making the acquaintance however of ſome Hungarians, who furniſhed me with letters of introduction, I found theſe accounts to ariſe from national hatred; and on the 5th of May, though the weather for the climate and ſeaſon of the year was not fine, I ſet out on my tour, accompanied by a ſervant, who had lived ſeveral years in Hungary, and ſpoke the different languages in uſe there; the Hungarian, German, Wallachian, and different dialects of the Sclavonian. Having ſent my portmanteau before me to Oedinburgh, by the diligence, I ſet off on foot, that I might view the country at my eaſe, and pick up any thing I might meet with, either foſſils, plants, or inſects; for hitherto I had hardly made a ſingle excurſion about the capital.

The country through which I paſſed was pleaſant. I had often a view of the Danube on my left, and at no great diſtance on the right roſe a ridge of hills, running nearly north and ſouth, gaining in height towards the north, at the foot of which were many villages ſcattered about; but I did not ſee here either the little ſnug box of the retired tradeſman, or the more elegant ſeat or villa of thoſe of the ſuperior ranks of life. Some mountains that lay at the back were covered with ſnow. Here is the Schneeberg, ſo rich in Alpine plants.

The cold weather ſeemed to have retarded vegetation: the ſummer crops had only broke through the ſoil, but the winter crops were near half a yard high, and promiſed to repay the labourer's toil. Where

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the plough was at work, one without a coulter was uſed; the ſoil was light, and the beds flat and large. The *Hyacinthus botryoides* grew on the banks by the road ſide, with the *Ranunculus polyanthemos* in plenty; but the *Ranunculus aquatilis* had not yet ventured to blow. The Horſe Cheſnut was likewiſe in bloſſom. I heard the mowing of the *Rana bombina*, and ſaw a few of the *Rana variabilis*; they are both very common about Vienna. Many of the *Sterna nigra?* were ſkimming over the fens which I paſſed towards the evening. I ſaw two or three of the great Tern, *Sterna Hirundo*; and Hooded Crows, *Corvus Cornix*; and Jackdaws, *Monedula*, in abundance.

As I did not ſet out till the afternoon, I only reached a village called Oberrechsdorf; where, as I expected, I met with very bad fare. My attempts to perſuade the landlord to put on clean ſheets were all in vain: he ſaid he could not always be putting on clean ſheets. I took my revenge, and ſlept in my boots. In the morning I croſſed the Leitha, and entered Hungary.

At Wimpaſſing is the Hungarian Cuſtom Houſe. As an order had a ſhort time before been publiſhed by the Auſtrian government prohibiting any Frenchman from reſiding in the diſtant provinces, or going indeed beyond a certain diſtance from the capital, I expected to have been examined; but I paſſed on unqueſtioned. The Auſtrian government was very careful to prevent French principles and opinions

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from being diſſeminated in the provinces. In the capital the French emiſſaries were more eaſily watched; and there, to judge from the general indignation of all ranks (a few pſeudo-philoſophers excepted) on the news of the murder of Louis XVI. they had little hopes of ſucceſs. On this atrocious act being made known, many of the French reſiding here, ſome probably of quite different principles, were ill treated; they hardly dared to ſhew themſelves; ſome of the *traiteurs* and inn-keepers would not receive a Frenchman into their houſes. The French language, ſo general here, was laid aſide. Theſe *expreſſions* of diſapprobation were indeed only momentary, though the diſapprobation ſtill remained, and I hope ever will.

What a ſevere blow to liberty is the French Revolution! Where there can be no medium between the French licentiouſneſs and the moſt deſpotic government of Europe, what upright and ſenſible man will heſitate to prefer the latter, and quietly wear his chains? What an example for tyrants to hold up in their own behalf to a juſtly revolting people!—Mayeſt thou, Gallia, alone ſuffer; and, unworthy of a moderate government, ever live in the turbulencies of democratic anarchy, or feel the imperiouſneſs of deſpotic ſway; whilſt the reſt of Europe peaceably live under their various governments, and quietly await the amelioration of their lot!

On entering Hungary the country becomes more uneven. It is well cultivated: it is chiefly corn land, and ſome paſture. Its gentle

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elevations fit it for the vine, which is planted on the banks expoſed to the ſun. In the vineyards, the labourer ſeemed behind hand; few had driven in the ſtakes which were to ſupport the vine under its autumnal load. The Laryx is uſed for this purpoſe, on account of its durability, for they are here left out all winter; but they are a leſs expenſive article than our hop-poles. Amongſt the vines there are a great many ſtandard Peach-trees; theſe were in full bloſſom: they are more pleaſing to the eye than their fruit is to the palate, which has very little flavour, and is ſold under the name of Vine or Vineyard Peaches.

At the foot of a ſmall ridge of hills, two or three miles to the left of the Oedinburgh road, lies Eiſenſtadt, where the preſent Prince Eſterhazy moſtly reſides. Towards the evening I reached Oedinburgh. I met many cart-loads of fowls going to the Vienna market, and two or three numerous parties of pilgrims, compoſed of men, women and children, going to St. Maria of Zell in Styria. What indulgences they obtain by this I don't know; no diſpenſation, I hope, from obſerving the duties of morality: if only from penances and ceremonies, then it is merely an exchange of one trifle for another. But how great is the misfortune, if it gives a licenſe to leave one kind and friendly act undone!

In ſome places the road was mended with *Gneiſs*, and the compact primitive limeſtone; but what ſeemed to be moſt general, was a kind

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kind of Breccia, compoſed of fragments of fat quartz, accompanied ſometimes by fragments of ſhells, cemented by the *Tophus communis*. This, I think, extends to a conſiderable diſtance, as I have ſeen ſome ſpecimens from quarries, towards the Neuſidle Lake, of the ſame kind, with entire ſcollop ſhells.

Oedinburgh is old, and irregularly built; but, with its ſuburbs, contains ſeveral pretty good houſes, as it ſerves for the winter reſidence of many of the neighbouring nobility. Its population is given at about 12,000, and it muſt carry on a conſiderable trade, as Mr. Korabinſky eſtimates its annual ſale of horned cattle at 40,000 head, and 150,000 hogs. In 1781, he ſays there was 2300 hundred weight of honey ſold; and the ſale in 1782 of its own wine, which is chiefly ſent into Sileſia, amounted to 28,000l. ſterling. The celebrity of this wine, which, according to my taſte, is but indifferent, led to a ſingular miſtake. In travelling through Bohemia, I ſaw, in a liſt which was hung out at a wine cellar of the wines which were on ſale, Edinburg as the place of growth of one of them: this ſurpriſed me much; for though I knew that Scotland was noted for its *cakes*, I had never yet heard of its wine. I therefore conjectured it was whiſky; but to prevent an error, I got off my horſe, and enquired, and I then learnt it was an Hungarian wine. In this manner the name of this city is ſometimes written, but more commonly Oedenburgh, and then the etymology is from the German language, and it ſignifies the ſolitary, waſte or deſert

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town, which name was given it many centuries ago, after it had been deſtroyed by the army of ſome foreign prince.

A letter of introduction procured me the acquaintance of Count Szecheny, who received me in a very kind and polite manner. In his family I had an opportunity of obſerving what good linguiſts the Hungarian nobility are. His ſon, a beautiful boy about 10 years old, ſpoke pretty correctly and fluently the Hungarian, German, Latin, French, and Italian languages, and, I believe, in ſome degree, the Croatian. After dining with the Count, I accompanied him to Zinkendorf, which is one of his eſtates, about three or four miles from the town, to ſee ſomething of Hungarian œconomy and rural life. The eſtate is very conſiderable, but the houſe much out of repair: he ſhewed me a large collection of books and maps, and a very valuable collection of Hungarian coins. Though he had left his counteſs and children in town, and there were no ſtrangers but myſelf; yet, when we came to ſit down to ſupper, which was in *en famille*, we were a pretty large party; theſe were the gentlemen of his houſehold. Each had his reſpective title; one who ſeemed to have the *pas*, was, I believe, his Lawyer; the others were Secretaries, Stewards, &c.

The next day, ſoon after breakfaſt, we took a ride to ſee the palace of the Prince Eſterhazy, the richeſt nobleman in Hungary. As the Prince now generally reſides at Eiſenſtadt, this ſeat is not kept in the beſt order; but nothing could make it an agreeable reſidence,

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ſidence, being ſituated in a flat, near the moſt fenny part of the Neuſidle Lake. The palace is large, and well fitted up; but moſt of the furniture has been taken to Eiſenſtadt, to the great mortification of the houſe ſteward, who complained in a melancholy tone, particularly on ſhewing us the china, that *he* ſhould ſoon have nothing left, nothing to look after!—Theſe were the complaints of a faithful ſervant: for no doubt he was as well paid as if the whole had been there. He was an old ſoldier: whether he had gained laurels, I don't know; but he had received wounds. I was ſhewn a long room, under the name of a picture gallery; its contents were unuſually bad.

Behind the houſe is a wood, prettily laid out; with ſome very neat Chineſe ſummer-houſes. The theatre is ſmall, but very elegant. The late Prince was very fond of dramatic performances, and kept a troop of players; but the preſent keeps none. His paſſion is ſhooting; to his neighbours the moſt inconvenient one he could have, and which procures him the ill will of many of the neighbouring nobility. In Hungary every nobleman has a right to ſhoot on the eſtate of another, without his leave; but every one may ſet apart a certain portion of his lands, entirely for his own uſe, where it is then illegal to ſport. He ſtands accuſed of appropriating to his own private uſe a more than ordinary quantity of his domains. The revenues of this Prince are very great: they are generally eſtimated at eighty or ninety thouſand pounds ſterling; but

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in 1793, which was an extraordinary profitable year, they amounted to 1,070,573 florins, that is, about 107,057 pounds ſterling. This account I had from good authority; and his *Regie*, or all the expences for his Stewards *(Beamte)*, Servants, &c. in his thirty-three eſtates, were 36,745 pounds. From thence we returned, and dined at the houſe of one of the Count's Stewards; and from thence, by the ſide of the Lake, through Wolfe, where there is a cold hepatic water, which is heated and uſed for bathing, to Oedinburgh. By the ſide of the lake, I was ſhewn ſome of the cellars in which the Oedinburgh wine is kept; they are dug deep into the ſides of the hills on which the vines grow.

Five or ſix miles ſouth-weſt of the town there is a coal mine amongſt the hills; the coal appeared to me very good. Twelve men are employed, but it has been worked only a few years; a hundred weight coſts five pence at the mine. A coal mine ſo near a great populous city like Vienna, ought to be conſidered as a treaſure; but here, as over the whole Continent, there exiſts ſuch a ſtrong prejudice againſt the uſe of it (for to it our conſumptions, melancholy diſpoſitions, and *ſelo de ſes*, are generally attributed), that it is only uſed in a few manufactories. It is accompanied by a ſoft ſand ſtone and clay, but all the neighbouring rocks that I could examine are of decompoſed *micaceous ſchiſtus*.

Oedinburgh poſſeſſing nothing worthy of notice, I began to make

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enquiry about the means of continuing my journey to Raab, the next town I intended viſiting in my way to Buda; and was a good deal ſurpriſed and mortified on hearing that there was neither private nor public means of conveyance, this not being a poſt road.

But the Count ſoon extricated me from this difficulty by procuring me a *foreſpan*. This is an order from the magiſtrates, to the judges of the peaſants, to ſupply the perſon who obtains it, with horſes to tranſport him to the next ſtation, which is generally from fifteen to twenty Engliſh miles, for which 15 creutzers, that is, about ſixpence, is paid for each horſe. Sometimes you are allowed to travel with only two horſes; but in general you muſt have four: which is ſtill very cheap, being only two ſhillings for fifteen or twenty miles. It is a favour, and ſhould be only granted to the military, and to thoſe travelling in the ſervice of the public; but in the more diſtant parts of Hungary it is the moſt common way of travelling, and, except in particular ſeaſons of the year, is no very great hardſhip, as it is treble the price of a day's labour of a peaſant and a pair of horſes, as fixed in the *Urbarium*, which is 20 creutzers, that is about eight pence; and if he brings, as he generally does, four horſes, to make the work lighter to them, his day's work is ſtill valued at only 20 creutzers.

I took leave of my friend Szecheny, who, after having filled ſeveral high offices, as locumtenens to the Ban of Croatia, and Ambaſſador from the ſtates of the kingdom of Hungary to the king of Naples,

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on the occaſion of his viſiting Hungary, by whom he was created a knight of the order of St. Janaro, has retired from the career of public honours, to cultivate his eſtate, and paſs his time in literary amuſements. He has viſited our iſland, and entertains a very favourable opinion of us.

In the morning my carriage arrived; a peaſant's four-wheeled hay-cart, and a pair of little lean horſes. This is not ſo deſpicable a conveyance as the Engliſh reader will imagine. In Hungary you often ſee decent-dreſſed people travelling in this manner; and to me, who had travelled in Sweden, Denmark, and the North of Germany, where open carriages nearly ſimilar, but neater, are in common uſe, it was no new thing. But had it been in England, the moſt common opinion would have been, that I was an evil-doer, conveying to gaol, and that my ſervant, who held my gun, and wore my cutlaſs, was the gaoler. After travelling three or four hours a jog trot, I arrived at the village where I was to change horſes. As in theſe places there are no inns, it is the cuſtom to drive up to the Judge's houſe, and ſhew him the *foreſpan* order; and he is then obliged to go himſelf, or to ſend his deputy, to the peaſant whoſe turn it is to ſerve. If he happens to live at a diſtance, and the horſes to be at graſs, you are often detained an hour or two, and even more, before you can get them; for the horſes are never kept in readineſs, without previous notice, as they are in Sweden, where there are no other poſt-horſes than thoſe of the peaſants.

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The Judges are only common peaſants, and have authority only over the other peaſants, and are therefore called *Judices plebeii.* They are ſometimes appointed by the lord of the village; ſometimes elected by the peaſants themſelves; and ſometimes the joint election of the peaſants and their lord: theſe are local differences eſtabliſhed by cuſtom. They have no fixed ſalary, but get a few fees, and they are very thankful for two-pence or three-pence, as a dram, which is generally given them by the traveller, if they have been expeditious in procuring him horſes; and ſo little are they reſpected, that they run a riſk of being thraſhed, particularly by the military, if they do not exert themſelves. They are eaſily known, by having a ſtick in their hand; the moſt common, the moſt expreſſive, and the moſt uſeful enſign of power amongſt a rude people.

The next ſtation, where I changed horſes, was Michlos, a large well-built village. As this was a holiday, I got a tolerably good dinner at the public houſe; after which, as my horſes were not come, I took a walk about the village. The peaſants were dreſſed in their beſt. I know of no dreſs more becoming for a man than the Hungarian—long breeches, ſhort jackets turned up with fur, and ſhort boots, with ſpurs. But this is not the dreſs of the common peaſants: theſe generally wear grey linen trowſers, with boots, or elſe a kind of ſandals; a ſhort ſhirt, covering the upper part of the body only; and a wide coat, made out of ſheep-ſkins, which is thrown looſe over the ſhoulders. The dreſs of the women is much like that of

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the Germans, and no ways becoming. Whilſt waiting for my horſes, I was amuſed by a new paſtime.

The amuſements of the faſhionable world are eaſily introduced from foreign countries, and, by the caprice of thoſe who ſet the *ton*, laid aſide again: but the paſtimes of the people continue unaltered for ages; and often, like the dreſs they wear, or the implements of huſbandry they uſe, ſerve to ſhew their origin; and on this account they merit notice.

Thirty or forty moſtly grown up girls were drawn up in two lines, oppoſite to one another, and twelve or fifteen yards diſtant. The girls of each party held one another by the hand, and in this manner ſwung their arms to a ſlow-timed ſong: from time to time they changed places, the girls of one party going under the arms of the others, who gave them a hearty thump on the back as they paſſed under. The ſongs were queſtions and anſwers, concerning things in which country people are intereſted. One party, for example, aſked the other what they wiſhed for above all things, and what would make them happy? They anſwered: A pleaſant garden well ſtocked with fruit, a good farm well ſtocked with cattle, and a young and faithful huſband. All theſe girls, I thought, though I had taken my uſual portion of wine, which, giving warmth to the cold, like youth makes one leſs ſevere in criticiſing female beauty, had few perſonal charms; and their dreſs was not becoming. The hair

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hair on the ſides was plaited tight, and brought into the hair behind, which was likewiſe plaited, and hung down behind, as with the Swiſs girls. The neck was covered with a white handkerchief; and a variegated body and petticoat, with a white apron, formed the reſt of their dreſs. The petticoat was ſhort, to ſhew their yellow leather boots with low iron heels. The latter are of great uſe in dancing, like the ſpurs of the men, for making a noiſe.

After waiting near a couple of hours, my horſes came, which conveyed me to Pogyoſlo, where I again changed horſes; but the evening came on before I could ſet out; and as ſoon as it grew duſk, I found my young driver to be a *hemerops*, when he ſhould rather have been a *nyctalops*. He firſt fairly left the high road, and got into a field; to which I ſaid nothing, thinking he was taking a ſhort cut, till he ran againſt a garden hedge, and carried part of it away. And he was no ſooner got upon the high road, than he drove off it again, and at laſt upon a bank: here he began crying, and groping about, as if it had been pitch dark. I had the misfortune of ſeeing too well; of ſeeing all his blunders. At laſt, I made my ſervant take the reins; and I arrived ſafe, about nine o' clock, at Egget, the ſeat of Count Ignatius Feſtitich, for whom I had a letter of introduction from Count Szecheny, who received me in the moſt polite and friendly manner.

The country through which I travelled this day was flat, with corn

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corn and paſture lands, and woods alternating. I was ſo pleaſed with my hoſt, that I ſpent three days with him, to ſee ſomething more of Hungarian œconomy. He, like many of his countrymen, let his whiſkers grow under the reign of Joſeph II. and was one of the boldeſt oppoſers of his deſpotic orders, ſome of which were very oppreſſive to the great landed proprietors. He reſides chiefly on his eſtate, and paſſes his time in rural œconomy. His village is very neat; the peaſants' houſes are uniform, and kept in good repair, and form a very broad and long ſtreet. They are compoſed of mud walls, and thatched roofs, for which the *Arundo phragmites* is much uſed. But theſe mud walls are very warm and durable; and though conveying, in the very denomination, meanneſs and poverty, are very eligible for low-built houſes, like thoſe of peaſants. They are compoſed of the ſame materials which nature has taught the Swallow to ſelect for his neſt, and out of which he forms his ſolid dwelling; which is a ſandy kind of clay, and much uſed likewiſe by the Germans, in building their houſes, under the name of *Leim:* ſtraw is mixed amongſt it. They are afterwards whitewaſhed.

Some of his peaſants have very large flocks of ſheep. His own flock, or a great part of it, to the number of eleven hundred, he has let out to one of them upon the following terms. For each ſheep he receives annually one gulden and one groſs, about two ſhillings and two-pence, and three hundred weight of butter from the whole; and two ſheep or lambs weekly for his table. He gives the peaſant

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the right of paſturage for them, who, at the end of the agreement, muſt return him the ſame number again.

The management of an eſtate, in a country where the *glebæ adſcriptio* exiſts, and where the rents of lands are paid in perſonal ſervices and the produce of the ſoil, is very different from, and far more troubleſome than, the management of one where the cultivators of the ſoil are free, and where money is the ſubſtitute for both. This is not the caſe here, and the management of an Hungarian eſtate is hardly leſs troubleſome than the carrying on of a manufactory. For the former ſtate renders a number of ſtewards, bailiffs, &c. neceſſary, and a great authority muſt by the laws be inveſted in the hands of the landholders over their peaſants; from whence ariſe, and often not ill-grounded, complaints of the peaſantry againſt the oppreſſion and extortion of their lords; and the complaints of theſe, of the ſloth, lazineſs, and diſhoneſty of the peaſantry: yet this is the ſtate in which I think almoſt every part of Europe has been in or is in at preſent—it is the infant ſtate of ſociety.

In a ſhooting party which we made on a lake on this eſtate, we ſhot, amongſt other water-fowls, a Cinereous Tern, *Sterna cinerea?* which is a very common bird here. They ſkim over the lake like Swallows, in great plenty. I opened it, and found its ſtomach full of inſects: ſome *Tipula*, and the *Donacia aquatica*, were ſtill very diſtinguiſhable, with ſome fragments of the ſmaller Chafers. In the open grounds

grounds round this ſeat, I ſaw ſeveral Buſtards, and collected ſome fine ſpecimens of the *Bombix pavo*.

If the traveller has the conſolation, in the trifling inconveniences which befall him, to think they will be of ſhort duration, he has a no leſs poignant mortification in the reflection of being ſo ſoon obliged to part from his moſt worthy friends and agreeable acquaintance. I reluctantly left my hoſpitable friend Feſtitich, who lent me his chaiſe and four peaſants horſes to convey me to Raab, where I arrived in about four hours; paſſing over a very ſandy ſoil, ſo barren in ſome places as not to produce a ſingle blade of graſs.

Raab is a pretty large and well built town, containing twelve to thirteen thouſand inhabitants, on the banks of the river of the ſame name. I found a pretty good inn and coffee-houſe here, but there is little to ſee. The cathedral church has lately been repaired, and ornamented in a modern ſtyle. I think it is in this church where one of the gates of the fortreſs is kept, which the Hungarians broke down when they drove the Turks out in 1547. A friend, who was my Ciceroni for this town, ſhewed me a monument erected on a ſingular occaſion. "As the living body of the Lord," ſaid he, "in a plate was carrying to the ſick, it was, with its attendants, by accident overſet and trod in the dirt in this very place, by ſome people who were fighting to ſeize, or to ſet at liberty, an offender." To expiate this indignity, the Emperor Charles VI. cauſed this to be

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erected, and here the holy fragments to be preſerved in an iron cheſt, which have moſt probably long ſince been eaten by weevils, or elſe have ſerved as dung for *Mucors* and other cryptogamical plants.

It has this inſcription upon it:

Pani Angelorum Incorruptibili, Carolus VI. Roman. Imp. Auſtriacus, Regni Apoſtolici Conſervator & Vindex, Læſam Adorationis Cauſam, Correctis Seductorum Audaciis, Perpetuæ Deprecationis Monumento, Ad Expiandam Offenſi Numinis Iram, Ex Avita Pietate, Reſtitui Juſſit, An. Sal. M.D.CC.XXXI.

It was in this town where the great Eugene, in 1717, was preſented in form with the hat and ſword from the Pope, for having beaten the Turks at Belgrade.

A letter from Count Feſtitich made me acquainted with Count Eſterhazy, of Galantha, an amiable *bon vivant*, with whom I dined, and who, the next day, ſent his phaeton and four with me, to pay a viſit to Count Vitzay, at his ſeat at Hedervar, who received me with the greateſt politeneſs. After I had partaken of an elegant dinner, he ſhewed me what I came chiefly to ſee, a very valuable collection of medals, moſtly collected by his father, but increaſed by himſelf: this, I believe, is the ſecond beſt collection in Hungary. He has likewiſe cameos, a library, and an armoury containing many old inſtruments of death.

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I was much pleaſed to find him an admirer of the good taſte of my country. He was laying out his grounds in the Engliſh ſtyle, for which they were very well adapted, and had called in the advice of a German, who had reſided a good while in England with a view to learn the art of adjuſting the ſcattered careleſs beauties of rural ſcenery. In his ſtables I found ſeveral Engliſh horſes, and two Engliſh grooms, who drew my attention to a trifling diſeaſe, if it can be called one, to which the Hungarian horſes were excluſively incident, a ſpontaneous bleeding from the back, ſides, or neck, from whence only a few drops exude. I obſerved with pleaſure ſome gipſies, or, as they are called here, *zygyners*, working in the gardens. Much pains was taken by Thereſa to turn theſe uſeleſs members of ſociety from their vagrant life; but with not much ſucceſs: they ſtill ſtroll about as tinkers and muſicians.

I was kindly invited to ſpend a day or two; but I returned in the evening to Raab, and the next morning I ſet out for Dotis.

I had informed one of my friends of my intended departure, and he took charge of procuring me a chaiſe. On enquiring what agreement he had made, I was told the Count Eſterhazy had lent me one; but before I had got half way, I learned that he had hired it for me and had paid for it. I ſtopped and dined at Bobolna, where the Emperor has a ſtud: I was ſhewn ſeveral very fine Holſtein horſes. In the evening I reached Dotis.

The

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The view of this town with the plain in which it ſtands, and the hills which lie at its back, is very fine. The country through which I paſſed this day was flat, with corn and paſture lands. A great many of that beautiful little animal, the Earleſs Marmot, *Arctomys Citellus*, were playing in the ſhort graſs by the road ſide, and on the banks. They are not very ſhy, yet run to the mouth of their holes, on the appearance of danger, where they ſit upon their hind legs, and look about, but ſuffer you to approach near enough to ſhoot them; which, if they did not do ſo much harm where there is corn, I ſhould conſider as a great barbarity: I only ſhot one. I ſaw at a diſtance ſeveral Buſtards.

Ever ſince I left Oedinburgh, I had been travelling through a flat country, and had not once ſeen a ſolid rock. At Bobolna, in digging for the foundation of a building, the workmen had come to a rock; but it mouldered away on expoſure to the air, ſo as to be of no uſe in building: it appeared to me to be Stone Marl.

I paſſed, at no great diſtance, the famous Mons Pannoniæ; and here is the no leſs famous Benedictine Cloiſter, which was founded by the firſt Chriſtian King of Hungary, St. Stephen. It is ſaid the monks have more wine than water, as theſe hills are covered with vines, and water they are obliged to procure in the neighbourhood.

This Cloiſter is the depoſitory of ſeveral relics:—an ivory altar,

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from the Holy Land; the wedding clothes of King Stephen; his ſtool, in marble, which poſſeſſes many medicinal properties, &c. &c. But having ſeen enough relics in my tour in Italy, I did not go out of my way to ſee them.

I was perſuaded by my friends to take Dotis in my way, principally to ſee the gardens of Count Eſterhazy; and they had provided me with letters for Counſellor Bezereday, who, though he enjoys a reſpectable office under government, has taken the management of this eſtate upon him, in the abſence of the Count, who is now Imperial Ambaſſador to the Court of Naples.

The Counſellor not being at home, I called on the Profeſſors of the *Piariſt* Cloiſter, a kind of ſchool, or college, for the education of youth; and they were kind enough to be my Ciceronis; ſome of them were Ex-Jeſuits. This little place, which belongs to the Eſterhazy family, is worth coming a few miles out of one's way to ſee, as the gardens of the Count are really very fine; a great ornament of which, is an unuſual profuſion of copious ſprings, of which they have availed themſelves, not to form little piddling Cupids and puking ducks, but lakes and canals overhung with weeping willows, and limpid murmuring ſtreams, on whoſe banks one would willingly repoſe, when inclined to meditate, or to feaſt on the pleaſures of imagination, or to paſs ſome ſweet moments with a tender female friend. For noiſe and chatter, the French gardens are beſt adapted.

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I was ſhewn ſome curious Baſtard Pheaſants, which I was informed were the offspring of the illicit amours of a Turkey and a Pheaſant. This ſeems not only too unnatural an amour, but too improbable a ſtory, and the account was confuſed: probably they were the progeny of the Pheaſant and Common Fowl.

The town is built upon a rock of variegated red marble, which is quarried, and ſent to a conſiderable diſtance. At the quarry I had an opportunity of obſerving the upper bed to be full of petrifactions, but not that which lies under it, and is uſed for marble. Near to it are rocks, which belong to the alluvial ones, and moſt probably owe their origin to the preceding: theſe are formed of a congeries of beautiful incruſtated moſs, irregularly mixed with incruſtated and conglutinated freſh-water univalve ſhells *, and Alabaſter †. The incruſtating, or, as it is commonly denominated, petrifying matter, is not the common coarſe ſediment-like matter, but it is fine grained, and compact, like the *Travertino* of the Italians; and the vegetable matter of the moſs has waſted away; ſo that when this petrified moſs is tranſverſely broken, it ſeems to be compoſed of fine hollow tubes, with lateral appendages.

* Tophus.

Ex taſtis immutatis Neritæ lacuſtris & pauſis fragmentis Quartzi lactei, ope Tophi incruſtantis conglutinatis, conſtans.

† Inolithus filamentoſus.

Ferrugineus ſubdiaphanus, textura undulato-cruſtoſa, tranſverſe & parallele fibroſa. Fractura feſtucaria, micans nitore ad lucem fugaci.

Foſſil

Foſſil bones are likewiſe found in this rock. My Ciceronis aſſured me, that an Elephant's tooth, eight to nine feet long, had been dug out ſome years ago.

Neither ſuperfine cloths, nor Dreſden china, are made here, nor could the ſkilful workman here learn how to bring his art to greater perfection; yet theſe branches, in a rude ſtate, are very flouriſhing, and employ the greateſt part of the inhabitants. An agent of the Emperor had lately contracted for a hundred thouſand ells of coarſe white woollen cloth, for ſoldiers' great coats: this is made out of the long coarſe-woolled fleeces, which are like hair, of the *Ovis Strepſiceros*, ſo common in Hungary. In ſpinning, the ſpinners ſat down, and uſed their right foot, to which was faſtened a ſmall piece of board to lengthen it, inſtead of the left hand, when they wanted to lift the yarn off the point of the ſpindle.

In ſeveral ſmall rooms, I found ſix or eight at work, men, women, and children: the ladies were *en negligé*, but not naked: the gentlemen, as it was hot weather, being leſs delicate, had ſtripped in buff to their trowſers: but upon three-pence a day, the common price of a day's labour, the deſires do not riſe to a great height—except thoſe of eating and drinking. There is one or two fulling-mills in the town.

The potteries are not leſs an object of induſtry. I ſaw one pretty large

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large manufactory of ſtone ware, but the moſt intereſting are the ſmall ones. Some of theſe have furnaces like thoſe in uſe in other places, but the poorer conſtruct very ſmall ones in a more ſimple manner. Theſe externally have the form of a bee-hive, are five or ſix feet high, and made of mud and clay with a door on one ſide: this is only the covering; at the bottom a large hole is dug in the ſoil, and two or three bars of iron are placed acroſs at the bottom of it: this is the oven, and on theſe bars the pots are placed. The ſoil is dug away on one ſide lower than this, where a large lateral hole is made under and communicating with the oven: here is placed the fire. They make a great part of the coarſe earthen ware of a black colour: it is a rough imitation of Mr. Wedgewood's beautiful manufacture. This is done by ſhutting up the oven before the wood or fuel is burnt out, ſo that the articles it contains remain for ſome time in an atmoſphere of ſmoke, which is the only colouring matter uſed. Some of thoſe who uſe the common reverberating furnaces, conſtruct them in the ground, ſo that three of their ſides are formed by the ſoil. Juſt beneath the walls of the Caſtle, there is a large lake, five or ſix miles in circumference, which is more profitable than lakes generally are. Every three or four years the water is let off, and the fiſh caught; and the year after, the bottom is ſown with Indian corn, hemp, &c. Mr. Korabinſky ſays, that the fiſh caught at the laſt draining ſold for ſeven hundred pounds, and ſome years before for two thouſand pounds: *Relata refero.*

The

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The Caſtle, which is now in ruins, and of which now only ſome of its vaults are uſed as a priſon, ſerved often formerly for the reſidence of Mathias Corvinus, the favourite King of this nation, to whoſe golden days they look back with pleaſure: "In his days," they ſay, "we were a great and formidable nation, now only a province of Auſtria."

Roman antiquities have often been found here. In the College Gardens there is a marble ſarcophagus, which was found about twenty years ago, with this inſcription:

D. M.
ÆTERNÆ. QUIETI. ET. PERPE
TUÆ. SECURITATI. AURELÆ
TERNÆ. CONIUGI. KARISSIMÆ.
QUÆ. VIXIT. ANNIS. XXX. ET. TIB. CL. MA
CEDONI. QUI. VIXIT. ANN. X. MENSES. III.
ET. CL. IUSTINÆ. QUÆ. VIXIT. ANN. III.
MENSES. VI. ET. CL. LIGURINÆ. QUÆ. VI
XIT. ANN. I. MENSES. VII. FILIS. EIUS. ET. VEP.
PAVENTINÆ. TIB. CL. VALENTINUS. VETE.
XCALEGIADE. CONIUGIS. ET.
FILIS. ET. SOCRO. KARISSIMIS.
F. C.

Mr. Kora-

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Mr. Korabinſky mentions another dug up in 1746, with this inſcription:

D. M

VICTORIÆ. VERINÆ. CONIUGI. PIENTISSIMÆ.
DOMU. FORO. HADRIANENS. PROVINCIA. GER
MANIA. INFERIORI. VIXIT. ANN. XXX. ÆMI
LIUS DECIMINUS. MEDICUS. ORDINARIUS.
LEG. I. ADJ. MARITUS. BENE MERITÆ.

Fac. cur.

I ſtaid here but little more than a day, and then, with the Counſellor's chaiſe and four horſes, I travelled on to Komorn, a town on the banks of the Danube, containing about five thouſand inhabitants. It is about two or three hours journey from Dotis. I paſſed the Danube upon what is called a flying bridge. This, where a real bridge, either from the great expence, or from other cauſes, cannot be built, is the beſt contrivance I know. It is only an improved kind of ferry-boat: a floor, or ſtage, with a rail round it, is built upon two narrow barges, which are at a little diſtance from each other: in a croſs bar, ſupported by two ſhort maſts or poſts, there is a groove, with a ſliding pulley; to this is faſtened the cable, which prevents it from being carried down with the ſtream; and the other end of the cable is faſtened, higher up in the river,

to a row of boats, which are moored with anchors, but yet admit of a lateral movement:—it is then driven over by the ſtream.—They are large, and can carry over ten or fifteen carriages and a hundred paſſengers at a time.

The Fortreſs is famed for having never been taken. Joſeph II. ordered it to be demoliſhed, and the materials ſold. It was ſtrongly fortified by art, and has a very favourable ſituation. In 1783 it ſuffered a good deal by an earthquake. Hiſtory records ſeveral which have happened in this part of Hungary, and one in 1763 did a deal of miſchief. Mr. Groſſinger, an Ex-Jeſuit, author of the *Zoologia Hungarica*, a very remarkable work, for the cloſe of the eighteenth century, lives in this town. In regard to the general plan of this work, and the knowledge it contains of the preſent ſtate of this ſcience, it is very ſimilar to the Natural Hiſtory of Pliny; but I queſtion much whether it will procure to its author an equally long-lived fame.

Amongſt other great men, as, the learned author juſt mentioned, King Ladiſlaus Poſthumus, and the Archbiſhop Kolonitſch, Mr. Korabinſky ſays, this town has had the honour of giving birth to "Tobias Angerer, a turner, who reſided thirty-ſix years in London, and had the good fortune to inſtruct the preſent reigning Sovereign in his art; and by his probity keep himſelf conſtantly in his favour."

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It was not far from hence that Nature produced, in 1701, that remarkable phænomenon, the Twin Sisters who were united back to back. They lived till they were twenty-two years of age, and were carried about many parts of Europe, as a show: there is a long account of them in the Philosophical Transactions.

A bad inn, no acquaintance, and nothing to see, induced me to pass only half a day here. I hired a chaise and pair, set off about noon, baited half way, and in the evening reached Gran. The road was good, and by the side of the Danube. At Almas, which I passed through soon after leaving Komorn, there is a hot spring. I saw soon after another quarry of marble like that of Dotis. The rocks that overhang the road are stratified sandstone, and calcareous *tophus* or *travertine.*

As I was examining these rocks, a lad came merrily along with joy in his countenance, and from each hand something hung dangling by a string. These were two of the *Mus Cittillus:* one was at the last gasp; the other, from having a thicker string about its neck, had not suffered much: this I bought for a trifle, and took into my chaise.

I have often observed in Hungary, and particularly hereabouts, that the young pigs are striped on the sides: this is common to the young of wild ones, but I never saw it in the young of our domesticated ones.

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CHAP. III.

GRAN, ITS HOT SPRINGS, FROGS, EPSOM WATER—NATURE OF THE ROCKS—VISSEGRADE—BOGDON—ST. ANDREE.

May 19. TO find an Engliſhman and the brother of an Engliſh Peer, married and ſettled at Gran, how I was ſurpriſed! Major Dormer brother of Lord Dormer I found here, and here apparently fixed for life. He received me in a very friendly manner, ſeemed glad to ſee one of his countrymen, and was ſo obliging as to be my Ciceroni for Gran. The firſt thing I looked at was the old ruined fortreſs built on a compact ſtratified limeſtone rock, on the banks of the Danube. From hence there is a very extenſive view, and in return it forms with the neighbouring hills a fine *point de vue*, as you come from Komorn. The town is favoured with a fine ſpring of tepid water, of more uſe, I believe, to the Frogs than to its other inhabitants. My Ciceroni aſſured me, that this animal is not torpid here during the winter, but is then ſeen in numbers in the pond in the town, which receives its water from this ſpring. Buſbeck, who was here in 1554, obſerved the ſame thing; for he ſays, " Je ſçavois deja que ce défaut étoit

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étoit commun à tous les Turcs: auſſi en fui-je bien moins ſurpris que je ne l'avois été d'entendre croaſſer des grenouilles pendant toute la route de Commaronium à Grand, d'autant mieux que nous étions pour lors dans le mois de Décembre, & que le tems étant très froids, ceci me parût un phénomène. J'en demandais la cauſe à quelques gens du paye, qui me dirent que l'eau de ces marais malgré la rigueur de la ſaiſon étoit toujours tiéde à cauſe de la quantité de ſoulphre qui étoit dans le limon." This is uncommon, but not ſurpriſing. For theſe three years I have kept a favourite Tree-Frog, *Rana arborea*; but ſhe is as gay in winter as in ſummer, provided ſhe has warmth and enough to eat. The German ſtoves, which keep the rooms warm all night, have been very favourable to her. In this, hybernation differs from ſleep, that whereas the latter admits of little variation, and can never be laid aſide, or through art receive a ſubſtitute, the former greatly varies, and may be ſupplied by warmth and food. The Alpine Marmot in ſome high vallies in Savoy hybernates, I am told, eight or ten months in the year. In other parts of the Alps it does not hybernate half that time; and when kept warm, and well fed, its annual ſleep entirely foreſakes it, but not its diurnal. The ſame warmth that keeps alive the Frog, keeps alive the inſects on which it feeds; which, in their turn, will find food from the vegetable world, the mediate or immediate ſupport of every living being, kept in vegetation by the ſame cauſe.

Lately a ſpring of Epſom water has been diſcovered, and the proprietors

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prietors have eſtabliſhed a large manufactory of Magneſia, with not leſs than four or five boilers. It is in its infancy; but I do not doubt it would be a ſource of great wealth, were there as great a ſale of it, as of ſugar or ſalt: but this not being the caſe, I am much afraid the demand will not equal the quantity produced. The water exudes from a clayey ſoil. According to the analyſis of Dr. Vinterl, Profeſſor of Chemiſtry at Peſt, 100 Engliſh cubic inches of it contain 700 grains of vitriolated Magneſia,
24 grains of aërated Magneſia,
14 grains of muriated Magneſia.

From a paper in the eighth number of the *Merkur von Ungarn*, it appears that vitriolated Magneſia has likewiſe been found here, in a dry ſtate, in great abundance, as ſome miners, employed by the Archbiſhop, were able in a ſhort time to collect above twenty hundred weight of it.

In the buildings, and likewiſe in the ſtreets, I noticed a kind of *Breccia* like a volcanic *Tufa*; and being informed that the quarry was not far off, I took a walk in the afternoon to ſee it, for geognoſtic ſigns often throw great light upon a dubious Foſſil. By miſtaking the road, I could not find the quarry; but I found the hills in which this quarry muſt be, compoſed of nothing but fragments of different kinds of Porphyry. Many of theſe fragments would weigh a ton; and here, where the *Breccia* is very coarſe, nothing

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thing like ſtratification can be ſeen: but in the ſame hill, the *Breccia* is often as fine as a Sand-ſtone; and it is then more or leſs ſtratified. This is an obſervation I have often made, and even in our Iſland, and it is exemplified in the hills about Edinburgh. The ſame may be obſerved in Sand-ſtone ſtrata, where, if it becomes very coarſe, like Pudding-Stone, it ceaſes more or leſs to be ſtratified.

The next morning I examined the hills which lie on the other ſide of the Danube. I found them ſimilar to thoſe of yeſterday, but with ſtronger marks of ſtratification, being finer grained: this ſtratification is often found in the middle of the hill, ſupported and covered by the coarſe unſtratified *Breccia*: this is a ſtrong indication, I think, of a formation under water. Theſe hills, if I had had time to examine them with a view to Botany and Entomology, would, I think, have afforded me many things new or rare. Here it was, I believe, where I ſaw the *Polygala major* growing in great abundance. The *Turdus ſaxatilis?* I likewiſe found here, and at the foot of theſe hills the *Cittillus*, and abundance of both the varieties of the *Lamia Morio* crawling on the ground. This animal is a ſtriking example of the conſtancy of ſome varieties, if theſe be varieties, and excluſive of their colours they are perfectly alike. For though they are deſcribed as ſometimes having the *elytra*, the firſt joint of the *antennæ*, and the legs, ſometimes black and ſometimes brown; yet this is not promiſcuous; but the black *elytra* are always accompanied

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panied by black legs and *antennæ*, and the brown *elytra* by brown legs, with the firſt joint of the *antennæ* likewiſe brown.

The inn here is very good, but the hoſpitality of my countryman did not permit me to make much uſe of it; yet I had rather have been without the comfort of his hoſpitable table, than have found here an Engliſhman, and one of his rank, ſettled for life. The thought of never returning to one's native country is a melancholy one: "*Let me return and be buried with my fathers*," is, I think, an inſtinctive wiſh, which towards the decline of life, in the moments of reflection, muſt often ariſe, if prejudices againſt our country do not prevail.

Excluded from ſerving his country in a military line, by its laws, on account of his religion; he entered early in life into the Imperial ſervice, and fought againſt the Pruſſians in the laſt war between theſe two powers. He has now retired from ſervice with the rank of Major, and has married an Hungarian lady, by whom he has one or two children. At Vienna I ſaw a great many Iriſh in the pay of the Emperor, being likewiſe excluded from the Britiſh ſervice on account of their religion.

When the dogmas of religion were often a ſufficient cauſe of nations riſing in arms againſt one another, of internal tumults, and rebellion; it was requiſite that governments ſhould know on whom they

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they had to rely, and with juſtice could demand that the ſaith of thoſe who offered themſelves as their particular defenders ſhould not make them their natural enemies. But a change for the better in the opinions of men, renders theſe laws now leſs neceſſary: and as nothing keeps alive reſiſtance and diſſatisfaction in the weaker party, ſo much as intolerance in the ruling; probably, if all diſtinctions of this nature were to ceaſe, no inconvenience would ariſe, and greater unanimity might be expected as its natural conſequence: but ruling principles of government are not to be haſtily changed. The family of Dormer, as far as I recollect, has never interfered in the religious differences of their country. But in gratitude I ought not to ſpeak againſt the teſt act; to it I am indebted for the roaſt beef and plum-pudding I eat at Gran: it is an ill wind that blows nobody any good.

Gran has between five and ſix thouſand inhabitants. Its archbiſhop, as archbiſhop, is lord lieutenant of the county, primate and chancellor of Hungary, has a ſeat and vote in the royal council and ſeptemviral court, and is legatus natus. He has the excluſive right of crowning the king, and can create nobility upon the archiepiſcopal domains.

When the nobility are called to defend their country, he muſt bring a pair of colours into the field, and under each a thouſand men. He is likewiſe prince of the German Empire. The archbi-

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ſhop, filling ſuch high offices, is obliged to reſide at Bude, and the chapter is at Tyrnau.

Ever ſince leaving Oedinburgh I had travelled over a flat country, where I could not expect to meet with any thing intereſting in mineralogy; I had therefore travelled in a chaiſe. But the country becoming here more hilly, it promiſed to offer me occaſions of mineralogical obſervation: I therefore ſent my portmanteau on to Offen, by a carrier, and, putting a change of linen in my ſervant's knapſack, I ſet off for Viſſegrade on foot.

For the firſt four or five miles I walked at the foot of hills compoſed of the ſame kind of rock as thoſe I have juſt deſcribed: and when on account of the road leaving the hills I could no longer examine them; from the looſe fragments I found by the road-ſide, and from the rock, which now and then appeared above the ſoil, I had reaſon to believe they continued the ſame.

The preſence of the moon, and the calmneſs and ſerenity of the air, made me almoſt regret that my evening's walk was not longer. About nine I reached Viſſegrade. As this was no poſt, or much frequented, road, I had no right to expect a good inn, but I got a room to myſelf; a comfortable thing in a thronged hedge ale-houſe. It was one that ſerved for brew-houſe, lumber-room, and pantry; but alas a pantry *degarnie!* But if I had no victuals, I had muſic; it was Whitmonday,

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Whitmonday, and a party of ſtrolling ziguiner muſicians had fixed their quarters here for the night. Their inſtrument is the fiddle. I knew I could ſleep in ſpite of it, I ſet it at defiance, and threw myſelf upon my bed. I hardly was there, when lo! the bagpipe, the bagpipe itſelf, to my great ſurpriſe and vexation, began to make itſelf heard. Whether the divine muſician who brought forth the thrilling ſounds was deſcended from any of the noted highland pipers, I know not; this I know, that a more frightful noiſe I never heard. I thought I ſhould have had the megrim, but its monotony in ſome degree mitigated its *antiſoporific* powers, and I ſlept; and in the morning, when I intended to have enquired of him of what *ſchool* he was, I found he was off.

This frightful inſtrument is common in many parts of Europe. In Sicily, when the ſhepherds about Chriſtmas leave their hills, and come into the great towns, they bring their bagpipes, and then no language can expreſs the ungrateful noiſe they make. Woe to thoſe who are ſubject to the head-ach! But *de guſtibus non eſt diſputandum.*

Fleas are as good as larum clocks; they awake us as ſoon as the wants of nature are ſupplied, and then make us quit the bed of indolence. Through their inceſſant admonitions I was up with the ſun; and when I ſtepped out of my alehouſe I was charmed with the beauty of the ſcenery which ſurrounded me. Before me flowed the rapid Danube, winding amongſt hills covered with wood, variegated accord-

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ing to their ſituation, with light and ſhade. By the ſide of this rapid river ſtands an old ruined tower, whoſe connected wall called my attention to the old caſtle, to which it is united, ſeated on the top of an immenſe perpendicular and craggy rock, which towards the bottom is covered with vineyards.

I was ſo pleaſed with this view, that after breakfaſting, and not upon muffins and crumpits, I croſſed the Danube, which is here very wide, to enjoy it to greater advantage from the oppoſite ſide, and from thence I ſketched this drawing. Seen from hence, I hardly know a more beautiful landſcape than what theſe ruins and rocks, with the addition of ſome hills covered with wood which now riſe behind them, form.

I repaſſed the Danube, and by a road now unfrequented and blocked up with briers, but formerly often trod by royal feet, I aſcended to the caſtle. Here I had a delightful view. I could ſee the Danube and its winding path amongſt the hills to a great diſtance; and I could make this remark, that though this rock is likewiſe a Breccia, it has not been formed of the ruins of other hills more elevated, which having fallen down have given it exiſtence; but it is of antient date.

I deſcended the ſide facing the river, but not without difficulty. It is evidently, though I think as high as Arthur's ſeat * at Edinburgh, entirely from top to bottom, compoſed of Breccia.

* About 800 feet from the king's park.

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A View of the Ancient Castle of Vissegrade.

London. Published by G.G. & J. Robinson, Pater Noster Row, July 1st 1796.

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This caſtle, now in ruins, was once the Windſor of ſeveral kings of Hungary, and, though in ruins, ſtill ſhews that it once was a princely dwelling. It is ſaid by ſome old authors to have been ſo elegantly fitted up, as hardly to have had its like in Europe. Here the ſovereigns of Poland, Bohemia, Moravia, and Boſnia, came together in the beginning of the fourteenth century and formed a treaty with Charles I. who entertained them in the moſt ſumptuous manner. Bonfinius deſcribing it ſays, "Hi tanta rerum copia, & tantis apparatibus tractati, ut nemo e Bohemis Poloniſque fuerit, qui vini & obſoniorum omnium abundantiam ſatis admirari poſſet." And Thuroczius adds, "Omni enim die ad prandium regis Bohemorum ex magnificentia regis Hungariæ expendebantur duo mille & quingenti panes, & de cibis regalibus copioſe; pabulum etiam equis per ſingulos dies viginti quinque garlettæ. Ad prandium vero regis Polonorum mille & quingenti panes, & de cibariis etiam abundanter. De vino autem expenſæ ſunt centum & octoginta tunellæ". Louis his ſucceſſor likewiſe reſided here: and here Charles II. died of the wounds he received by the hand of an aſſaſſin. Likewiſe as priſoners it has had ſovereigns within its walls; and the crown of Hungary, not leſs eſteemed by the Hungarians than the ark of the Lord was by the Jews, by an act of Ladiſlaus II. has been kept here. It has had the creſcent planted upon its walls, and in ſhort has had a viciſſitude of fortune: but now it ſuffers, to great minds the worſt of all,——neglect; and is, alas! become the dwelling of only owls and bats.

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The village or town which lies at the bottom of the hill, is inhabited by Germans, and their houſes are built as in Germany, and are accompanied by an orchard.

My ſervant here fell ill, and required reſt; and as I was neither inclined to paſs another night here, nor to loſe my time, I left him to go down to Offen by the firſt barge; and I ſet off on foot, about one or two o'clock, for Bogdon, where I was informed I ſhould find a tolerable inn. I ſoon came to a quarry of ſtone uſed for building; a kind of *Breccia*, of white fragments, very friable, but feeling harſh between the fingers; in which were a few ſpangles of black hexangular *mica*, mixed with a greeniſh grey-coloured clay *. From the harſhneſs and the *mica*, I am led to think theſe white fragments to be ſomething of the nature of *Pumex* partly decompoſed. Likewiſe a kind of *Tufa*, a congeries of various coloured ſmall fragments of a terreous nature, intimately united †. I followed the courſe of the river,

* *Breccia.*

Ex fragmentis minoribus albis aſperis ungue raſilibus, interdum fere pulverulentis mica hexangulari nigra ſparſis, fragmentis extraneis rarioribus Quartzi pinguis lactei, Marmoris vulgati et ſhiſti? ope argillæ griſeo-vireſcentis conglutinatis.

Tubo ferruminitorio argilla vitrum viride, & fragmenta alba vitrum albidum, ſine intumeſcentia aut phoſphoreſcentia præbent.

† *Breccia.*

Ex fragmentis parvis heterogeneis terreis ferrugineis rufis & lateritiis inter ſe intime coalitis, fragmentis Hornblendæ Baſaltinæ & lamellis Micæ nigræ hexangularis inſperſis.

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which ſtill continued to run amongſt pretty high hills. Thoſe I could examine were like what I have already deſcribed, and all the way by the road ſide I ſaw fragments of the ſame. When arrived at my inn, I found nothing but coarſe bread and very ſour wine; and therefore I reſolved, as it was not late, to try my fortune once more. But the Fates had decreed, and then all human efforts are fruitleſs—they had decreed that I ſhould go without my ſupper! And ſo it happened: for in paſſing ſome vineyards I got out of the right road, amongſt the hills, and thick woods, chiefly of Beech; and after loſing a couple of hours, I was informed by a woodman I luckily met, that I muſt go back again, being quite out of my way. The hills I aſcended were pretty high, and connected to thoſe about Viſſegrade, and compoſed of the *Saxum metalliferum*, or argillaceous Porphyry.

Being more hungry than tired, and ſeeing Watzen only two or three miles off, on the other ſide of the Danube, I ſet out again; and being told that a child might find the way, I took no guide. I ſoon loſt my way again. I indeed reached the river, but could find no ferry boat; nor could I, with all my vociferous exertion, induce any one to come to my aſſiſtance. As it was growing dark apace, I made the beſt of my way back. Several birds of evil omen came hovering about me, particularly Owls and Goatſuckers; and on entering the village I was attacked by all the Dogs of the town, and obliged to draw my cutlaſs in my defence. The foot paſſenger

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in the ſheep-countries in Hungary runs conſiderable riſk from the Sheep-dogs, which are very large and fierce. About ten I returned again to my ſour wine and bad bread.

In theſe ſeries of misfortunes I conſoled myſelf with having met with one piece of good luck. In a field, *haud procul a pago Bogdon in vino aquoſo acido & pane ſicca brunnea abundante*, I found, for the firſt, and only time in my life, and then in great abundance, the *Lethrus Cephalotes*. They make holes in the ground, like the *Scarabæus ſacer*, &c. Almoſt all I found had ſomething green in their mouths: ſome had the *Alchemilla vulgaris*. On ſhewing them to a vine-dreſſer, he curſed them, and told me they did much miſchief in the vineyards. Whether he took them for ſome more common *Scarabæus* I don't know; but at Vienna they are looked upon as a very rare inſect, and as only found in the ſouthernmoſt part of this kingdom. In Tombacher's catalogue they are valued at 40 creutzers, that is 16 or 17 pence.

My landlady took pity on my misfortunes, and, as ſhe could give me nothing to eat, gave me a double portion—of feather-beds to *cover* myſelf with—It was a very warm night. It is a very great inconvenience in Hungary and Germany, that inſtead of ſheets, blankets, and quilts, a light kind of feather-bed is uſed: this is always too ſhort; and the ſame being uſed in ſummer as in winter, the traveller has no remedy, if he finds himſelf too hot, but to get on the outſide of it, and ſo have no covering at all. It is likewiſe a cauſe

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cauſe of dirtineſs, as the upper ſheet is ſown on to the under part of this feather-bed, or, what is more common, the feather-bed is put into a dark-coloured caſe, and then no upper ſheet is uſed; but this contrivance ſaves the chambermaids a deal of trouble.

In the morning I ſet off with much eagerneſs for St. Andrée, where I had reaſon to expect, from its being a conſiderable town, to meet, not indeed with hot rolls or muffins, but with the common breakfaſt of this country, good coffee and white bread. But, alas! I found only a moſt miſerable public houſe, which afforded nothing but ſmall-beer, eggs, and bread: ſo, had I reached this much deſired St. Andrée laſt night, I ſhould not have fared better. So far as concerns inns, this part of Hungary is much in the ſtate it was in more than two centuries ago, when Buſbeck travelled through Hungary: at Gran he was adviſed to eat heartily, as he would not get any thing afterwards to eat till he reached Bude.—Where torrents had laid bare the rock, I found the uſual *Breccia* *. The hills here ſeparate;

* It may intereſt ſome of my readers, as theſe *Breccia* rocks are of great extent, to have a more accurate and minute deſcription of them. For their uſe I here ſubjoin an extract from my own Catalogue of Foſſils.

No. 17. *Breccia.*

Fragmentum Porphyrii rufeſcentis cryſtallis Hornblendæ Baſaltinæ & Feldſpati cum lamellis micæ nigræ hexangularis, in lapillis Porphyrii? conglutinatum.

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ſeparate; thoſe on the left of the Danube run towards the eaſt, and thoſe on the right keep more diſtant from this river. The ſides of the

16 *Breccia.*

Ex fragmentis majoribus albis terreis aſperis textura ad lentem ſubfibroſa, cryſtallis Hornblendæ Feldſpati & lamellis micæ nigræ hexangularis, ope ſabuli heterogenei terrei cinerii arcte conglutinatis.

Breccia.

Cineria tam ſimplex colore & conſiſtentia ut pro Porphyrio fatiſcente facile haberi poſſit, fragmentis Hornblendæ Baſaltinæ inſperſis.

Tubi ferrumînitorii ope Scoriam heterogeneam albidam & nigram præbet.

In this *Breccia*, and conſtituting a part of it, are ſmall and large fragments of the following ſtones:

No. 18 *Porphyrius.*

Ex Iaſpide ſolida hepatica, particulis Feldſpati albidi et lamellis micæ nigræ hexangularis conſtans.

22 *Porphyrius.*

Ex Trapeſio nigricante, particulis parvis Feldſpati albi fatiſcentis copioſiſſimis conſtans.

20 *Porphyrius.*

Ex Petroſilice nigricante, particulis parvis Feldſpati albidi & cryſtallis parvis Hornblendæ Baſaltinæ conſtans.

19 *Porphyrius.*

Ex argilla indurata (Germanorum) dilute lateritia cryſtallis parvis Hornblendæ Baſaltinæ & Adulariæ compoſitus.

13½ *Trapeſius.*

Niger cultro rafilis rarius & ſubtiliſſime foraminoſus, loculis materia terrea alba non efferveſcente forſan Argilla indutis.

Tubi ferruminitorii ope vitrum heterogeneum albidum & nigrum præbet.

2 *Trapeſius.*

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the hills were planted with vines, and the fields with Indian corn. At St. Andrée I took a chaise, and travelled on to Bude, where I arrived about two or three o'clock in the afternoon.

2. *Trapezius.*

Niger cultro rasilis foraminibus subtilissimis materia albo-cœrulescenti indutis, particulis nonnullis Adulariæ, intuitu multum a precedente differt, indole perparum.

7 *Trapezius.*

Idem indole. Externa facie scoriam adhuc magis emulatur.

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CHAP. IV.

BUDE—ROYAL PALACE—CASERNS—HOSPITALS—UNIVERSITY—LIBRARY—THEATRES—COMBAT DES ANIMAUX—COFFEE-HOUSES—HOT BATHS—ANTIQUITIES—FAIR—KETCHKEMET HEATH—FIELD OF RÆKOSCH—SUPPOSED BASTILE, &c.

THE entrance into Bude is the moſt unfavourable that can be conceived. There are no fortifications nor even gates to this city; and you enter the metropolis of Hungary as you do one of its villages: and as the Jews have occupied the firſt part of the town, it is not neceſſary to ſay, that the firſt thing that ſtrikes you is poverty and filthineſs.

If in this direction the metropolis does not ſtrike you with its beauty, it does with its extent. From the time I took in going to my inn, I think the town muſt be three or four miles long; but as it has the Danube on the left, and the fortreſs on the right, it is very narrow.

When we ſpeak of our metropolis, we generally conſider the three towns which compoſe it, as one: ſo here we may conſider the cities

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cities of Peſt and Bude as one; for they are only ſeparated by the Danube, over which there is a bridge of boats, and then this city is very reſpectable in its extent and population; Peſt containing ſixteen, and Bude or Offen twenty-two thouſand inhabitants. Th e fineſt public and private buildings are in Peſt, and within the fortreſs. The Royal Palace is a vaſt and ſtately pile of building. The Hoſpital for Invalids, now uſed I think as caſerns, is fine and ſpacious, and the internal œconomy of it, good: it is calculated for four thouſand men; but on emergencies can receive double that number. The Governor was ſo obliging as to conduct me through it himſelf. I was greatly pleaſed to ſee with what mildneſs he treated his men, and they in return looked up to him as to their friend. He receives no *zeguiners* (gipſies) into his regiment; a moſt wiſe regulation. No doubt it was not the bad example which they might give, which alone induced him to exclude theſe vagabonds; but he wiſhed to keep alive, in his regiment, a principle of honour, by conſidering his men as above being aſſociated with thieves and vagrants; which is the common character of the *zeguiners*; they would then, he thought, be leſs inclined to act like them; and, by entertaining a high opinion of themſelves, require leſs the reſtraint of puniſhment. Nothing is ſo injudicious, and ſo injurious to the diſcipline of the army, as preſſing into it the refuſe of mankind. Likewiſe, to induce men to enter more readily into the ſervice, and to make them bear their hardſhips more patiently, where ſuch paltry pay is received, the ſoldier ought to be taught to conſider his poſt to be a poſt of honour.

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Theſe ſoldiers ſeemed to live more comfortably than one would expect they could on two-pence-farthing a day (five creutzers), which is their pay; but they have a loaf of good rye bread, three pounds weight, every two days gratis. They in general meſs together, and each gives daily a *groſs*, which is ſomething leſs than three-halfpence; this is only for their dinner, which takes place about ten or eleven o'clock. They had two or three good diſhes. The Hoſpital belonging to this eſtabliſhment is very good, and well managed.

For hoſpitals this town is badly off; that belonging to the Univerſity is good, but can admit very few; twelve or fifteen only; and that which belongs to the town, and is called the *Burgers Hoſpital*, is, I hope and really believe, the worſt in Europe. Had I not ſeen it, I could not have believed ſuch to have exiſted in this town. Every thing here, building, furniture, attendants, &c. &c. is miſerable, ſtinking, and dirty. In a little ſhabby room, in which were eight beds, there was only one ſmall window, and this ſhut, though the weather was hot. Seeing ſome flies on the face of a poor wretch, who appeared almoſt gone, I approached him; when one of the ſick, thinking I doubted whether he was dead or aſleep, ſaid, "O, Sir, he is dead enough." Surely Joſeph II. never was in this hoſpital, or he would have ſuppreſſed it as an inſult to humanity. I believe there are in the town, as in moſt Catholic countries, ſome convents who undertake the painful but humane office of ſerving the ſick.

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The Univerſity has the rich foundation of twenty thouſand pounds annual income *; four thouſand of which is applied to pay the ſalaries of the Profeſſors. Beſides the uſual chairs which exiſt in every univerſity, there are thoſe of natural hiſtory, botany, and œconomy. The collection of inſtruments for natural philoſophy, and the models of machines, are good; and the Muſeum of Natural Hiſtory, which contains the collection of the late Profeſſor Piller, beſides that of the Univerſity, may be ranked amongſt the fine collections of Europe.

The Library occupies a very fine extenſive hall; it poſſeſſes too few modern books of ſcience, yet ſeems uſeful, by being very acceſſible, which is not uſual with moſt public libraries; yet I found it not much frequented.

The Botanical Garden is good, but has very little hot-houſing.

The Obſervatory is in one of the towers of the Royal Palace.

There are two theatres. That in Bude, which was originally a church, and was applied by the Emperor Joſeph to this purpoſe, is a very good one; that in Peſt is ſmall, and with wretched ſcenery and wretched decorations. The pieces are generally played in German,

* Korabinſky's Lexicon.

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but within theſe few years ſome have been given in the Hungarian language.

On *Sundays* and great feſtivals, the public is entertained as at Vienna with the *Hetze*. The proprietors have two very fine Wild-Bulls. The day I was a ſpectator of this polite and humane amuſement one was turned out on the arena, and at the ſame time an Hungarian Ox: this attacked the former, but was immediately thrown down: but our Engliſh Bulls would have diſputed the ground with him to greater advantage: an Hungarian Ox, and a *Bos ferus*, are very unequally matched. Then came a *Raube Bear*; this is a Bear that has been kept without food for ſeveral days, and rendered ſavage by hunger: on another Bear being let out a battle enſued: the latter was ſo much inferior in ſize that the conteſt did not laſt long: the *Raube Bear* kept the other, which ſeemed no ways ferocious, down with his paws, and ſtrangled him, by ſeizing him by the throat, and then carried him into his den. The great diſparity in ſize and ſtrength rendered this a moſt diſagreeable fight. The White Greenland Bear afforded more entertainment. In the middle of the arena there was a ſmall pool of water, with a Duck in it. As ſoon as the Bear came to the edge of the pool, the Duck laid itſelf flat and motionleſs on the ſurface of the water: the Bear leaped in, the Duck dived, and the Bear dived after it; but the Duck eſcaped, through its ſuperior diving. The next piece was a bold attempt of one of the keepers to wreſtle with an Ox. As ſoon as the keeper came

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came upon the arena, the Ox ran at him. The man, who was not above the middle ſize, ſeized his antagoniſt by the horns, who puſhed him indeed from one ſide of the arena to the other, but could not toſs him. After the battle had laſted ſome time, and the Ox had got the keeper near the ſide of the arena, and might have hurt him, ſome aſſiſtants came out, diſengaged him from the wall, and gave him his dagger, which he immediately ſtruck between the cervical vertebræ of his antagoniſt, which inſtantly fell lifeleſs to the ground; but ſmall convulſive motions continued for a minute or two. In this manner the Oxen are killed by the butchers at Gibraltar, who, I am told, have learned it from their African neighbours. Might not the magiſtrates of towns recommend this method to their butchers, and, if found better than the uſual manner of knocking them down, even compel them to adopt it? Every means of diminiſhing the ſufferings of the brute creation ſhould be recommended, not only from humanity towards them, but for the ſake of our own ſociety. Men accuſtomed to be cruel towards animals, will require but a ſmall inducement to be ſo to their own ſpecies. A Lion came next upon the ſtage, and one with all his native majeſty: conſcious of his ſtrength, he looked undauntedly about, to ſee if he had any opponent; but he was brought out only for ſhow. From the hole in the upper part of the gate of the arena, a handkerchief was put out, and inſtantly drawn back: he flew at this in an inſtant. Some other animals were turned out, and were glad to get into their dens again. One of the keepers ſhewed his addreſs in ſpearing a Wild Boar, which ran

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at him as ſoon as he came on the arena. I found few other public amuſements. Being ſummer, moſt of the *grand monde* was out of town; for the Hungarians are like the Engliſh, they live a great deal upon their eſtates. In winter no doubt I ſhould have found the uſual amuſements, as concerts, balls, card parties, converſaziones, &c. The *Citizens* have a ball ſometimes on the Sunday evenings, and in the neighbourhood there are ſeveral inns pleaſantly ſituated in retired ſituations, where the great and ſmall often go for recreation. Coffee-houſes are little known in the northern part of the continent; but in the ſouthern they are places of reſort, time-killing places at leaſt, if not places of amuſement. This town has ſeveral good ones; but that facing the bridge is, I think, not to be equalled in Europe. Beſides a very large handſome room elegantly fitted up, and with two or three billiard-tables, there is a private billiard-room for thoſe who do not ſmoke; and two or three other rooms for giving entertainments in; and very comfortable dinners may be had. And here, according to the continental cuſtom, all ranks and both ſexes may come; and hair-dreſſers in their powdered coats, and old market-women, come here and take their coffee or drink their *roſolio* as well as Counts and Barons.

The hot baths are the moſt remarkable things of Bude: the water ſprings up in ſeveral places in great abundance, in that narrow ſcrap of land which lies between the Danube and the hill on which the fortreſs ſtands. The Turks, who ſo often have had poſſeſſion of the city, could

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could not fail of applying it to their favourite paſtime; ſome of the baths, and the greateſt, are Turkiſh remains. There are large common bath for the lower order of the people, and commodious private baths for thoſe who can afford to pay for them. In a common baths I ſaw young men and maidens, old men and children, ſome in a ſtate of nature, others with a fig-leaf covering, flouncing about like fiſh in ſpawning-time. But the obſerver muſt be juſt. I ſaw none of the *ladies* without a petticoat, though moſt were without their ſhifts. Some of the *gentlemen* were with drawers, ſome without; according, no doubt, to their degree of delicacy, and as they thought themſelves favoured by nature or not. But no very voluptuous ideas ariſe in theſe ſuffocating humid ſteams; and as a further ſedative, the ſurgeon is ſeen hard at work, cupping and ſcarifying.

The firſt time I went into one of the private baths, I found the water ſo hot that I was glad to get out again: but this was my own fault; it may be made of all temperatures. I examined one of the hotteſt, and in the common bath I found the thermometer ſtand at 30 degrees of Reaumur; in a private one at 32; but at the ſpout, as it came from the ſource, it roſe to 46.

Near to this bath is the pond of *hot* water full of fiſh. Warm water, hot water, water ſmoking hot, ſcalding hot, boiling hot, differ but in degree, which is a thing eaſily overlooked in a *lively* de-

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ſcription. Yet what would be more ſurpriſing than to ſee fiſh ſwimming about in boiling water? In ſummer its warmth might paſs unnoticed, and in winter might be denominated ſcalding. I found the thermometer immerſed in it riſe to 20½ of Reaumur, whilſt the atmoſphere was only 15. But the difference in a ſevere winter, when the rapid Danube is frozen over, muſt be very great; and this happens ſometimes, though the latitude of Bude is but about 47. The army which called Matthew I. to the crown, when the ſtates were undecided whom they ſhould elect for their ſovereign, the crown of Hungary being then elective, was encamped on the frozen Danube. This pond is very deep, and has a communication with the bath; it is commonly reported that the fiſh are not eatable, but this I believe is a miſtake. I could ſee them, but not catch them; I think they belong to the genus *Cyprinus*.

As Alt Offen was a Roman ſtation, under the name of *Sicambria*, it is very natural to ſuppoſe that many Roman antiquities have been found here. I was informed at Vienna that there was a building ſet apart for the reception of Pannonian antiquities. This is a miſtake: they are ſhamefully ſcattered about the town. The gable end of the *Hoff Richters* houſe has the beſt collection: in the wall of this a great many inſcriptions are ſtuck. Near the ſame place was diſcovered a few years ago a *Sudarium* in good preſervation: it is about twelve yards long, and ten broad: the floor is ſupported by two hundred and forty-ſeven ſmall pillars: Schœnwieſſner has deſcribed it, and given a plate:

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plate of it. Juſt without Alt Offen (Old Bude) there is a chain of ruins running near an Engliſh mile; they are drawn by Marſillii. If they are examined on that ſide furtheſt from the Danube, they will rather be taken for works of nature than of art: then nothing is ſeen but a ſtalagmitical body, or calcareous incruſtation *; but on going to the other ſide which is broken down, it is plainly ſeen that this calcareous matter is only a cruſt covering a work of art. This cruſt in ſome places is a foot thick. Theſe remains were ſolid columns formed of filled up arches, a manner of building common amongſt the Romans. The moſt entire I ſaw was about three yards high, and nearly as thick. From their lineal direction, and particularly from the calcareous depoſition, I cannot ſuppoſe that they are any thing but the remains of an aqueduct, where the water, charged with calcareous matter, by running down theſe columns, has formed this incruſtation.

Near theſe ruins are, or ſoon will be, other ruins; ruins of a ſilk-mill. This machine, which is very large, was erected a few years ago, and went on for a year or two; but for theſe laſt eight or ten years it has not been worked, and will ſoon be rotten. The inactivity of the machine, as well as the inactivity of Hungarian induſtry, is attributed to the court of Vienna, which, the Hungarians think, wiſhes to keep them as a colony.

The *Peſt* fair happened whilſt I was here. It is the greateſt in the

* *Tophus communis.*

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kingdom, and laſts eight or ten days: many ſhop-keepers came from Vienna, and brought their merchandize with them. But the chief articles were the natural productions of Hungary, and the principal of theſe, Horſes. Theſe are driven to market in flocks like horned cattle, from the great *Puſztas* or commons: they are quite wild, and have never had a halter about their heads. When they come to market, they are driven into folds. In this manner they are ſhewn and ſold. When a purchaſer has bought one, it is not an eaſy matter to catch it, and take it away; for they do not ſuffer the near approach of their keepers, who are therefore obliged to catch them in this manner: A nooſe at the end of a long rope is put in a ſlit at the end of a long pole: this nooſe, by means of the pole, is endeavoured to be thrown over the Horſe's head; but this is often impracticable: if ſo, then the nooſe is thrown on the ground, and they endeavour to catch it by the ſame means by the leg. From the great number of horſes that are together, a good deal of time is often conſumed in this firſt ſtep. As ſoon as one is caught the greateſt confuſion takes place; and the ſpectators who are unaccuſtomed to this buſineſs cannot diveſt themſelves of fear, in behalf of the keepers, from the great danger in which they appear to be in, who now endeavour to haul it a little aſide to put a halter about its head, which it reſiſts; then three or four ſtout fellows fly upon it and ſeize it by the ears, head, and neck: they can often then put on the halter; but the ſtronger and more ſpirited are obliged to be thrown down firſt. The leading it away gives

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often no leſs trouble. For this purpoſe the buyer has at hand a ſtrong ſteady horſe, and theſe two are faſtened together by the head, with a very ſhort rope: he is even then often very troubleſome. The whole buſineſs is dangerous both to the keeper and to the horſes. The ſmaller kind of Horſes, ſuch as are in uſe amongſt the peaſants, ſold for about four or five pounds; thoſe for the army, from ſeven to twelve pounds.

Another ſtaple article are Oxen. A pair of fat Oxen ſold for nine to twelve pounds: not fattened, for eight or nine pounds. Wool, from the Hungarian breed of ſheep *(Ovis ſtrepſiceros)*, from thirty-ſix to forty-four ſhillings per hundred weight of Vienna; which, I believe, is about an Engliſh hundred weight of 112 pounds. The wool of theſe ſheep is often ſold by the pair of fleeces, at about two ſhillings the pair. The wool of the common German breed was about double this price. That of the mixed breed of German and Spaniſh fetched from five to ſix pounds the 100lb.

Tobacco is likewiſe a ſtaple article: that from Funfkirchen ſold at ten ſhillings per 100lb. of Vienna: that of Szegedin at fourteen ſhillings; and the beſt, which is from Debroe, at ſixteen ſhillings.

Beſides theſe ſtaple articles, there were many cart-loads of hides and Knoppern. Theſe latter are a kind of Gall, which grows upon the calix of the Acorns of the Common Oak; and are uſed as a ſubſti-

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tute for Galls, and for Oak Bark, in tanning. The quantity of common earthen-ware was ſurpriſing. A great many Jews, Greeks, and Armenians, who have moſt of the commerce of the kingdom in their hands, attended the fair.

The recruiting parties, which were not wanting here, any more than in our fairs, gave me an opportunity of ſeeing ſome Hungarian dances. They are very neat; but, being a kind of hornpipe, very fatiguing. The men wore the huſſar dreſs, and looked well. The rowels of the ſpurs were very large, ſome of the ſize of an half-penny, but without points; and ſome had double rowels: theſe were for the ſake of muſic, as throughout the dance a great deal of noiſe is made by ſtriking the ſpurs againſt each other, and by ſlapping their hands upon their boots and breeches. They danced to the ſound of the fiddle—So are men caught in Hungary!

The Turks having been in poſſeſſion of Bude from 1541 to 1686, I expected to have found here ſome remnants of Turkiſh arts; either in buildings, manufactures, or handworks; but there are no remains of Turkiſh buildings, except the Baths, worth mentioning, nor any arts that I could hear of.

The common arts, here, as well as in the reſt of Hungary, are chiefly in the hands of the Germans. On Corpus Chriſti day there was a great proceſſion, principally of the different trades. The Germans

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Germans wore the common dreſs, and the Hungarians their national dreſs: the latter made by far the beſt appearance, partly through their more elegant dreſs, and partly by being finer men; but the former greatly exceeded the latter in numbers.

Arms and agriculture are the great occupations of the Hungarians, nobles and plebeians; and few of them carry on trades, or enter into commercial affairs; but the equipment of an huſſar, and every Hungarian is an huſſar in his dreſs, is the buſineſs of Hungarian workmen. A common taylor would as ſoon think of making a pair of buckſkin breeches as a pair of Hungarian breeches; theſe are entirely different in their conſtruction from thoſe worn in other countries. The flap before is not held up by buttons, but it has a hem, through which a leather ſtrap, which lies likewiſe in a hem in the waiſtband, runs through, and faſtens with a buckle. The boots are likewiſe quite different in their conſtruction; the ſeams are on the ſide, and not behind; and the front part of the foot, and the front part of the leg, are in one piece; and the heels of them are often only formed of a ſemicircle of iron. The ſpurs are not faſtened on by ſtraps, but are riveted on. Nor are their ſaddles leſs different; they have, beſides a general difference in the conſtruction, a long proceſs behind, like the ſaddles of the Arabs, as deſcribed by Haſſelquiſt. The ſabre, and its accompanying pendent pouch, are likewiſe made by Hungarian workmen, and ſo I believe is the bonnet or cap; but this is not ſo commonly worn, and the cocked hat, except on

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gala days, ſupplies its place. The Hungarian dreſs is very coſtly; the breeches are always ornamented with lace; ſo is often the waiſt-coat, and the jacket both with fur and lace. The plume of *Raiger* feathers for their caps often coſts ſeveral guineas; and the ſilk and lace girdle or ſaſh is not leſs expenſive. In this dreſs the Hungarians walk about, and carry on the common concerns of life, which gives a gay look and military appearance to their towns; and when they meet in large bodies they make a very fine appearance. Thoſe who are not noble, are not allowed to wear the hanger.

The great concerns of commerce are chiefly in the hands of the Greeks and Armenians.

This city acquired a great addition of wealthy inhabitants in 1784, by the government and the public offices being transferred hither from Preſburg. It was on this occaſion that the citizens gave ſuch a ſtriking ſpecimen of mean and deſpicable egotiſm, and the Emperor Joſeph of ſuch greatneſs and public ſpirit. Through this new colony of opulent men in the public offices, the citizens found they could let their houſes, and ſell their wines and other produce, to greater advantage: they therefore requeſted of Joſeph the permiſſion to erect to him in gratitude a ſtatue. But mark the anſwer of the *man*: "When prejudices," ſaid he, "ſhall be eradicated; when true patriotiſm, and juſt ideas of the general good of the kingdom, ſhall be eſtabliſhed; when each, in an equal proportion, ſhall

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ſhall with readineſs contribute his ſhare to the wants of the ſtate, its ſafety and proſperity; when true enlightening knowledge, improved ſtudies, ſimplicity in the teaching of the clergy, and the union of true ideas of religion with the laws of ſociety; a ſolid juſtice; riches through increaſed population and improved agriculture; acknowledgment of the true intereſt of the landlord towards his peaſants, and of thoſe towards their landlord; when induſtry, manufactures, and the demand of them, and general unanimity amongſt the provinces of the monarchy ſhall be introduced, as I wiſh and hope; then I merit a ſtatue: but not where the city, by my transferring thither the public offices, for a more eaſy inſpection, obtains a greater conſumption of its wines, and a higher rent of its houſes."

I made two or three excurſions amongſt the hills at the back of Bude. The rocks that overhang the town belong chiefly to the alluvial *(aufgeſchwemte)*. By the water ſtreet I obſerved indurated Marl, with fragments of *Pectens*; and the Blockſberg, at leaſt on the ſide facing the Danube, is of *Breccia* *, formed of ſmall fragments of *Petroſilex* cemented by indurated Marl. But the hills I examined further back, I found to be of a whitiſh ſcaly limeſtone †; at a

* Breccia.

Ex fragmentis minoribus laſpidis & Petroſilicis rufi & nigricantis angulis integris & detritis, in maſſa calcarea heterogenea terrea albo-ferruginea inſperſis.

† Marmor micans.

Marmor iſſabellina ad angulos diaphanum, textura ſubtiliſſime ſpatoſo-ſquamoſa, micans, tarde effervescens.

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greater depth probably it might be fit to be uſed for Marble. I ſaw no ſigns of ſtratification, nor any petrifactions. I obſerved likewiſe ſand-ſtone in ſome places.

On the right hand, and a few hundred yards from the road which leads to the *Schöne Schæferinn*, I found in a hollow a very fine white ſand *, which, till I tried it with acids, I ſuppoſed to be a fine white ſiliceous ſand; but it diſſolves entirely in acids, with effervescence, though ſlowly. It is certainly calcareous, and I think it is formed by the decompoſition of the ſcaly limeſtone. In ſome places there were ſmall pieces, which did not fall into ſand, till rubbed between the fingers.

I noticed few rare plants, but in one ſhady place I found the *Cypripedium Calceolus*, the *Digitalis ambigua*, and the *Melittis Melliſſophyllum*, growing together in great plenty. In inſects I was pretty fortunate; but I do not recollect which I here added to my collection, except the *Curculio Cynaræ*, which was in great abundance; and the *Curculio Bardanæ*, *Lamia triſtis*, and the *Papillio Meſnymone*. But I miſſed the limeſtone hills, containing ſuch immenſe quantities

* As this cannot be claſſed under any genus of Foſſils, of the Gmelinian edition of the *Syſt. Nat.* of Linnæus, I have formed one to occupy the ſame place in the calcareous order, that *Arena* does in the ſiliceous.

Pſammos pulverulenta.

Alba, granulis minutiſſimis opacis hebetibus.

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of *Chamites*, *Turbinites*, and *Pectens*, mentioned by Mr. Born; yet in the ſtreets of this city I ſaw plenty of a ſtone much uſed for building, with abundance of the caſts and impreſſions of theſe ſhells, but no petrifactions: and the evening before I took my leave of this city, I found under the chiſel of the maſon, a real volcanic *Tufa*, uſed likewiſe for building; the fragments of pumice-ſtone were very evident; it contained a few ſpangles of *mica*. The workmen ſaid they brought it from a quarry ſix or eight miles to the N. E. of Peſt.

From the hills at the back of Bude I had a fine view of the Ketchkemet Heath, which lies on the other ſide of the Danube, and forms a part of that immenſe plain which extends ſouthward from the hills by Watzen, the Matra, Tokay, and thoſe that run from thence into the county of Marmorus, to Belgrade; and eaſtward from Bude and the lake Balaton, to the hills which ſeparate Hungary from Tranſylvania. When I looked to the eaſt or to the ſouth, not a hill could I ſee.

Mr. Born, ſpeaking of this plain, ſays, "The earth is covered with the *Glarea Linnæi*, which is mixed with ſmall broken ſhells. Here one may often travel for half a day, without meeting with a tree or a houſe, except the poſt-houſes; yet this plain, 250 miles long, and equally broad *, feeds a great number of horned cattle."

* Fifty German or Hungarian.

Here

Here are the great *puſztas*, or cattle-farms, ſingle farm-houſes, ſcattered about only for breeding and feeding of cattle; and it is principally from hence that the markets of Vienna, and far more diſtant ones, are ſupplied. Though this plain is in general dry and ſandy, yet in ſome places it is marſhy. This ſandy ſoil begins as ſoon as you croſs the Danube from Bude to Peſt; and the inhabitants of this latter city are much annoyed by ſand in windy weather. I took a ride to a ſmall farm a few miles from hence: the ſoil was ſandy, but black, and bore excellent crops of wheat. The Earleſs Marmot, *Arctomys Citillus*, was very common here. We caught ſeveral by pouring water into their holes, and catching them as they came out, in a bag.

The Field of Räkoſch, where the nation uſed often formerly to aſſemble, to elect their ſovereigns, and hold their diets, is on this plain, only three or four miles from Peſt. At ſome of theſe great aſſemblies, eighty thouſand have here pitched their tents. Since the fatal battle of Mohatſch, in 1526, no ſuch meetings have been held. Had Joſeph II. contemplated this field, and conſidered the tranſactions which have paſſed upon it, it might have given him ſome uſeful hints in governing this ſpirited nation. It ſtill brings to their recollection their ancient freedom; and they venerate it now, as an altar on which their hardy forefathers have often ſworn to defend their rights.

And

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And there is a building on the ſame ſide of the Danube, and on its banks, which they conſider as a ſign of departed liberty: it is differently named, and differently ſpoken of, as the generous glow for freedom, or chilling indifference, is felt, and as affection or diſſatisfaction to the court of Vienna may predominate. Its moſt common appellation is Baſtile; an odious ſound, and enough almoſt to damn a Work-houſe or a Bridewell: it was erected under the hated government of Joſeph the reformer: inauſpicious therefore to Hungarian liberty in its erection, and being built under a particular *direction*, it is ſtill more ſo; and then, what makes its deſtination leſs doubtful, the rooms in general are ſo ſmall as not to be in the leaſt adapted for an hoſpital, work-houſe, or for any thing of this kind; ſo think the patriots here: it was never finiſhed, and it was ordered by Leopold to be ſold. Whether Joſeph was apprehenſive, that the innovations he was making in the rights of his Hungarian ſubjects, would bring on ſuch diſcontents as might render a ſtate priſon neceſſary, or whether he built it only to intimidate them, or whether he had deſigned it for ſome quite different purpoſe, is not known; but had he not with one ſtroke of his pen, on his death-bed, cancelled the labours of reform of nine or ten years, he might have filled it with *rebellious* ſubjects.

7.

CHAP.

CHAP. IV.

NATIONAL DISLIKE TO THE AUSTRIANS—CONSTITUTION OF THE KINGDOM—STATE OF THE NOBLES, CITIZENS, AND PEASANTS—THE URBARIUM—STATE OF THE CLERGY—INNOVATIONS OF JOSEPH II.—ANTIENT ORDER RESTORED—TRANSACTIONS OF THE DIET OF 1790—AND STATE OF THE PROTESTANTS.

AT Vienna I learned that the Hungarians neither liked the Auſtrians, nor the Auſtrian government, and during my ſtay in Hungary, in every ſociety I found a confirmation of it.

In antient animoſities, handed down from father to ſon in opinions kept alive by vulgar proverbs and ſayings, we may often find the cauſe of national hatred; ſo to the frequent wars which were carried on between theſe two nations may be attributed ſome part of the mutual diſlike now ſubſiſting. But Hungary has been at war with its other neighbours, and yet with theſe, national animoſities have ceaſed: we muſt therefore look further.

Hungary

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Hungary has had its turbulent times, and its public misfortunes, like other nations, probably more than an equal ſhare; and what hiſtory of a country is not ſo full of them, as almoſt to deter one from turning over the page of hiſtory, which is hardly more than a recital of diſaſters; where years, if years there have been of peace and public happineſs, are paſſed over in a few words, whilſt wars, famines, peſtilences, and other great calamities which vex ſociety, are detailed in forcible language? But that page of hiſtory fills the Hungarian with the deepeſt ſorrow, which records that the crown of Hungary was worn by a prince from a foreign houſe, and that he kept his court out of Hungary.

This has now been the caſe for a long ſeries of years. The crown from being elective has become hereditary in the houſe of Auſtria, whoſe court is at Vienna. The ſovereign ſeldom viſits his Hungarian dominions; the high office of Palatine was for many years vacant; no diet was called for twenty ſix-years, but the kingdom, like a province, was governed by royal mandates. Hence this nation conſiders itſelf as treated like an Auſtrian province, and not like a powerful kingdom; diſcontent and unwillingneſs to ſupport the public burthens on their part ariſe, and diſſatisfaction and indifference to their proſperity in the court, which in turn conſiders them as perverſe ſubjects and uſeleſs to the ſtate; and hence a general feebleneſs; and thus a country under a warm ſun,

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with a fertile ſoil, and near eight millions of inhabitants, makes no more figure amongſt the nations of Europe, than a province.

It is certainly an unfortunate circumſtance for a privileged kingdom or province to be under the ſame government as thoſe which are arbitrarily governed. Where even governments have nothing in view but the public good, ſo many hindrances in conducting public affairs are thrown in their way, through party ſpirit and unjuſt jealouſies, by the leaders of the people; that often the beſt diſpoſed rulers are inclined to act without enquiring the ſenſe of the nation, and are anxious to get rid of the inconvenience of obtaining its conſent; and the facility they find in governing thoſe parts of the empire which they can arbitrarily govern, is always contrafting itſelf with the difficulties they find in governing the privileged.

Though ſome of the neighbouring parts of the Auſtrian monarchy have ſtill their diets, yet they are for form ſake alone, and in none of the important acts of legiſlation or taxation are they conſulted. But Hungary has ſtill retained the invaluable right of giving itſelf laws and impoſing its own taxes, and it jealouſly watches the incroachments of the court. How then could the deſpotic government of Joſeph II. fail to be to this nation a cauſe of great complaint, when it had almoſt alienated from him the allegiance of his other ſubjects accuſtomed to be arbitrarily governed?

The

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The whole government of this well-meaning Monarch was a continued ſeries of alterations and innovations in the governments of thoſe which had no privileges, and of infringements on the rights of thoſe which had; where eſtabliſhed principles of government, modes of taxation, and general police, were, by ſovereign mandates, annulled, and replaced by others. I have ſeen a liſt of the ordinances publiſhed by Joſeph II. from January 1781 to November 1783, that is, leſs than three years, and they amounted to two hundred and ſeventy-one.

It was the avowed intention of this Sovereign to form, out of his extenſive hereditary dominions, peopled by twenty-five millions of inhabitants, governed by different laws, enjoying different privileges, ſpeaking different languages, and in different degrees of civilization, one uniform government; where the ſame code of laws, the ſame mode and quantity of taxation, and even where the ſame language ſhould prevail *; in which privileges ſhould ceaſe, and the burthens of the ſtate be equally borne.

But before we enter into the detail of thoſe innovations, which produced ſuch diſſatisfaction, let us take a view of the conſtitution of the kingdom, and obſerve the ſpirit of the people, for the ſpirit of a people is the only guardian of its conſtitution.

* His Belgic ſubjects may be excepted.

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The Hungarians are a brave, generous, and hardy race of men. Voltaire, in his Eloge of Monteſquieu, ſpeaking of this nation, ſays, " Une nation fiere et généreuſe, le fléau de ſes tyrans et l'appui de ſes ſouverains."

This ſpirit has preſerved to them ſome of the moſt valuable rights of a people, and has kept hitherto the power of the Monarch from riſing into arbitrary ſway;—though this has varied here, as in other countries, as a weak and unfortunate, or as an ambitious and ſucceſsful one has reigned. Not only when the crown was elective, as till 1682, in the reign of Leopold I., but even now that it is become hereditary, in the houſe of Auſtria, in gratitude for that Emperor's driving the Turks out of Hungary, it is the fundamental law of the land, that every new Sovereign, on aſcending the throne, ſhall ſolemnly ſwear to the nation, to grant them their rights. Theſe rights have been thought moſt ſacred, and King Andrew II. in the thirteenth century, went ſo far as to promiſe, in his *diploma*, or coronation oath, to allow his ſubjects to take up arms againſt him, if he infringed them. Several of his ſucceſſors have ſigned this *diploma*, and the ſame is ſtill in uſe, except that this particular article, permitting the rebellion of the ſubjects, is proteſted againſt; but a coronation oath, of which ſuch an article could be a part, muſt certainly be very favourable to the liberty of the nation.

The two greateſt privileges of a people, thoſe of legiſlation

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and taxation, are ſtill in their hands; and the Sovereign has only a *veto* in the legiſlation. The choice of the Palatine, a kind of viceroy, from four candidates preſented by the Sovereign, and the reception of ſtrangers as denizens, are privileges likewiſe belonging to the people. But the King has the unqueſtioned right of deciding on war and peace; he has a *veto* in the legiſlation; the gift of the great offices in the church and ſtate, thoſe of the Palatine, and keepers of the crown, excepted: it is he who creates nobility; and coining, and pardoning criminals, are his prerogatives.

Thus the executive government of the kingdom is in the hands of the Sovereign. On his aſcent to the throne, in public parade, on horſeback, he draws his ſword, and ſtrikes towards the four points, indicating that he takes upon him its defence againſt its enemies from every quarter. But the raiſing of ſupplies for carrying on of war belongs to the nation, who can only grant them in a Diet; and before ſtanding armies were ſo general, when the defence of the kingdom depended on the nobility, it was here where they met, to conſider of the number of troops that were to be brought into the field, being convened by the Sovereign for that purpoſe.

But what is the nation?—Who conſtitutes the people?—To whom do theſe valuable rights belong?——In this country, as in others where ſociety is in its childhood, the nation, alas! is only the great ariſtocratic body of nobles and clergy; and the productive part of the

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the community, the citizens and peaſants, have few or no rights, and no interference in public affairs; yet muſt ſubmiſſively bear *all* the burthens of the ſtate.

As the peaſants were, till 1785, under the *glebæ adſcriptio*, or in the ſtate of villanage, they could never be conſidered as forming a part of the nation; and the deputies of the free towns being conſidered almoſt as intruders, it was, and ſtill is, the ariſtocratic body which checks the power of the Crown; and it is this body that, according to the ſpirit of the Hungarian conſtitution, the Sovereign ſhould conſult with, upon all important ſtate affairs, by calling them together in a Diet.

This Aſſembly is compoſed of magnates, archbiſhops and biſhops, lord lieutenants of the counties, abbots, prelates, deputies of the chapters, deputies from the counties, and deputies from the royal free towns.

The magnates were originally only the great officers of the Crown, as the Palatine, the ſupreme judge, the lord marſhal, the great cupbearer, the ſteward of the houſehold, the maſter of the horſe, &c. but now the princes, counts, and barons are conſidered as ſuch. Thoſe who pretend to be acquainted with the true ſpirit of the conſtitution, regard the reception of the princes, counts, and barons, amongſt the magnates, as an innovation. The eldeſt ſons of this

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great nobility, with the two archbiſhops, dioceſan and titular biſhops, with the lord lieutenants of the counties, and keepers of the crown, conſtitute the firſt table, or upper houſe; and the lower houſe, or ſecond table, is compoſed of the abbots and prelates, the deputies of the chapters, from each at leaſt two; two or three deputies from each of the two-and-fifty counties into which this kingdom is divided, and a deputy from each of the royal free towns. If the free towns ſend more than one deputy, they have only one vote; it is ſo likewiſe with the deputies of the chapters; and if the members of the upper houſe cannot attend in perſon, their deputies ſit in the lower houſe.

Though the Diet is thus compoſed of two tables, or houſes, yet they form but one body, as their votes are taken together. It muſt always be recollected, that the deputies of the counties are only the deputies of the nobility. Even the towns are generally repreſented by the nobility; but this is their own fault.

The Diet, beſides being convened upon all great national events, ſhould meet at ſtated times. Under Matthias Corvinus and Ferdinand I. it was decreed they ſhould be annual. Under Leopold I. it was decreed they ſhould be triennial; and this was confirmed by Charles VI. and is ſtill conſidered as the conſtitutional period. But ſovereigns and their miniſters often wiſh to get rid of theſe incumbrances, and lately, from 1764 to 1790, which is twenty-ſix years, no-

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no Diet was held, though many important affairs had happened within this period. It ought not to ſit more than two months.

This interference of the *people* in all the weighty affairs of ſtate, is juſtly conſidered by them as one of their greateſt advantages; but the people here, or, as they are called in their public acts, which are in Latin, *populus*, are, as I have juſt ſaid, only the great ariſtocratic body, the nobility and higher clergy. Their exemption from bearing any part of the public burthens they conſider as another valuable privilege, of which they ought to be no leſs jealous. So that the whole taxes for defraying the expences of government muſt fall immediately upon the productive part of the community; the burghers and peaſants.

The nobility, which is compoſed of titled and untitled, the former of which may be conſidered as the real nobility, and the latter only as gentlemen, have the excluſive privilege of enjoying all the poſts of honour, and of filling all the public offices, and are *the excluſive owners of the ſoil*, except what lies within the precincts of the free towns; and a burgher or a peaſant may as well think of poſſeſſing the throne, as of poſſeſſing one inch of land, without being firſt ennobled. Their perſons likewiſe are privileged, except in a few caſes, as high treaſon, murder, &c. They cannot be arreſted, till they have been legally tried and convicted. And the ſimpleſt kind of knight ſervice is the only duty they owe the ſtate. When ſummoned

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moned by their ſovereign, they muſt defend their country. Their taking the field is called an *inſurrectio*, and the high clergy are not exempt. This ſervice, from the frequent wars in which Hungary was engaged, and principally againſt the Turks, was formerly a pretty ſevere obligation, for they ſerved as a kind of barrier to the reſt of Europe againſt this ferocious people. As long as the war continued within the limits of their country, they were obliged to maintain themſelves; but when the war was carried on abroad, they were maintained by the ſovereign. The number of combatants each brought into the field was proportioned to his eſtate. The archbiſhop of Gran and the biſhop of Erlau brought each two ſtands of colours, and under each ſtand a thouſand men; the archbiſhop of Collotza and ſeveral biſhops a thouſand each. In the fatal battle of Mohatch ſeven biſhops were left on the field. But ſince ſtanding armies have become general, little uſe has been made of this mode of defence, and no general *inſurrection* has been ſummoned for a great length of time, ſo that the nobility at this day, except now and then by a *don gratuit*, contribute nothing to ſupport the ſtate. So far therefore as they conſider only their own immediate advantages, they have reaſon to be jealous of their privileges; and theſe are aſſured them by the conſtitution: but an immunity to one part of the community, ſince government muſt be ſupported, is an impoſition on the others; for ſince the nobility will bear no ſhare of the expences of government, the heavier theſe fall on the burghers and peaſants.

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The burghers being under the more particular care of the ſovereign, and having their own magiſtrates, are pretty independent of the nobility, and have only to bear the burthens of government. But this is not the caſe of the peaſants; theirs is a harder lot: for, living upon the eſtates of the nobility, they are under their immediate care and direction, and may be greatly moleſted and injured by their ſeverity; though likewiſe aſſiſted by their protection and generoſity.

As this part of the community is ſo very important, by being the moſt numerous, and the moſt productive; and as its ſtate generally ſhows the ſtate of the nation in general, which in its progreſs in improvement has its different ſtages pretty conſtantly accompanied by particular diſadvantages, I ſhall be rather diffuſe on it; as by this it becomes a key to the knowledge of the ſtate of the whole ſociety. How unreaſonable would it be to expect to find a country powerful and opulent through an improved agriculture, flouriſhing manufactures, and an extended commerce, whilſt the peaſantry are in the ſtate of villanage!

It appears, however mortifying the thought, that the ſame hard ſtate has been the lot of the peaſantry almoſt throughout Europe, but at different times; and that it differs not ſo much in regard to the country, as the time in which it has prevailed. A Poliſh and an Engliſh peaſant, how different now in the eighteenth century! Yet the peaſants in our happy iſland *were* once much in the condition they *are* in now in Poland.

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Poland. Under the Saxons, "there was," as Sir William Temple ſays, "a ſort of people in our iſland in a condition of downright ſervitude, uſed and employed in the moſt ſervile works, and belonging, both they and their children and effects, to the lord of the ſoil, like the reſt of the cattle or ſtock upon it." And upon their fate after the Norman conqueſt, it is further ſaid, "that theſe villains belonging principally to lords of manors, were either annexed to the manor or land, or to the perſon of the lord, and transferable by deed from one owner to another. They could not leave their lord without his permiſſion, but, if they ran away, or were purloined from him, might be claimed and recovered by action, like beaſts or other chattels: they held indeed ſmall portions of land by way of ſuſtaining themſelves and families; but it was at the mere will of the lord, who might diſpoſſeſs them whenever he pleaſed; and it was upon villein ſervice, that is, to carry out dung, to hedge and ditch the lord's demeſnes, and any other the meaneſt offices; and theſe ſervices were not only baſe, but uncertain both as to their time and quantity. A villain could acquire no property either in land or goods: but if he purchaſed either, the lord might enter upon them, ouſt the villain, and ſeize them to his own uſe; unleſs he contrived to diſpoſe of them again before the lord had ſeized them, for the lord had then loſt his opportunity." Such has formerly been the ſtate of our peaſantry. "There are not," ſays Cowel, "truly any villains now in England, though the law concerning them ſtands unrepealed." They have riſen by progreſſive amelioration into copy-holders, and now bear but

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a ſmall part of the original burthens of this baſe tenure. "Tenants at will by copy of court roll," ſays Bacon, "being in truth bondmen at the beginning, but having obtained freedom of their perſons, and gained a cuſtom by uſe of occupying their lands, they are now called copy-holders, and are ſo privileged, that the lord cannot put them out, and all through cuſtom*."

It is pleaſing to conſider, however ſlow the progreſs of ſociety may be, that the ſtate of this order of it is continually ameliorating: the intereſt of ſovereigns, the intereſt of religion, the efforts of enlightened men, and even the more humane and enlarged views of the lords of ſoil, all tend to render the ſtate of the peaſantry leſs debaſed and oppreſſed.

The peaſantry of Hungary are farther advanced than their northern neighbours, the Poles and Ruſſians. That hardeſt of ſtates, the being bound to the ſoil, yet removeable at the will of the proprietor of it, with undetermined labour and dues, is paſt; and it is ſome conſolation to think, that often, before the law has fixed bounds to the rapacity of the landlords, by determining the dues of the peaſant to his lord, cuſtom in ſome degree has done it. So I believe cuſtom had in ſome degree determined this in Hungary, before the Empreſs Thereſa, in 1764, had made known her *Urbarium*; which, though pub-

* Bacon on the Uſe of the Law, p. 43.

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liſhed without the knowledge of the ſtates, has been received as law. Nevertheleſs, Seventeen Hundred and Sixty-four muſt be conſidered as forming an epoch in the hiſtory of the amelioration of the ſtate of the peaſants, not only by more accurately fixing the reciprocal obligations of the lord and his peaſants, but by ſhewing that the latter were thought worthy of the protection of government. This *Urbarium* I think too intereſting not to be generally known; I therefore preſent the public with a tranſlation of it.

THE URBARIUM; OR,

CONTRACT BETWEEN THE LANDLORD AND PEASANT, AS FIXED BY LAW.

I. *Of the Quantity of Land.*

AS the dues from the peaſant muſt be ſettled according to the nature of the farm, which is not everywhere the ſame, but various, in regard to the ſituation, and the quality of the land, as well as to its advantages and diſadvantages; it is thought equitable in the village of A B that the houſe-ground for the cottage, yard, garden, and barn ſhall be equal to ſo much land as is uſually ſown with two Preſburg meaſures*; and if it be more or leſs, allowance muſt be made for this difference in the other ground, unleſs this difference ſhould not exceed a quarter of a meaſure, which then ſhall not be thought

* The Preſburg meaſure is about as much as two Engliſh buſhels.

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worthy of notice. And for the farm grounds, of arable land, twenty-four acres, each acre *(joch)* being reckoned at two Preſburg meaſures; and of meadow land, twelve days mowing, which muſt be mowed only once a year. In caſe the arable land is leſs, allowance muſt be made in the meadow land, and *vice verſa*; a day's work of meadow land being conſidered as equivalent to an acre of arable: this is the land for a whole farm, and after the ſame rate, the half, quarter, or eighth of a farm.

II. *Of the Privileges of the Peaſants.*

According to the 36th article of 1550, they are to enjoy the right of ſelling wine from Michaelmas to St. George's day.

If a peaſant poſſeſſes a piece of ground that he or his father has cleared, and rendered capable of culture; this can neither be reckoned as part of the lately mentioned land, nor can it be taken from him, till he has been reimburſed the expences of clearing, which muſt be equitably determined by the county meeting; but ſhould it have been cleared by another who may have left the farm, then he has no claim to it.

Where the ſituation and the extent of the eſtate permit, they are to be allowed ſufficient paſture for their cattle, a part of which is to be marked out, but with the knowledge and conſent of the landlord,

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landlord, for their draught cattle; upon which he can let his own graze, but not thoſe of another perſon. Where the paſture is already too ſmall, the landlord muſt not render it leſs by turning any part of it into arable land, or by other means.

Where there are woods, the peaſant is allowed to collect the wind-fall, dead wood, &c. for fuel; and where this fails, he may make uſe of other wood, but by no means of fruit-trees; and only juſt what is neceſſary for his family uſe.

Building timber is to be given gratis; but the trees muſt be marked out for him by the landlord; and where there is not ſufficient wood upon an eſtate for the peaſants, it muſt be procured for them from a neighbouring eſtate; yet only a reaſonable quantity.

The acorns are to be allowed them at ſix creutzers (twopence halfpenny) cheaper than to ſtrangers; but in the *prædial* woods, as they can make a contract with the landlord.

When a village or farm is in poſſeſſion of a wood, it can uſe it for fuel and building; and the Acorns and Knoppern (Galls) likewiſe gratis; but only for its own œconomy: but then it cannot demand fuel and timber from the landlord; and if its woods do not produce Acorns, it muſt pay as much as ſtrangers; yet it is to have the preference; but the care of theſe woods belongs to the landlord.

III. *Of*

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III. *Of the Labour or perſonal Service of the Peaſants.*

Every occupier of a whole farm muſt perform one day's labour from ſun-riſe to ſun-ſet, including the coming and returning, with four draught cattle every week, the cattle as well as the cart, plough, &c. being his own; this muſt not be divided into two half-days labour, except when the peaſant from his own fault, or with a view to defraud his landlord, ſhould keep leſs, and only bring with him a pair. To this one day's labour with a team may be ſubſtituted two days hand labour (that is, the peaſant without his cattle).

If a difference ariſe between the peaſant and his landlord, about the length of time to be allowed for coming and returning, it is to be determined at the county meeting.

Where the diſtance of the peaſant's abode from the place where he is to work, is half a day's journey or more, the peaſant being previouſly informed, that he may make the requiſite preparation, may be detained four days together every month, the coming and returning being included; and in ſummer the landlord muſt provide paſture for the cattle, and in winter the neceſſary ſhelter. In the ſhort days of the months of November, December, January, and February, when the diſtance is only an hour's journey, or at moſt an hour and a half, the peaſant's coming and returning is not to be included; but he muſt be at his work from ſun-riſing to ſun-ſetting.

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In the harveſt time, hay-making ſeaſon, and the vintage, the ſervice with cart and team, or hand-labour, can be doubled; which is to be deducted afterwards, ſo that the quantity of the labour annually performed ſhall remain the ſame: but the cottagers (that is, thoſe without land) cannot be compelled to perform this extra harveſt work.

When the peaſant, from living at a diſtance, muſt work four days together; double labour can be demanded, but in this manner: having performed his four days labour, he may return home, and work for himſelf alone, the next week; and then return and perform four more days labour. Yet more labour cannot be demanded in the ſummer months, than at moſt three fourths of the whole annual ſervice; one fourth muſt remain to be performed in the ſix winter months.

When rain or other cauſes prevent the peaſant, when come, from performing a day's work, and he returns, the time he has loſt muſt be reckoned, but not a whole day's work.

Every occupier of a cottage without land muſt perform annually eighteen days hand-labour; but thoſe who have neither houſe nor land, and only reſide on the eſtate, twelve days hand-labour. But cottagers with a ſmall piece of land, leſs than the eighth part of a *houſe ground*, muſt give the ninths of the produce in kind or its equivalent; but with reſpect to the other dues and ſervices, he is to be conſidered as poſſeſſing no land.

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Although the peaſant cannot be compelled to perform more labour than what is fixed by the laws of the land, and the preſent Urbarium; yet it is reaſonable that, when he is willing to work for a ſtranger, he ſhould in preference work for his landlord, on receiving the ſame advantages, or on making a free contract with him where the county meeting has not already fixed the price.

The landlord cannot demand money inſtead of labour; yet where both parties are inclined to ſubſtitute money inſtead of labour, either for a limited time, or for ever, it may be done, but in the preſence of the county meeting: and when either of the parties is inclined to diſcontinue it, a year's previous notice or warning muſt be given, that the parties may adapttheir œconomy thereto, and notice muſt likewiſe be given to the county court.

All contracts between the landlord and his peaſants, as well with individuals as with whole villages, about ſervices or other dues determined by this Urbarium, muſt be fixed in the preſence of the county meeting; but when any rights or rents belonging to the landlord, which do not concern this Urbarium, are farmed out, this is not requiſite.

Beſides the already mentioned labour, four peaſants muſt every year unite and provide a cart and four draught cattle, to perform a long journey, yet not more than a journey of two days diſtance, and not upon impaſſable roads, nor in the time of harveſt, hay-making, or vintage.

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vintage. This ſervice cannot be compromiſed by money, nor can it be deferred till next year; and when by unexpected accidents it is extended beyond two days in going there, or when the cart is loaded back for the landlord, the loſs of time in the firſt caſe, and the journey back in the ſecond, muſt be deducted from the other labours; and all the expences of tolls or other impoſts, as likewiſe the expences in the inns, are to be defrayed by the landlord; and in conſideration that fuel and timber are allowed gratis to the peaſants, every one of them poſſeſſing a cart and team muſt carry in a fathom of wood, which has been previouſly fallen and chopped up by two days of hand-labour.

But in lieu of this, the landlord can receive other labour, eſtimating the bringing in of a fathom of wood at one day's labour with a cart and team, and the falling and chopping it up, as one day's hand-labour from two peaſants: but this can only be demanded in winter.

The peaſant is obliged to carry to the place pointed out to him the ninths of his produce, as well as the *bergrecht*, (a due from the vineyards?) without being allowed to deduct it from the annual dues of labour; but every other caſe of carting, horſes for travelling, letter-carrying, &c. which are not already mentioned in this Urbarium, muſt be deducted from the annual ſervice; and he cannot be compelled, even for ready money, to perform other carting buſineſs, nor to tranſport any thing to market; but the landlord, if he wants his ſervice,

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muſt agree with him as he can; both parties being free, and no compulſion being allowed.

Where there are miſchievous wild beaſts, the peaſants may be employed three days every year to deſtroy them; but the landlord muſt ſupply them with powder and ſhot: other labour cannot be ſubſtituted to it, nor can money or produce be taken in lieu of it.

Although the peaſant, in ſerving his landlord and in carrying on his own œconomy, and in going to the mill, is to pay no tolls on the road, in other affairs he muſt pay the uſual tolls, or aſſiſt in the repair of the roads; this to be at his option.

IV. *Of the Dues.*

Every perſon, without exception, occupying a houſe, is to pay an annual rent of two ſhillings (a *gulden*), in two ſeparate payments, viz. at Michaelmas and at St. George; but thoſe who occupy no houſe are free from this tax.

Every one occupying a whole farm, muſt annually preſent his landlord with two chickens, two capons, twelve eggs, half a *maſs* (about a pound) of *ſchmalz* (butter that has been melted); and thirty of them muſt unite together, and give one calf, or, in lieu of it, three ſhillings.

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Every peaſant on the marriage of his landlord or landlady (but not on the marriage of their ſons and daughters), and likewiſe on the induction of the clergy (the chapters and convents excepted), muſt give a moderate contribution of the lately mentioned articles of chickens, capons, &c. The occupiers of half farms, and leſs, to give in proportion. But the landlord may receive theſe preſents in money, and then forty-eight creutzers (about twenty-pence) is to be the equivalent from the occupier of a whole farm.

If the landlord be taken priſoner in war, and it ſhould be neceſſary to redeem his liberty with a ſum of money, then, according to an old cuſtom, and the thirty-ninth article of 1548, the peaſants muſt contribute a ſuitable yet moderate aid; as likewiſe towards the expences of thoſe prelates and magnates, who are by royal letters expreſsly called to the Diet: the county magiſtracy is to ſee that it exceed not a moderate ſum.

For the liberty of diſtilling brandy, the peaſant muſt annually pay two guldens (four ſhillings) for a ſtill.

For the ground-rent of land that a peaſant may intend to clear, the landlord and peaſant may form an agreement; but of that already cleared the cuſtomary ground-rent ſhall be adhered to.

V. *Of*

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V. *Of the Ninths of the Produce of the Soil, and of the Bergrecht.*

A ninth part of all the fruits of the ſoil is due to the landlord in kind; but not from the gardens of the houſe-grounds; as likewiſe the ninths of the lambs, kids, and bees: an equivalent cannot be demanded in money, nor can theſe dues be extended to other articles not now mentioned. Where theſe lambs, &c. are leſs in number than nine, then the peaſant muſt pay the landlord three-halfpence (four creutzers) for each lamb; five farthings (three creutzers) for each kid; and twopence-halfpenny for every bee-hive; which, according to the ninety-ſixth article of 1647, muſt not be delayed later than St. John's day, and the produce of the ſoil than St. Stephen's (except when bad weather may prevent); and when the backwardneſs of the ſeaſon has prevented the harveſts from taking place at the uſual time, then the county meeting ſhall determine when the ninths and the tenths are to be taken away; which if not done at the fixed time, the peaſants may carry home their own, leaving the ninths on the field.

When a piece of ground has yielded its ninths, and being ſown again produces another crop, no ninths or tenths can be demanded from this produce, any more than from an extra piece of arable ground, which is given to make up a deficit in the meadow land or houſe-ground.

The occupier of a whole farm muſt either give the ninths of his

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flax and hemp to his landlord, or ſpin ſix pounds for him; the landlord providing the raw materials.

Though the queſtion of tenths does not belong to the regulation of this Urbarium; yet if, in ſome places, the tenths of articles not contained in the firſt article of the year 1481 ſhould have been taken, this practice is to ceaſe.

When the ninth of the vintage is taken, it is to be of the ſame quality as the whole of the gathering, and without any *over meaſure*; and in receiving the ninths, as well as the *bergrecht*, no other meaſure is to be uſed than the Preſburg meaſure, of thirty-two *maſs*.

As the ninety-ſeventh article of 1715 clearly ordains that the *bergrecht* ſhall not be raiſed higher than the old cuſtom; and as it is provided by ſeveral laws, that no other meaſure than that of Preſburg ſhould be uſed; ſo is it hereby ordered, that where this has not been obſerved, and new cuſtoms have been introduced, theſe illegal practices ſhall be ſuppreſſed, and the ancient cuſtom be reeſtabliſhed. And where ſince that time, on planting new vineyards, the quantity of the *bergrecht* has been fixed by a written contract, or otherwiſe, this ſhall be reduced to the Preſburg ſtandard; but where ſince that time any new dues ſhall have been introduced, they are hereby declared unlawful, and are ſuppreſſed: and that in future theſe dues may not be increaſed, an account ſhall be taken, by order of

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of the county court, of the vineyards in the hands of the peaſants, and of the quantity of *bergrecht*, in Preſburg meaſure, that is to be given: a copy of which account is to be given to the landlord, another to the peaſant, and a third is to be kept by the county court.

And where no wine is made (that year), the peaſant muſt give the uſual *bergrecht*; but as this is to be taken in kind, and not in money, it muſt be taken from the produce of the following year.

VI. *Of the Rights and Privileges of the Landlord.*

The property of peaſants dying without heirs, and of thoſe who run away, devolves to the landlord: the peaſants therefore muſt not take it; but give notice to the landlord, who muſt make good the debts and incumbrances upon it; but obſerving always the eighteenth article of 1723. But as this devolution cannot take place where there is a minor heir remaining, nor where it is part of a farm which has been divided, as it then falls to the poſſeſſor of the other ſhare; to avoid injuſtice, theſe tranſactions ſhall not be determined by the officers of the landlord alone, but by the manor court; according to the inſtructions in Titul. 30, part 3, which ſhall be afterwards reviſed by the county court.

And when it happens, that, from the ſeverity of the landlord, ſome of the farms become vacant, they ſhall be given to new peaſants,

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ſants, or ſhared out amongſt the other peaſants already ſettled in the village, on the conditions fixed by this Urbarium. The ſame is to be obſerved with reſpect to all grounds which are already drawn under the conſcription of the *Ports*, unleſs the fugitives ſhall return.

According to the eighteenth article of the fifth decree of King Uladiſlaus, and the twenty-ſecond article of 1729, the right of hunting, ſhooting, fiſhing, &c. belongs excluſively to the landlords. This is therefore ſtrictly forbidden to the peaſants.

Although, as it has been already ſtated, the peaſants have the right of ſelling wine during a certain part of the year; yet when the landlord has, or ſhall eſtabliſh, an inn for the accommodation of travellers, the innkeeper ſhall have the excluſive privilege of vending all ſorts of liquors, and the making of them.

When the landlord, according to the thirty-ſixth article of the year 1550, intruſts the ſelling of wine, &c. to a peaſant, he ſhall, during this time, be exempt from other ſervice; and the landlord muſt give him, as ſalary, four *denari* (about one penny) for every *eimer* he ſells.

All rents ariſing from the weekly markets or fairs, or from the ſhambles and tolls, belong to the landlord; except where formerly they have been given up to the community by a particular grant.

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VII. *Of the prohibited, and in future to be avoided, Abuſes and Exceſſes.*

As the landlord, as protector of orphans, has the care of their property, left by their parents, it is not allowed that any part of it ſhould be deducted, by any kind of taxes of *inventory and ſeparation*; and likewiſe the *laudemia*, the tax of *quere-briefe*, and the tenths of property deviſed by teſtament, exchanged, or ſold, are prohibited.

The peaſants ſhall be at perfect liberty to buy and ſell tobacco, honey, wax, ſchmalz (melted butter), flax, hemp, and other natural productions, from whom, to whom, and to whatever place, they think proper; without being in any manner hindered by the landlord; much leſs puniſhed with fines or corporal puniſhments, as illicit traders; without however taking away the privilege of the landlord, given him by the ſeventy-fifth article of 1723, which allows him a preference when he gives in ready money, and not by deducting from the dues, the price of the articles freely determined by the peaſant; and the landlord ſhall by no means prevent ſtrangers from coming to buy.

As all monopolies are expreſsly prohibited by law; ſo farming out the right of dealing in natural productions, and other objects of commerce, excluding and limiting thereby the trade of the peaſants, is likewiſe not permitted.

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The peaſants muſt not by any means be compelled to grind their corn at the mill of the landlord, but wherever elſe they pleaſe.

The paying of the *bahn-weingeldes*, which has been illegally introduced, is ſuppreſſed.

The peaſants are not to be obliged to give their manure to the landlord; and when they carry his into his vineyards, or elſewhere, this labour muſt be reckoned as forming a part of the annual fixed ſervice.

The illegal and uncommon practices on ſome eſtates of demanding the tenths of feathers, and plucking the geeſe of the peaſants, is entirely prohibited.

The peaſants are not to be obliged to find ſtraw for binding or tying up the vines of the landlord.

The cuſtom on ſome eſtates, of the guards and overſeers of the landlord's vineyards being paid by the peaſants, is ſuppreſſed.

The maintaining of the ſervants of the landlord, ſent out on executions; and every daily pay given in ready money; as likewiſe the extortions of the guards and huntſmen, are, except the execution *groſchen*, as will be mentioned afterwards, entirely forbid.

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It is not allowed to demand money from the peaſants, as ſecurity for their not running away; and where this has already taken place it muſt be returned them, together with the intereſt.

The quartering money, as well as the huſſar and equipping money, where they have been introduced, are quite ſuppreſſed.

In thoſe places where the ſhambles are farmed out to the peaſants, the landlord cannot preſs his own cattle upon them; nor can fleſh meat be ſold for ready money by pounds or in pieces amongſt the peaſants, but it muſt be cut up in the ſhambles, ſo that the peaſants may buy it there freely and without any difficulty.

The peaſants ſhall not be obliged to buy or ſell natural productions or articles of conſumption, nor to ſell for the landlord ſpoiled wine, brandy, or other liquors; nor are they to make good the ſpoiled wine, &c. which has been entruſted to them for ſale; nor are they to tranſport the empty veſſels, but as forming a part of the fixed annual labour.

The *hen and ſickle* money (hüner-und ſichelgeld), as likewiſe the *tent and preſs money* (zelt-und preſsgeld), together with the *koſtmaſs* introduced into ſome places, and the providing with victuals thoſe who come to receive the ninths and the tenths, are all entirely forbid.

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The peaſants ſhall not be compelled to lead their caſks, either for the vintage, or for the ninths or tenths of it.

All kinds of dues of natural productions, &c. that can poſſibly be thought of, not included in the aforementioned articles, are entirely ſuppreſſed.

The landlord is not allowed to exchange or ſubſtitute a piece of land, for any part of the ground belonging to a farm, except it be of the ſame ſize, goodneſs, and fertility; otherwiſe he muſt return it.

VIII. *Of thoſe Things forbidden to the Peaſants, and of the Puniſhments enſuing thereon.*

Fines ſhall under no pretext whatever be taken, except in thoſe caſes where they are expreſsly ordered in the laws; and then only after they have been legally impoſed in the lord's court, in the preſence of the magiſtrates (the *ſtuhlrichters* and *ſtuhlgeſchworn*); and even then appeal may be made to the judiciary court of the county. But when damage may have been done to fields, the law having already ordained what concerns the pounding of cattle, this is to be adhered to.

In all other caſes where there is juſt cauſe to puniſh the peaſants, the offenders muſt neither be puniſhed by fines, which only ſerve to impoveriſh the puniſhed; nor with corporal puniſhment (except

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where the law, or this Urbarium afterwards, ſhall otherwiſe order); but they muſt be compelled to work without pay, one, two, or at moſt three days hand-labour, which, however, muſt not be demanded in the ploughing, mowing, reaping, or vintage ſeaſons, but at other times.

Although, as it has been ſaid before, the peaſants ſhall neither be puniſhed with pecuniary fines, or bodily puniſhment; yet, as it may at times happen that the peaſant may offend by words or deeds, or that he cannot be bettered by the lately mentioned labour, and that conſequently ſuch offenders muſt be puniſhed with corporal puniſhment; this ſhall be adminiſtered in proportion to the greatneſs of the offence, and muſt not exceed, for a ſtrong and healthy man, twenty-four ſtrokes with a cane; and for the other ſex, the ſame number with a whip. But the aged, and thoſe of weak conſtitutions, ſhall be puniſhed with impriſonment, and even upon bread and water, according to the circumſtances; yet they may not be detained from their labour more than three days; except in thoſe caſes where the crime is of that nature as to belong to the cognizance of the manor court.

When a peaſant is brought into the landlord's priſon, and is fettered, and put in irons, where it is the practice to pay locking-up money, it ſhall not exceed fifteen creutzers (about ſixpence).

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The peaſants are prohibited to clear ground without permiſſion of the landlord, under the penalty of loſing their labour, and making good the damages that may have been done by it; but that which is already cleared cannot be taken away, without making good the value of the labour, as before mentioned.

As the care of the woods chiefly depends on the landlord, the peaſants are therefore not permitted to cut wood for poles for fruit trees, nor for fences, whips or hoops, &c. without particular permiſſion from the landlord: nor to carry it into other grounds, and ſell it, and ſo carry on a trade in wood.

In regard to the puniſhing of thoſe who cut down trees or bark them; they ſhall not only make good the damage, but ſhall be puniſhed with three days hand-labour: but if any one is not deterred by this puniſhment, from injuring the woods, he ſhall be puniſhed by the county court, and the landlord ſhall be aſſiſted to puniſh him ſeverely as an example to others.

The peaſants are forbid to collect (to beg?) money or natural productions, and the offenders are to be puniſhed with twenty-four ſtrokes of the cane.

The clandeſtinely driving of hogs into the woods of the landlord,

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is to be punished, when these are caught there, with paying twice the *acorn-money*, which is fixed for their feeding in it.

The peasants are not allowed to collect *knoppern-galls*, nor to knock down acorns, as they belong entirely to the landlord, but it is prohibited as contraband, and the offenders are to be further punished with three days hand-labour; but the landlord cannot make the peasants collect them for him otherwise than by reckoning this as a part of their annual service.

Peasants are not to carry a gun, nor to keep sporting dogs, under the penalty of three days hand-labour.

They are strictly forbidden to sell any kind of liquor, except during the time already mentioned, and the offence is to be punished as contraband, and with three days hand-labour as often as committed; but when they possess vineyards they are allowed, even in the period of the landlord's exclusive privileges, to bring it home for their own use and consumption.

When a peasant, out of idleness and carelessness, after being called to his service, does not come to it, he is to be punished with twelve strokes of a cane.

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If any peaſant ſhall bring fleſh-meat from another place, or cut up and ſell fleſh meat, thereby taking away the profits of the ſhambles from the landlord; this ſhall be conſidered as contraband, and the peaſant ſhall be further puniſhed with three days *hand-labour*.

The widows of deceaſed peaſants muſt obſerve the order of the twenty-firſt article of the ſeventh of king Uladiſlaus, which orders, that if they marry again they muſt not quit their houſes without permiſſion of their landlord, otherwiſe their whole property ſhall be at his diſpoſal.

A village is not permitted to contract debts without the knowledge of the landlord.

New-comers cannot be received, nor can parts of the land belonging to a farm be exchanged or ſold without the knowledge of the landlord, under the penalty of loſing the ſums received; and in thoſe caſes where the ſale is permitted by the laws, the vender muſt give notice to the landlord; yet he may fix the ſale without his conſent.

IX. *Of the Internal Police.*

In filling the office of judge, (of the village) the landlord ſhall preſent three, out of which the community ſhall elect one, in the preſence of his officers. But the landlord can, when the judge's bad

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conduct makes it neceſſary, diſplace and puniſh him, and then another ſhall be choſen in the ſame manner to fill his place; but the notaries and the ſworn may be choſen and diſplaced by the community without the interference of the landlord.

The judge ſhall not, on account of the ſervice rendered to the landlord, nor for other reaſons, under any kind of pretext, be diſpenſed from paying the contribution (to the ſtate).

It is reaſonable and requiſite, the landlord ſhould ſee that the partition of the contribution be equally divided amongſt the peaſants, according to the direction of the county court; and ſee that no fraud is committed; and therefore he ſhall demand an account of it from the judge, but without any expence falling on the peaſants.

Where the landlord neglects inſpecting theſe accounts, the county magiſtrates ſhall.

But the collecting and paying into the county treaſure, this contribution, ſhall excluſively remain in the hands of the community, and judge; and the county magiſtrates ſhall therefore ſee that the landlord or his ſervants do not interfere in it.

All the dues from the peaſant to his landlord, fixed by this Urbarium, ſhall be exactly rendered him; and in caſe he neglects, he ſhall

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ſhall be compelled by execution. The execution *groſchen* due to thoſe ſent out by the landlord on this buſineſs, muſt be paid daily, and to theſe only, and by no means to any others employed by the lord on other buſineſs.

That the oppreſt, and thoſe who ſuffer injuſtice, may obtain prompt ſatisfaction, it muſt be obſerved, that when the complaints are made againſt peaſants of the ſame landlord, they ſhall ſeek juſtice from their landlord or his officers: but where the injury has been done by the officers of the landlord, application muſt be made to the landlord; and when the complainants do not obtain the reaſonable ſatisfaction, they ſhall apply to the county court: but when the complaint is againſt the landlord himſelf, who on their application gives no redreſs, they muſt ſtraight apply to the county court; and in caſe the landlord or his ſervants ſhall puniſh a peaſant for having made ſuch application for juſtice to the county court, or to a ſtill ſuperior one, he ſhall be conſidered as a tyrant.

By this ordinance the reciprocal rights of the peaſants and their landlords are determined, and it appears, that the Hungarian peaſant pays to his lord, for twenty-five acres of arable land (each acre containing about twelve hundred ſquare fathoms), and twelve days mowing of meadow land, a ninth of the produce of the ſoil, of the lambs, kids and

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bees, and about one hundred and eleven days labour, two ſhillings for rent, and three ſhillings for fowls, butter, &c.

This I conceive to be no hard contract for the peaſant. I have been informed by ſeveral great landed proprietors, that they did not receive upon an average, taking all their dues together, more than equal to a gulden, or about two ſhillings Engliſh, for an acre. The hardſhip lies chiefly in the nature of the contract: this is a reciprocal hardſhip, as inconvenient for the landlord as for the peaſant. It chiefly ariſes from receiving labour for payment; yet this kind of payment is always uſed in ſimilar caſes, in the firſt ſtages of improvement. This compels the landlord to keep a great part of his lands in his own hands, to employ the labour of his peaſants, however he may diſlike rural œconomy. The law muſt entruſt him, as I have lately ſaid, with great authority over his peaſants. He requires a great many ſtewards, bailiffs, and overſeers to aſſiſt him, and to theſe he muſt delegate a part of this authority over them. From hence ariſe complaints from them, on the hardſhip of their fate, and of the ſeverity of their maſters; and from theſe no leſs complaints of the perverſe, obſtinate, idle, and diſcontented diſpoſition of their peaſants; who by not being intereſted in the labour they perform for their lords, firſt are ſlothful in the performance of this, and then through cuſtom become ſlothful in their own: and thus a bad ſtate of huſbandry pervades the lands. A great landed proprietor in Bohemia aſſured me, that he found it much his intereſt, to accept of ſixpence

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from his peaſants who were obliged to work for him, inſtead of a day's labour; and give ninepence to others over whom he had no other authority than diſmiſſing them from his ſervice.

It is, I think, a remark of the learned Dr. Ferguſon, that nations, however proximate, ſeldom receive from one another ſuch a diſcovery as can improve the ſtate of their ſociety, till they are nearly in a ſtate to make it themſelves. Whether this can in any degree account for the, in ſome degree, retrograde ſteps of the Hungarian peaſantry, I muſt leave to thoſe who are better acquainted with this part of hiſtory than I am. But it appears that the *glebæ adſcriptio*, or villanage of the peaſantry, was ages ago ſuppreſſed: it was ſuppreſſed by Sigiſmond; and this ſuppreſſion was confirmed by ſeveral public acts of ſome of his ſucceſſors: but it crept in again*.

The year ſeventeen hundred and eighty five forms an epoch no leſs

* "The peaſants in Hungary could formerly leave their landlords at pleaſure. This liberty was granted them by a great many laws of the land, as by the ſixth article of the ſecond decree, and the fourteenth of the third decree of king Sigiſmond, in the year 1405; by the fifteenth of the year 1458; by the ſixteenth, twenty-ſeventh, and twenty-ninth of 1547; the thirty-fourth of 1550; the twenty-ſeventh of 1566, and ſeveral others. This liberty, under Uladiſlaus, was taken from all thoſe who ſuffered themſelves to be drawn into the rebellion of that time. From this circumſtance, the Hungarian nobility has in aftertimes determined on their bondage, which, indeed not every where, yet in the greateſt part of the kingdom, is introduced."

Roſenmann's Staatsrecht, Wien. 1792, p. 193.

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favourable for the ſtate of the peaſantry than 1764. Nothing could be more contrary to the views of Joſeph II. than a debaſed peaſantry, that order through which, had he ſucceeded in his plans of reform, he expected to have received all his reſources. The ſuppreſſion of the *glebæ adſcriptio* took place in Bohemia and Moravia by the order of this ſovereign in 1781, and in 1785 it was extended to this kingdom: and though, as we ſhall ſoon ſee, this monarch was before his death obliged to give back to the nobility their antient rights and privileges which he had taken from them, and thus cancel his own acts, this act was excepted.

This right of the peaſantry to leave their landlords, did manufactures and the induſtry of towns flouriſh in this kingdom, would be ſufficient ſoon to make them find their juſt value in ſociety, and get rid of unreaſonable humiliations: though indeed peaſants are little inclined to change their occupations, and they often remain cultivators of the ſoil on which they are bred under many hardſhips, rather than become mechanics; and a peaſant who ſhould leave the eſtate on which he was born, and ſhould apply to another landlord, would meet but with little encouragement; and as a certificate muſt firſt be obtained from his laſt landlord, ſome hindrances can ſtill be thrown in the way of thoſe who wiſh to better their lot.—Such then is the connection between the peaſantry and their landlords.

To the public, of which the peaſantry here forms no part, they have obligations likewiſe; for, the great ariſtocratic body being as I

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lately ſaid exempt from bearing any part of the public burthens, theſe naturally fall upon the citizens and peaſants, who are emphatically ſtyled in the public acts the *miſera contribuens plebs*.

Theſe pay a tax which is called a *contribution*, part into the military cheſt, and part into the county cheſt, or *caſſa domeſtica*; from the firſt the military ſtationed in the province are paid, and from the latter the expences of the government of the county, the repairs of the roads and bridges, and the damages ſuſtained by the peaſants by fire, ſtorms, and inundations; and likewiſe the expences of the deputies or repreſentatives of the county, that is, *of the nobility*, when attending the Diets. It is aſſeſſed on the ability and opulence of the peaſant, in the following manner:

		Deca.
The peaſant is valued at	- - - -	1
His 2 Sons capable of working	- - -	1
4 Daughters ditto	- - - -	1
4 Farming ſervants, men	- - -	1
8 Ditto ditto, women	- - - -	1
2 Draught or fat oxen	- - -	1
2 Milk cows	- - - -	1
4 Horſes	- - - - -	1
4 Young oxen	- - - -	1
8 Calves	- - - - -	1
		16 Hogs

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	Decas.
16 Hogs - - - -	1
32 Young pigs - - -	1
Winter corn, of a whole farm - -	2
Summer ditto, ditto - - -	2
Meadows producing ſix *fuders* of hay	2
A ſtill - - - -	1
Sheep and bees, according to the profit ariſing from them.	

If the peaſant is beſides a ſhoemaker, taylor, weaver, ſmith, &c. this makes an additional deca. What is paid for a deca I am at preſent not able to inform my readers; but I hope to do this in an Appendix. That part paid into the *caſſa domeſtica* muſt vary, according to the expences of the county.

The clergy, when united in defence of their own intereſts, unconnected with the other part of the ariſtocratic body, with which they have often a common intereſt, and deprived of that influence which acts over the conſciences of men, are a very powerful body. They have in the Diet, according to a paper in Mr. Slötzer's Staats Anzeigen, No. 64, about a hundred votes; and the revenues of the higher clergy, and the great offices they fill, give them ſtill greater weight; for, beſides their ſpiritual charges, many of them are lord lieutenants of the counties.

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The revenues of the archbiſhops and biſhops are given in the *Political Journal* for 1783, thus:

	Florins.		£. ſterl.
The archbiſhop of Gran -	360,000	that is, about	36,000
Biſhop of Erlau - -	80,000		8,000
Nitra - -	40,000		4,000
Raab - -	20,000		2,000
Waitzen -	50,000		5,000
Funfkirchen	30,000		3,000
Veſprim	50,000		5,000
Archbiſhop of Kolotſcha and Bats	50,000		5,000
Biſhop of Groſs Wardein	70,000		7,000
Ofanad or Zſchanad	9,000		900
Zagrab in Croatia	20,000		2,000
Syrmien			
Boſnia	25,000		2,500
Tranſylvania	12,000		1,200

The biſhoprics founded in 1777, as Stuhlweiſſenberg, Neuſohl, and Roſenau, are not mentioned in this liſt.

This then was the ſtate of the kingdom in 1780, when, by the death of Thereſa, the ſole government of it, with the reſt of the Auſtrian monarchy, devolved to Joſeph II.

The Sovereign was limited, and half thought an uſurper, by

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not being an Hungarian. The nobles and clergy were powerful and privileged; the citizens were debaſed, and the peaſants were bondſmen: yet all gloried in the name of *magyar*, and were unanimous in deſpiſing their German rulers. Joſeph knew all this: during the life of Thereſa he had viſited more than once this kingdom; and he was not ignorant whom he had to govern.

Under theſe unfavourable circumſtances, he undertook the difficult labour of reform, his favourite object; which he muſt be aware would alienate from him the affection of the powerful among his ſubjects: he knew certainly too well mankind, to think that the goodneſs alone of his plans would be ſufficient to make them well received, when the conduct not only of individuals, but of whole communities, is ſo much influenced by intereſt, pique, and caprice: but the temple of JANUS was then ſhut in all this part of Europe, and he could give his mind up entirely to this project.

The firſt error he committed was his diſpenſing with the ceremony of coronation; a ceremony which, however trifling it may appear to other nations, is thought to be of great importance in Hungary. An old author (Inchofferus) ſays, "Nemo ut rex legitimus habetur niſi prima illa corona, quæ Stephani, primi regis, caput cinxit, nempe Angeli monitu a Silveſtro Papa, miſſa coronatus. Ea de cauſa, ſacram vocant, & incredibile ſtudio, loco & cuſtodibus deputatis, conſervant; non aliter quam ſi ſalus & religio Hungariæ

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Hungariæ ex ea dependeret." "No one is conſidered to be the lawful Sovereign, unleſs he has been crowned with the crown which was placed on the head of St. Stephen, which was ſent at the command of Heaven by Pope Silveſter, and is therefore conſidered as ſacred, and is kept with all imaginable care." It cannot be ſuppoſed that Joſeph omitted this to inſult the nation, but rather to avoid ſwearing to them, by taking the oath which accompanies this ceremony, to keep ſacred their rights and privileges, when he intended immediately to deſtroy them.

In 1784, he acted no leſs unconſtitutionally by ordering the crown to be brought from Hungary to Vienna. By the lately quoted paſſage it is ſeen in what eſteem this is held by the nation. The place where it ſhould be kept is fixed by the Diet; and without a decree of this aſſembly it cannot be legally removed.

By a law under Ladiſlaus it was ordered to be kept at Viſſegrade; but by another decree of the Diet in 1608, its place of conſervation was altered to Preſburgh. The keepers of it were choſen by the Diet, and took an oath * not even to *ſhew* it to any one, without permiſſion of the ſovereign and the ſtates, and to defend it until death.

The

* Quoniam ſua majeſtas regia, atque omnes ſtatus & ordines Hungariæ, in præſenti generali Diæta Poſonienſi congregati, ſacram ejuſdem regni Hungariæ coronam, ſimul cum omnibus ejus clenodiis, fidei & cuſtodiæ meæ concredere dignati ſunt: Ideo, juro per Deum vivum, quod ego, ſacræ regiæ majeſtati, ac dicto regno Hungariæ, fide-

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The diviſion of the kingdom into counties, with the adminiſtration of their government and police, through counts and vicounts or lord lieutenants, deputy lieutenants and inferior officers, was next ſuppreſſed, and a diviſion of the kingdom into ten circles, with a *royal commiſſary* at the head of each, ſubſtituted to it. This was no trifling alteration; for it took in ſome degree a great and honourable office accompanied with and giving great influence, and which in ſome families was hereditary, from the nobility, and threw greater influence into the hands of the ſovereign.

The ſame year the *glebæ adſcriptio*, or villanage of the peaſants, was ſuppreſſed. This being done by a royal mandate, and not by an order of the Diet, was illegal; and was conſidered as an invaſion of the rights of the landed proprietors.

lis & obediens ero, dictamque ſacram regni coronam, ſumma fide, diligenti cura, vigilantia ac ſollicitudine, cuſtodia adſervabo; fine præſcitu & voluntate ſuæ regiæ majeſtatis & regni, *neminem ad illam viſendam & perſcrutandam admittam*; aut aliono illam tradam; atque quolibet anno, certis temporibus, frequenter huc Poſonium me conferam, & locum conſervationis dictæ coronæ diligenter perſcrutabor & inſpiciam; ac ut ſalva ſemper & ſecura perſiſtat, omni diligentia & fidelitate curabo; ac, ſi quid ſuſpicionis, & hoſtile, in januis, ſeris, vel parietibus, advertero; de eo confeſtim ſacram majeſtatem ſuam regiam, vel palatinum edocebo. Item ſi quem motum, vel tumultum, in regno hoc oriri, contingeret; de illo quoque, ad majeſtatem ſuam regiam, & dictum palatinum ſubito referam; & ad cuſtodiam dictæ coronæ majus præſidium humiliter petam: ac in perſona mea, ad mortem & vitæ exitum, fideliter & conſtanter illi adſiſtam, omneque periculum pro poſſe meo, ab illa avertam.

The

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The royal mandates now became more arbitrary and deſpotic. In this kingdom ſeveral languages are in common uſe in particular diſtricts; and the public acts and proceedings are accordingly carried on in theſe different languages. Joſeph, whoſe favourite project was to form out of his vaſt poſſeſſions one uniform government, publiſhed an order, that after three years all public buſineſs ſhould be tranſacted in the German language; and thoſe filling the public offices, if they did not make themſelves maſters of this language, not only to ſpeak it, but to write it likewiſe, ſhould be diſmiſſed the public ſervice. The Germans form but the ſmalleſt part of the people of Hungary, and are looked upon by the Hungarians as a kind of intruders: how muſt it not then have enraged the latter to be obliged to learn their language! An old MAGYAR to be *obliged* to learn, and to learn the GERMAN language! To ſuch this mandate muſt have been more terrible than the news of the invaſion of the Turks. Not but this language is pretty generally known to moſt of them above the vulgar, in the cultivated parts of the kingdom.

Some alterations in the mode of adminiſtering juſtice added likewiſe to the diſcontents.

But the introduction of the *land tax* rendered the nobility almoſt outrageous. Hitherto the lands in the hands of the *plebs* had only paid; now all were to be equally taxed, and no reſpect was to be paid to the occupier or proprietor of the ſoil; only to the fertility of

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of it, and its local advantages. But to apply this mode of taxation, it was found requiſite to meaſure every piece of land in the kingdom, and to aſcertain its productive powers: and this Joſeph ordered to be executed, and with the greateſt expedition. People totally unacquainted with land ſurveying, from the want of a ſufficient number of proper perſons, were therefore obliged to be employed; and through the ignorance of theſe, and probably from the ſecret oppoſition of thoſe who were affected by this tax, great errors were committed: this was a further cauſe of complaint.

During theſe reforms, which, if practicable, required to be introduced with the greateſt circumſpection, and under the moſt favourable circumſtances, Joſeph involved himſelf in a war with the Turks.

It is well known that the Auſtrian arms acquired no laurels in the beginning of this war, and that a great dearth of corn was felt in the Auſtrian camp. Hungary is looked upon as the granary of Auſtria; and it could, though corn was not as uſual plentiful that year, have aſſiſted its Sovereign, had it been ſatisfied with his conduct towards it. But it refuſed its aſſiſtance, and Joſeph publiſhed an order to oblige the landed proprietors, whom he was about to deprive of their privileges, to deliver into the royal magazines a certain quantity of corn, at a price fixed by himſelf. The price for wheat was four ſhillings a *metzen* (about two Engliſh buſhels); for barley two ſhillings and ſixpence, and oats two ſhillings. One half

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of the corn delivered in, was to be paid for in ready money, and the other half after the war. Theſe prices were indeed higher than the uſual market prices; but on account of the war, wheat was ſold in the market for eight ſhillings, and the other kinds of corn, high in proportion. Some obeyed through fear the order of the Emperor, others would not. Where the military were quartered, force was employed. Hay was likewiſe demanded. A large landed proprietor aſſured me, that the ſucceeding winter he loſt many ſcore of cattle, for want of this article, which had been taken from him. This added much to the diſcontents already raging.

Nor can it be ſuppoſed, that Joſeph did not extend his reforms in religious matters to Hungary. At the very beginning of his reign, he diſpleaſed the Catholic clergy, by giving toleration to the Proteſtants. He took away their churches, and applied them to profane yet uſeful purpoſes: he ſuppreſſed their monaſteries and convents *, and changed and new modelled their ſeminaries of learning. Even the towns had ſomething to complain of; for he took from them ſome of their privileges, and put them under the juriſdiction of the circles.

Againſt theſe violations of the laws of the land, very bold repreſentations were made by ſeveral of the counties; and the diſ-

* According to De Lucca, 130 monaſteries and ſeven convents were ſuppreſſed by Joſeph II. At preſent, according to the ſame author, there are 168 monaſteries and eleven convents in this kingdom.

ſatisfaction

ſatisfaction of the nation reached the Sovereign's ears by various means.

Though the ſurveying of the kingdom was begun in 1785, as laying a foundation for the aſſeſſment of the general land-tax; yet the tax itſelf was not fixed till February 1789, and it was not to be put in force till November of the ſame year. Then, as a part of the ſame vaſt ſcheme, all dues from the peaſant to his lord, in labour and produce, were to ceaſe, and about eighteen per cent. according to the aſſeſſment, was to be paid in lieu of it. The taxes likewiſe from the peaſant to the Sovereign were to ceaſe, and about twelve per cent. was to be paid in the ſame manner: ſo that ſeventy per cent. remained for the peaſant, after paying his landlord and Sovereign. As no land was to be privileged, ſo naturally the lands of the nobility and clergy were to pay the twelve per cent. for the public ſervice; as well as thoſe in the hands of the peaſant.

Joſeph's health was much impaired by the fatigues of the firſt campaign againſt the Turks; and in 1789 it was expected he would ſoon terminate his earthly career. Whilſt at war with the Turks, and a Pruſſian army on the frontiers of Auſtria, his ſubjects in the Netherlands were in open rebellion; and complaints and threats of further inſurrection aſſailed his throne, or rather his death-bed, from every quarter. Hungary and Tyrol, the freeſt of his people, were the loudeſt in their complaints; but the ſtates of Bohemia, Moravia,

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and Gallicia were not indifferent to his arbitrary government; and the lower claſſes of the people who were the objects of this monarch's particular care, were complaining of the high prices of the neceſſaries of life.

Arbitrary indeed was the government of Joſeph; yet no one I think will queſtion the goodneſs of his intentions, however they may diſapprove of his meaſures. How ſevere a mortification muſt it not have been to him, after paſſing ſo many ſleepleſs nights in planning for the welfare of his people, to find nothing but diſcontent and diſſatisfaction within their breaſts, and this, when the ſtate of his health required the ſincere applauſe of his ſubjects, the greateſt recompenſe to a patriot king, as a cordial to ſupport his drooping ſpirits, now oppreſſed with diſeaſe! Yet ſtill complaint. And now every bright hope of high public proſperity, through the introduction of his wiſe political inſtitutions, he found daily decreaſing. How willingly he would have obeyed an earlier call of death, which ſhould have reſcued him from greater mortifications! Yet, quick as the ſummons came, it was too ſlow to ſave him from the cruel puniſhment of being obliged to cancel with his own hand the acts of his whole government, and of thus making, on his death-bed, an *amende honorable* to public opinion and ariſtocratic rights.

On the 4th of February 1790, he publiſhed the following revocation, and on the twentieth of the ſame month he retired at once

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from the vexations of government, and the world. "Since we intend to open the Diet, which we promiſed you on our royal word on the 18th of December of laſt year, after the conſtitutional coronation ordained by the ſecond article of the decree of the Diet of 1723, and after the ſigning of the inaugural diploma; and ſince we intend perſonally to attend this Diet, we have thought proper to defer it until peace, that we being free from the cares of war and recovered from the diſeaſe which enfeebles us, may be able to devote ourſelves entirely to the affairs of the kingdom, which are the object of the deliberation of the Diet: and that you may have no cauſe of uneaſineſs, whilſt waiting for this yet indeterminate time, we have reſolved that it ſhall not be deferred further than the year 1791. Accordingly we promiſe you upon our royal word, that we will call the Diet next year, which ſhall be held as the laws of the land ordain: and that we may not confine to this alone our paternal kindneſs towards the Hungarian nation; and to ſatisfy your wiſhes alſo in this ſhort interval until the holding of the Diet, we have of our own free choice taken the reſolution to place the adminiſtration of the ſtate and of juſtice, from the 1ſt of May of this year, entirely in the ſtate we found it in 1780, upon the deceaſe of the Empreſs and Apoſtolic Queen our dear mother, when we took upon ourſelves the government.

"Although we have ſince this time changed ſome of the branches of the public adminiſtration, with the view to advance the intereſt of the kingdom, and in hopes that taught by experience you would approve

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of it; yet as we are informed that you prefer the former mode of adminiſtration, and that you ſeek and find your happineſs in the maintaining it, we make no difficulty likewiſe in this matter to comply with your deſire; for the welfare of the people intruſted to our care being the only object of all our wiſhes and efforts, that way which is pointed out to us by the unanimous voice of the nation will always be the moſt agreeable to us. Accordingly we declare by this, that as ſoon as all the counties of the kingdom are reinſtated in their former authority given them by the laws, in reſpect as well to the tranſactions in general and particular congregations, as to the conſtitutional election of magiſtrates; and as ſoon as the royal free towns and free diſtricts ſhall be reſtored to their former activity, all the other acts publiſhed ſince the commencement of our reign, which according to the common opinion may ſeem to be contrary to the laws of the land, ſhall be revoked and loſe their force. But to avoid all confuſion that might happen in the public adminiſtration; before further notice is given to you concerning the formal revocation of the former acts (for which purpoſe we have already given the requiſite orders), it is our will, that nothing be done by private authority, and that you pay obedience to the preſent lord-lieutenants of the counties, till the (former) lord-lieutenants can enter upon their offices. Further it is our will, that our act of toleration, the regulation concerning the eccleſiaſtical offices, and what we have ordered in favour of the peaſants, as well concerning their treatment as the tie of ſubjection, ſhall remain in force; in as much as theſe acts may quite be conci-

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liated with the laws of the land, and are founded upon a natural reaſonableneſs: and the arranging of the eccleſiaſtical affairs is our duty as firſt patron of the church: and we are convinced that you have, after your reaſonable manner of thinking, already given them your moſt perfect approbation. Finally, that nothing may remain undone towards completely ſatisfying your wiſhes, we have ordered that the crown and the other inſignia, which we in the mean time have preſerved in our treaſury, ſhall be carried immediately to our royal palace in Offen, where we have already given orders to prepare a proper placefor them, where they ſhall be kept as the law ordains. By theſe regulations, made according to the eſtabliſhed laws, you receive a freſh token of our paternal love towards the Hungarian nation, and at the ſame time an everlaſting witneſs, that ſince the legiſlative power, according to the laws of the kingdom, is equally divided between the prince and all the ſtates of the kingdom, we likewiſe will ſupport the rights of the ſtates, and deliver them over to our ſucceſſor in the ſame ſtate we received them. We promiſe ourſelves likewiſe that you will ſupply the wants of the ſtate for the campaign of the preſent year, by furniſhing corn for the ſupport of the troops aſſembled for the ſafety of the kingdom, and by furniſhing of recruits in the manner which may appear to you moſt proper."

Thus was a reign of nine years, which at firſt promiſed to form a brilliant epoch in the hiſtory of Europe, almoſt eraſed from its page. Yet muſt it be recorded as a leſſon to other rulers, to teach them

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them that the feelings and wiſhes of a people are not to be ſlighted, nor a nation to be governed like an eſtate, and that even good regulations and inſtitutions ſhould not be arbitrarily nor too haſtily introduced. Good princes are often metaphorically called the fathers of their people. As the head of a family Joſeph governed his dominions; he deſired the welfare of his children; and he planned for their happineſs, and wiſhed them to receive with ſubmiſſion his plans, which he would have immediately executed. It is ſaid by his biographer Pezzel, that being adviſed by his miniſters not to be ſo haſty in his reforms, he ſaid, "Of all that I undertake, I will immediately ſee the effects: when I put in order the *Prater* and *Augarten*, I did not take young ſhoots which might only ſerve the next generation, but trees under whoſe ſhade I myſelf and my cotemporaries might find pleaſure and advantage."

This revocation being a compelled one, the diſlike and miſtruſt of the nation was as inveterate as ever towards the Houſe of Auſtria, and it required the greateſt circumſpection in his ſucceſſor to quiet his enraged people. In ſome places the people had the boldneſs to burn the public edicts of their ſovereign, under the gallows, on the news of his approaching death.

In this critical ſituation Leopold aſcended the throne; but reluctantly entered his Hungarian dominions, to receive with trembling hands the enſigns of power from his incenſed people, many of whom wiſhed to ſet aſide their Auſtrian connections. An Hungarian

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rian author, ſpeaking of the ſerious aſpect of the kingdom at this period, exclaims, " Deum immortalem! quam tetra, quam lugubria, quam funeſta fuiſſet tunc harum ditionum facies! Cædes, incendia, rapinæ, vaſtitas univerſum regnum & florentiſſimas regni civitates miſerandum in modum deformaſſent; vici omnes & oppida acervis corporum, & civium ſanguine redundaſſent; templa ipſa Dei O. M. ac delubra nefariis ignibus conflagraſſent! niſi divina, eaque ſingulari providentia Leopoldus II. quaſi de cœlo miſſus, habenas imperii capeſſiviſſet; qui patriam, vitamque omnium noſtrûm, bona, fortunas, parentes, cognatos, atque aras ipſas, ex flamma ac ferro & pene ex faucibus fati ereptas & conſervatas nobis reſtituit. Ille leges, jura, libertatem, vetenem formam regiminis priſtino loco collocavit; ille comitia, ſolennem ſui inaugurationem, jusjurandum, ceteraque omnia quorum dilatio animos antea perculerat, præſtitit; ille medium illum, qui populum & regem dividebat, parietem demolitus eſt: ille mutuam cives inter & principem fiduciam quaſi ab interitu ſuſcitavit; ille ſubjectos jam propemodum templis, mœnibus, ac tectis noſtris, circumdatoſque ignes reſtinxit; ille diſtrictos gladios a jugulis noſtris ſingulari ſapientia, & divina quadam animi moderatione, rejecit *."——" Heavens! what a melancholy and dreadful aſpect theſe poſſeſſions would have preſented! Rapine, ſlaughter, and conflagration would have ſtalked over the land, and would have deſtroyed the kingdom; unleſs it had pleaſed the Almighty to ſend

* Oratio pro Leopoldo a Step. Pallya.

Leopold

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Leopold to take the reins of government into his hands, who has ſaved us from fire and ſword, and has ſnatched us, as it were, from the jaws of fate."

Complaints therefore, from every quarter, on the illegal government of Joſeph were preſented to his ſucceſſor Leopold. The repreſentation from the county of Neitra, on the 2d of March 1790, is expreſſed in this harſh language;

"We ſaw the ſacred crown of the kingdom taken away: we ſaw God robbed of his churches; the laws of their ſacredneſs; parents of their children*; the nation of its language; the kingdom of its privileges; the dead of their cuſtomary burial. We ſaw the meaneſt kind of flatterers hatch plans, and leave nothing undone which could in any manner contribute to the deſtruction of the kingdom. We ſaw the ſacred veſſels profaned; the reſpect of pre-eminenee overturned; the power of the poſſeſſor of the ſoil diminiſhed; the education of youth ſpoiled. We ſaw men well deſerving of their country, and learned in the ſciences, deprived of their places; but foreigners, and ordinary people, who neither through birth, nor through morals, uprightneſs or experience, had diſtinguiſhed themſelves, put in the place of thoſe induſtrious children of the country (the natives), as teachers of the German language. We ſaw the native inhabitants

* Alluding probably to taking of recruits.

occupying

occupying public offices, engaged by an oath to undermine the liberty of their country; many of them break boldly into our cellars and granaries, and take from us, without citing, hearing, or convicting us, corn, ſheep, and children (recruits?) without reſpecting our common origin, or availing themſelves of the power of the laws. We ſaw the fertility of our country's ſoil, to which the blood of our forefathers had given fertility, magnified in an extraordinary manner, and to our injury; and what is ſtill more, an oath expreſſed to give credibility to this falſehood. We ſaw our country arbitrarily meaſured; many millions (of guldens) expended on a mob compoſed of various nations, which devoured our money gained with blood, ſweat, and hard labour, and miſuſed our property, to maintain common proſtitutes, &c."

National hatred againſt the Germans, with patriotiſm, aroſe more violent than ever. Every thing German was deſpiſed, and this people were liable to be inſulted if not protected by the Hungarian dreſs; for the patriots were more than uſual attached to their manners and dreſs; and the *mouſtaches*, which, with the poliſhed part of ſociety, were grown out of uſe, were again introduced. The more violent were for carrying things with ſo high a hand, as to conſider, ſince Joſeph never was crowned, the Auſtrian ſucceſſion to be at an end. Many were for a new *diploma*, or bill of rights; and it is certain one was really drawn up, in which the Sovereign was to be deprived of the right of nominating to the public offices; and

all

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all the charges in the mines, poſt-office, &c. &c. were to be excluſively given to the nobility; the ſovereign was not even to appoint the officers of the army, nor to fix their pay. He was to be compelled to reſide in Hungary, and the government of the kingdom was to be entirely ſeparate from the other part of the Auſtrian dominions. He was to have no *veto* in the legiſlation, and the ſtates were to have the privilege of aſſembling without his order. Taxing the land was not even to be thought of. The ſtates were to be allowed to form treaties of commerce without the conſent of the king, and coining was not to be the prerogative of the crown. Peace and war were not to depend on the king, nor was he to form treaties, without the conſent of the ſtates; and he was to include in his coronation oath the thirty-firſt article of the ſecond of King Andrew, which permits the ſubjects to take up arms againſt their ſovereign, if he ſhould infringe their rights. But the *moderates* were contented that affairs ſhould be put in the ſtate they were in, on the Emperor Joſeph's acceſſion to the throne; and theſe fortunately both for ſovereign and people, prevailed.

The crown, about which ſo much ſtir was made, was ſent back to Bude on the 18th of February, that is, two days before Joſeph's death. How much this is valued, and how it was received by the nation, may be ſeen by this trifling letter, written at the time, and printed in Mr. Slötzer's Staats Anzeigen, No. 54.

"The crown, the greateſt jewel of royalty, is brought back with

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the greateſt pomp and imaginable joy: wherever it paſſed in its journey from Vienna to Bude, the moſt magnificent preparations were made for its reception. The ſplendour of the ladies in the Hungarian dreſs, was never equalled before; they wore blue petticoats, with ſhort jackets of the ſame colour turned up with fur, faced with gold; their head-dreſſes were black velvet kalpacks * with gold lace and feathers.

"Patriotiſm awakes in all its force: every body wears the Hungarian dreſs; ſuch a ſcene of joy was never known before: here with us, likewiſe, the crown was received with all imaginable pomp. As it was depoſited at night in the chapel of the palace, the whole city and ſuburbs were illuminated: this was a moſt beautiful ſight, and our ſtreets being long and ſtraight contributed much towards it. Woe to thoſe who did not keep their lamps in proper trim, or who put them out too ſoon! Their windows were broken without mercy. In every ſtreet, throughout the night there was rejoicing, and whole crowds of people paraded about with muſic, and cried, 'Huzza! The freedom of the Hungarian nation for ever!' I can now form a pretty good idea of the revolutions in France and in the Netherlands. It ſeems to me as though I were there, for I never in my life ſaw any thing equal to this. It was on Friday the 19th of February that the crown arrived here, to be further tranſported to Offen. Only imagine what extra-

* A kind of Huſſar cap.

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ordinary joy was demonſtrated on its return, when even all religious reſtraints ceaſed, and our biſhop gave a grand ſupper to the keepers of the crown, and the nobility, where fleſh was ſerved up; and in the public ſtreets and houſes there was dancing as in the Carnival. I muſt deſiſt; I can by no means deſcribe every thing: yet I muſt tell you, that the crown was expoſed to public view on the altar of the cathedral church: the nobility were very deſirous of ſeeing it: it was kept at night in the palace chapel, guarded by the officers of the county, and town magiſtrates, with naked ſwords. On its arrival at Offen on the 21ſt of February, the city notary Francis Balaſt, in the name of the magiſtrates and citizens, addreſſed the keepers of the crown in a Latin oration, in which he congratulates the nation on its return, which he conſiders as the pledge of the return of its rights *.

The people now in poſſeſſion of their crown, their rights reſtored, and

* "Excelſi Proceres, ſacræ regiæ coronæ cuſtodes! Quam, auſpice Supremo Numine, ante octo propemodum ſæcula Auſtricus, archipræſul Colocenſis, divo regi Stephano attulit à Sylveſtro nominis hujus IIdo, Romanorum maximo pontifice, ſacram regni hujus Hungariæ coronam, eandem à triſtibus Iſabellæ reginæ temporibus ex hac urbe et arce Budenſi abſentem, dum hodie ſolenni hocce ritu rurſum per vos, Excelſi Proceres, reduci, et velut exoptatæ felicitatis teſſeram ad gremium regni et urbis iſtius in avitam regni ſedem modo collocari cernimus; gaudet populus, lætantur cives, exultat nobilitas, univerſi denique regni ſtatus et ordines ſuorum votorum compotes fieri gratulantur maxime. Nec immerito. Felicem enim patriam noſtram, cui diadema iſtud regium, ex diverſis ſalvum periculis, in ſinum ſuum, tanquam firmum redditi veteris ju-

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and their grievances redreſſed, the effervescence ſubſided; and the fame of the wiſdom of the new ſovereign daily diminiſhed the remaining diſcontents. And Leopold, a few months after his taking the reins of government into his hands, ventured to aſſemble the ſtates of the kingdom in a Diet; after a vacation of ſix-and-twenty years: and the following buſineſs was tranſacted.

The firſt article only concerns the aſcent of Leopold II. to the throne.

The ſecond contains his inauguration oath, which is the ſame as that taken by the Empreſs Thereſa. Herein he promiſes, that the royal crown ſhall be kept in the kingdom, and be guarded by the crown keepers, choſen from among the members of the ſtates; that the lately acquired countries, which formerly belonged to the king-

ris et poteſtatis pignus, ad commune gentis Ungricæ decus licet reponere. Glorietur proinde triumphans ætas noſtra; et non minus ultima quoque plaudat poſteritas. Dignum propter ea, ut auguſtiſſimo principi noſtro, a cujus benignitate et clementia hæc accipimus, immortales in homagiali ſubmiſſione referamus gratias. Dignum, ut inclytis ſtatibus et ordinibus, quorum in exorando principe virtus fuit eximia, perpetua litemus gratitudine. Nos vero Budenſes incolæ, quibus ſacrum hunc theſaurum ſemper coram venerari conceditur, æterna diei iſti ſpondemus ſolennia; vobiſque, Excelſi Proceres et Cuſtodes, ad tuendum pro gentis Ungricæ beatitate hoc regale ornamentum, omne robur, vitam et fortunas in adjutorium ſancta voti religione addicimus et conſecramus."

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dom of Hungary, ſhall be united to it; that when the preſent family which ſits upon the throne ſhall be extinct, Hungary ſhall again become an elective monarchy; and that all his majeſty's ſucceſſors ſhall be bound to take this ſame oath.

The third ordains, that in future the inauguration and coronation ſhall take place within ſix months after the deceaſe of the laſt ſovereign.

The fourth is concerning the uſual preſent from the ſtates to his majeſty.

The fifth is on the election of the archduke Leopold as Palatine.

The ſixth decrees that the crown ſhall be always kept at Offen.

The ſeventh takes the manor of Munhats from the royal domains, and ſubſtitutes to it a diſtrict in the county of Bats.

The eighth decrees that Count Joſeph Keglevich of Bazin, commander of the order of Saint Stephen, chamberlain to his majeſty, and lord lieutenant of the county of Torn; and Count Michael Nadaſh, heir of Fogaras, chamberlain to his majeſty, and hereditary lord lieutenant of the county of Komorn; ſhall be the keepers of the crown, being unanimouſly choſen by the ſtates.

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The ninth ſays, that the king promiſes to reſide longer in Hungary than has been of late the cuſtom.

The tenth decrees that the kingdom of Hungary ſhall be independent of the other Auſtrian dominions, and ſhall not be put on the ſame footing with them, but have its own particular government as decreed in 1715 and 1741.

The eleventh orders that the limits of the kingdom ſhall not be altered, that the differences which have ariſen concerning them ſhall be ſettled, and the parts that have been ſeparated from it ſhall be reunited.

In the twelfth, the king voluntarily acknowledges that the power of making, laying aſide, and interpreting the laws, is a joint prerogative of the ſovereign and the ſtates; and he promiſes that he will not govern by royal mandates, edicts, and patents; that the courts of juſtice ſhall not be altered by him, nor their judgements changed or reviſed, but that he will put them in force according to the intent of the law.

The thirteenth decrees that the Diets ſhall be held every third year, and oftener if the ſtate of affairs requires it.

The fourteenth ordains that the adminiſtration of the affairs of the

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the kingdom belongs to the council of the lieutenancy *(Staathalter-ey-rath)* of the kingdom, whose duty it is to make representations to the Sovereign, if his orders transmitted to them to be enforced be contrary to the fundamental laws of the kingdom.

The fifteenth constitutes a committee to draw up a plan for the education of youth, and for the liberty of the press. In

The sixteenth the king promises that public transactions shall not be carried on in a foreign language; but, that the Hungarian may become more general, a teacher of this language shall be appointed in the academies and *gymnasia*. For the present the business of the courts *(dicasteria)* shall continue to be transacted in the Latin language.

The seventeenth puts in force the eleventh article of 1741, the King promising to admit Hungarians into his ministry, and to put those, who are properly qualified, in a situation of being employed in the diplomatique line; and further, that only Hungarians shall be employed in the management of the *internal* affairs of the kingdom; and in the external they shall be admitted.

The eighteenth is concerning the oath to be taken by those employed in the courts; and it orders that no one, on a mere accusation, shall be dismissed from his office. In

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The nineteenth the king promiſes, that no ſubſidies, either in money, natural productions or recruits, ſhall be demanded, either from the ſtates, or the tax-bearing people; not even under the name of a free gift, or other title, but only in the Diet; but the maintenance of the eſtabliſhed military ſhall always be fixed from one Diet to the other; and the eighth article of 1715, and the twenty-ſecond of 1741, on this ſubject, are hereby confirmed. In

The twentieth the king is ſo good as to promiſe, that the price of ſalt (it is a royalty) ſhall not be raiſed, except on preſſing occaſions, out of the Diet. In

The twenty-firſt the king ſays he will take care that the ninety-ninth article, concerning the public fund, ſhall again be put in force.

The twenty-ſecond decrees that the Poſt ſhall be put under the direction of the council of the lieutenancy, &c.; and that the adminiſtration of the mines ſhall be ameliorated. By

The twenty-third the King is to ſee that the churches, and other ſimilar foundations, are not deprived of their rights.

The twenty-fourth confirms the rights and honours of the *Palatine*, *Primate*, *Ban*, and *Tavernicus*.

The twenty-fifth confirms the rights and privileges of the royal free

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free towns, mining towns, the diſtricts of the *Jazygers* and *Cumanians*, and the ſix towns of the *Haydukes*.

The twenty-ſixth is on matters of religion. (See the next article on the ſtate of the Proteſtants).

The twenty-ſeventh gives the non-united Greeks permiſſion to acquire landed property, and to fill the public offices and charges.

The twenty-eighth reſtores the counties of Temeſwar, Torantal and Kraſſo to their right of ſitting and voting in the Diet.

The twenty-ninth gives the *Jazygers*, *Cumanians*, and *Haydukes* the right of ſending ſeverally two deputies to the Diet.

The thirtieth conſtitutes the cities of Temeſwar, Thereſianſtadt, Poſega, and Carlſtadt, royal free towns.

The thirty-firſt prohibits games of hazard, under the penalty of a hundred ducats (about fifty pounds).

The thirty-ſecond decrees, that the privileges granted by Joſeph II. are only valid when confirmed by his preſent majeſty.

The thirty-third orders that a committee ſhall be choſen to draw up a plan for making a *military enumeration* of the people.

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The thirty-fourth declares the orders of the laſt government for meaſuring the kingdom, together with the claims for the expences incurred in this buſineſs (except the claims of private perſons), to be invalid, and orders that in future no ſuch meaſuring ſhall be made.

The thirty-fifth determines the connection between the landlord and his peaſants, confirms the Urbarium introduced by the Empreſs Thereſa, till the Diet to be held in 1792; when this ſubject is to be reconſidered: recommends the county courts to ſee that the peaſants are not oppreſſed; acknowledges the perpetual ſervitude of the peaſants to be contrary to the rights of man, and injurious to the ſtate; and to have been ſuppreſſed in 1405, in the reign of Sigiſmond; in 1458, under the Stadtholder Szylagy; in 1547 and 1550, under Ferdinand I.; and in 1566, under Maximilian: but to have crept in again; and decrees its entire abolition; and gives the peaſants leave to quit their landlords, after paying their dues and rents; and to diſpoſe of their moveable property: yet too great an emigration from any diſtrict is to be prevented, as being injurious to the nation.

The thirty-ſixth orders that the privileges of acquiring landed property, granted by Joſeph II., and the rights of thoſe who have acquired them, ſhall remain undetermined till the next Diet; the preſent poſſeſſors however remaining in the mean time in quiet poſſeſſion; and that the population and induſtry may be increaſed, his majeſty promiſes to divide the eſtates lying in the counties of

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Temeſwar, Kraſſo, Torantal, Bacs, Arad, and Tſanadd, amongſt thoſe who are deſerving of them. In

The thirty-ſeventh the king promiſes that the corn and hay delivered, by order of Joſeph, to the army, ſhall be reckoned as part of the contribution; that he will take into conſideration the caſes of thoſe who have ſuffered by the Turkiſh war; but to favour the royal treaſury, the nobles and free towns are only to be paid for what they delivered after the concluſion of the preſent Turkiſh war.

The thirty-eighth permits the Jews to dwell in all places (except in the mining towns), as previous to 1790, till the committee has had time to lay before the ſtates further arrangements.

The thirty-ninth orders that the royal courts of juſtice, &c. &c. ſhall be transferred to Peſt.

The fortieth orders an amelioration in the penal and civil codes, and in the modes of trial.

The forty-firſt orders a reviſion of the cauſes tried under the preceding reign; and decrees the puniſhment of diſ-ennobling the nobility to be invalid.

The forty-ſecond ſuppreſſes the uſe of torture in criminal caſes.

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The forty-third permits the citizens, and thoſe not noble, to appeal, in criminal caſes, to the higher courts, as well as the nobles.

The forty-fourth orders the cauſes which have commenced in the courts inſtituted by Joſeph, but which are not terminated, to ceaſe; and the documents to be returned to the reſpective parties.

The forty-fifth declares likewiſe invalid the cauſes which have paſſed judgment; but which judgment ſtill remains to be enforced, &c. &c.

The forty-ſixth concerns cauſes brought before the king's court; which, if there only on points of law, are to be thrown out.

The forty-ſeventh orders that cauſes which have paſſed the king's court may be ſent back for further reviſion.

The forty-eighth orders that cauſes merely on points of law, brought before the *ſeptem-viral* court, ſhall be thrown out.

The forty-ninth concerns the reviſion of cauſes before the *ſeptem-viral* court.

The fiftieth orders that cauſes determined and ordered for execution ſhall remain in *ſtatu quo*; but the ſuffering party may, in

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the ordinary way, commence a new law-ſuit, and appeal to higher courts.

The fifty-firſt re-eſtabliſhes the manor-courts in the rights they poſſeſſed prior to the innovations of Joſeph II.

The fifty-ſecond orders that law-ſuits called *octaval* and *tabular*, may be continued before the king's court; for which reaſon the documents in the archives muſt be reſtored to the parties.

The fifty-third orders that cauſes of appeal before the king's court, not yet terminated, ſhall be commenced in the legal manner, within the two next terms of the general courts of the kingdom.

The fifty-fourth orders that the judgments of the courts eſtabliſhed by Joſeph, but now aboliſhed, and other judicial proceedings, ſhall be valid.

The fifty-fifth confirms the judgments given during the government of Joſeph in matters of marriage and divorce.

The fifty-ſixth decrees that, in future, trials for high treaſon ſhall be brought before the king's court.

The fifty-ſeventh is to prevent the deſtruction of the woods and foreſts.

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The fifty-eighth places Dalmatia, Croatia, and Sclavonia, under the care of the Council of the Lieutenancy.

The fifty-ninth orders that the *contribution* of Croatia and the three counties of upper Sclavonia shall be always determined in the Diet, but separate from that of Hungary, and shall never be raised but in the Diet. By

The sixtieth the king promises that the free town Zengh shall be exempt from the military jurisdiction, and its grievances redressed.

The sixty-first is concerning the district of the sea coast called the *Littoral*: and it constitutes Buccari and Port Royal, the first a commercial town and the other a free port.

The sixty-second orders a district lying between the *Carolin* and *Joseph commercial* roads, to be put under the political jurisdiction. In

The sixty-third the king promises to order a commission to examine the differences concerning the territory of Repus, &c. In

The sixty-fourth the king promises that the nobles, and the burghers of the free towns, shall, according to the fifty-ninth article of 1618, be exempt from paying customs and tolls in the military districts.

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The fixty-fifth is the offer of the ſtates of their perſons and fortunes, in defence of their king and country, if it ſhould be requiſite to continue the war againſt the Turks. In

The fixty-ſixth the ſtates promiſe to raiſe immediately ſix thouſand recruits, to complete the Hungarian regiments; and to form a plan for a more ſpeedy and efficacious recruiting of the army.

The ſixty-ſeventh appoints the following committees to carry on the reforms in the political, œconomical and judiciary affairs of the kingdom, begun but not terminated in this Diet, whoſe labours are to be laid before the Diet, which is to meet next year, and to be confirmed by its decrees if approved of.

A committee on Public political affairs.
The contribution or taxation.
The urbarial affairs, or matters between the landlord and peaſant.
Trade, cuſtoms, and impoſts.
The mines and mint.
Judiciary matters.
Literary matters.
Spiritual concerns.
Public grievances.

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The ſixty-eighth appoints commiſſaries to examine into the differences with the neighbouring provinces, concerning their reſpective limits.

The ſixty-ninth decrees that thoſe who have acquired the *indigenat* (denizenſhip), but have not paid the uſual tax, ſhall be ſtruck off the liſt of denizens, if they do not take the oath and pay the tax before the enſuing Diet.

The ſeventieth decrees, that in conformity to the ſeventeenth article of 1711, all foreigners poſſeſſing rich church benefices, as biſhops, provoſts *(probſts)*, and abbots, ſhall pay a tax of a thouſand ducats into the public treaſure; but the provoſts, abbots, &c. who enjoy only ſmall ones, ſhall pay but 200 ducats.

The ſeventy-firſt gives the right of denizenſhip to Prince Cobourg, (without paying the uſual tax of 2000 ducats) as a mark of gratitude from the Hungarian nation, for his military ſervices rendered them in defending their country againſt the Turks, and reconquering Walachia and Moldavia.

The ſeventy-ſecond gives denizenſhip to Prince Waldeck, the Baron of Gemingen, Count Clerfait, Count Soro, Baron Spielman, Ignatius Born and Baron Mitroſky, without paying the uſual tax.

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The ſeventy-third gives denizenſhip to ſeveral perſons named therein; to ſome on paying half, to others on paying three-fourths; and to others on paying the whole of the uſual tax of two thouſand ducats.

The ſeventy-fourth gives denizenſhip to the Marquis of Manfredini, without paying the uſual tax.

Thus a ſtorm raiſed through imprudent and ill-timed reformations, which might have ſevered from the Auſtrian monarchy the fineſt part of its dominions, blew over; and now the liberty of the peaſants, and the toleration of the proteſtants, were confirmed by acts of the Diet.

The perſecution of the latter had often given riſe not only to bickerings, but to acts of violence. Shall not injuſtice, hatred, and avarice, have endeavoured to accompliſh their ends under the maſk of religious zeal? Shall not a difference of opinion in religious matters have been in this country, as in others, a cauſe of public misfortunes? The rights of the Proteſtants, by the articles of the peace of Vienna in 1606, agreed on between their Protector Botſkai and the Emperor Rudolf; and by the peace of Linz, in 1645, between their ſupporter Rakotzi and the Emperor Ferdinand III. were ſolemnly ſecured: yet this did not prevent them from ſubſequent perſecution under different pretences. How could the beſt of ſovereigns, when

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ſurrounded by their enemies, ever active in their endeavours to render them odious to him, by deſcribing them as a moſt dangerous ſect, be their protector? Under the virtuous Thereſa they were not leſs vexed, than under the profligate prince, who was taught, that his deviations from virtue might be made up for by zeal to the true church. By a *reſolution* of Thereſa, in 1749, it was ordered, that thoſe who ſhould leave the catholic perſuaſion, ſhould be impriſoned for two years; and if within this time they ſhould not return to the church, they ſhould be ſent to hard labour!!! But let it be known, for the honour of Hungary, that in the Diet of 1791, when the rights of the proteſtants were confirmed, excluſive of the clergy there were only eighty-four members who voted againſt them; though two hundred and ninety-one for them; of whom one hundred and eighty-one were Magnates, and the greateſt part of them catholics. How great an honour is this ſpirit of toleration to the Hungarian nation!—Where is there a nation in Europe, in which the ſeceding religions have the privileges they have here? entire freedom of public worſhip, with churches and bells, and their own ſchools and ſeminaries of learning; and a right to fill all the public offices, and a ſeat in the legiſlative councils. It will probably be agreeable to moſt of my readers to ſee this more in detail; I ſhall therefore lay before them a tranſlation of the twenty-ſixth article of the Diet of 1791, which is entirely upon this ſubject.

This article decrees, "That in future, without reſpecting any

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new ordinances or privileges, all orders, barons, magnates, nobles, royal free towns; as likewiſe the market towns and villages, ſhall have the free exerciſe of their religion; with liberty of building churches, even with ſteeples and bells, and poſſeſſing ſchools and churchyards: and nobody, of whatever rank he may be, under any pretext, ſhall be in anywiſe hindered or impeded in the enjoyment of this privilege, by his majeſty, or other landlords. The peaſants, whether reſident in market towns, villages, or royal domains, ſhall likewiſe, for the general good and public peace, not be prevented from enjoying the ſame advantages, either by his majeſty, his miniſters, or other landlords. For the confirming of which it is decreed, that henceforth all diſtinction of public and private worſhip ſhall ceaſe; that private ſhall no longer exiſt; but that everywhere it ſhall be public; conſequently it ſhall now be permitted to the proteſtants (as it will be fixed afterwards) to appoint miniſters, build and repair churches, with or without ſteeples, parſonage houſes and ſchools, everywhere; even in thoſe places where hitherto there have been none; without further leave being granted; but with this proviſo, that, as the government muſt be particularly attentive to the ſupport of the *tax-bearing* ſubjects, where it is intended to introduce free religious worſhip, to build churches, chapels, or to appoint miniſters, previouſly a mixed committee of the county, in the preſence of the landlord, yet without the dioceſan, ſhall be held, accurately to examine and to acquaint the county of the requiſite expences to be incurred; of the

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number and wealth of the people and ſettled inhabitants, and whether they are able to bear the requiſite expences; and when according to this examination it appears that the number of the people and the funds are ſufficient, the landlord ſhall fix a ſpot of ground, where the church, parſonage houſe, and ſchool may be built. But the catholic inhabitants are by no means bound to aſſiſt, either by money or labour. This is likewiſe to be obſerved towards the proteſtant landlords and people, when a catholic church is to be erected.

" But it is to be obſerved, that the introducing of religious worſhip, the building and repairing of the churches and parſonage houſes, &c. always remain free and unreſtrained to the proteſtant nobles and landlords.

" In conſequence of this religious liberty, the proteſtants cannot under any pretext, under the penalty of pecuniary fines, whether they are artificers or people of rank, be compelled to be preſent at the holy maſs, proceſſions, or other religious ceremonies, notwithſtanding corporation privileges.

" The proteſtants of both confeſſions muſt in religious matters depend on their own ſpiritual ſuperiors alone; but that this ſubordination in ſpiritual matters may obtain its proper organization, his ſacred majeſty has reſolved to eſtabliſh that order, which meets with the general approbation of the clergy and laity of the proteſtant religion,

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as well concerning the appointment of ſuperiors and directors, as the other regulations, without invading religious liberty; for which reaſon his majeſty, in conſequence of his right of ſupreme inſpection, will hear the proteſtants, and likewiſe take care that a proper diſcipline, agreeable to the principles of their religion, ſhall be introduced: in the mean time it is decreed, that the church laws already exiſting, which are introduced by their directors, and which at preſent are followed, and likewiſe thoſe which in future, according to the ſenſe of this law, ſhall be introduced, ſhall not be altered by any *dicaſterial* or royal ordinance. They ſhall not only be allowed to form conſiſtories, but likewiſe to call ſynods; his majeſty to appoint the place of their meeting: but his majeſty muſt previouſly be informed of the number of the perſons to be preſent, and the buſineſs to be conſidered, which ſhall likewiſe be determined by him; and likewiſe ſuch a ſynod called by permiſſion of his majeſty, whether it be of the Lutherans or Calviniſts, muſt admit to be preſent a deputy from his majeſty, if he requires it, of whatever religion this deputy may be; who indeed cannot direct or preſide, but only have the inſpection. But the church laws or ordinances made in theſe ſynods, ſhall only be valid after the royal inſpection and approbation; and his majeſty, notwithſtanding the mentioned liberties, has reſerved to himſelf the executive power of ſupreme inſpector, through the legal courts, as likewiſe the other royal prerogatives in the religious concerns of the proteſtants.

"The proteſtants can likewiſe retain their *trivial* and grammar-

ſchools

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ſchools where they are already exiſting; and can, with the royal conſent, eſtabliſh new ones, both inferior and ſuperior; appoint or diſmiſs profeſſors, rectors, ſubrectors, and ſchool-maſters; increaſe or diminiſh them; and in future elect local, ſuperior, and general directors, or curates, of the ſchools from amongſt themſelves; likewiſe fix the method and order of ſtudy: but here likewiſe his majeſty has reſerved to himſelf, through the legal courts, the ſuperintendance, ſo that the general management of the literary *police*, the determination of which the ſtates have moſt humbly referred to his majeſty, ſhall extend over this. The ſtudents ſhall be permitted to collect (money) for themſelves, or for their miniſters, and to frequent foreign academies, and enjoy all the *ſtipendia* deſtined for them. The proteſtants can freely print *ſymbolic* (catechiſtical), theological, and other religious books, under the care of thoſe whom they have choſen for this purpoſe, and whoſe names have been tranſmitted to the royal lieutenancy; but with this condition, that they contain no deriſion, ill-natured or ſatirical remarks upon the catholic religion; upon the reſponſibility of the *cenſors*, who have permitted their impreſſion. The three copies, as ordained by the law, muſt be tranſmitted to his majeſty, through the royal lieutenancy.

"The church dues which the proteſtants have hitherto paid to the catholic pariſh prieſts, ſchool-maſters, or other ſuch officers, either in money, productions, or labour, ſhall in future entirely ceaſe, and after three months, reckoning from the publiſhing of this law, ſhall be no more any where demanded, except the proteſtants make uſe of

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of them of their own accord; and in this caſe they muſt render the ſame as the catholics. How this deduction, from the incomes of the catholic pariſh prieſts, may be made good to them, his majeſty will condeſcend to hear the repreſentations of the royal lieutenancy; but it is now made known, that he will never permit any thing to be demanded from the *tax-bearing people* *, or the royal treaſury, on account of theſe indemnifications.

"On the building or repairing of churches, parſonage-houſes and ſchools, the proteſtants are not obliged to aſſiſt the catholics with labour, nor the catholics the proteſtants; therefore the former contracts of this nature are hereby declared invalid.

"The proteſtant miniſters may viſit the ſick and impriſoned of their religion, with the requiſite care and prudence, at all times and in all places; prepare them for death, accompany them to, and ſupport them at the place of execution; but may not make any harangues to the people. The catholic prieſts when they are called to the ſick impriſoned, or to thoſe ſentenced to die, and obſerve the requiſite care, can by no means be denied admittance.

* The reader ſhould be informed, that when a peaſant through poverty or any other cauſe is obliged to leave his farm, which is a kind of copyhold eſtate, his landlord takes poſſeſſion of it; which then being in the hands of a nobleman pays nothing to the government.

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"The public charges, offices, and honours, whether high or low, great or ſmall, ſhall be given to natural-born Hungarians, who deſerve well of their country, and poſſeſs the other requiſite qualifications, without any reſpect to their religion.

"The proteſtants are freed from ſwearing by the uſual legal oath, that is, *by the holy Virgin Mary, the ſaints and choſen of God.*

"The pious foundations and donations of the proteſtants which already exiſt, or which may in future be made for their churches, miniſters, ſchools and ſtudents, hoſpitals, orphan-houſes, or their poor, cannot be taken from them under any pretext, nor yet the care of them: but rather the unimpeded adminiſtration of them ſhall be intruſted to thoſe from amongſt them to whom it legally belongs; and thoſe foundations, which perhaps may have been taken from them under the laſt government, ſhall be returned them without delay. The ſupreme royal inſpection extends itſelf likewiſe over ſuch foundations, to the end that the intent of the founders may be anſwered.

"All affairs of marriage of the proteſtants are left to the deciſion of their own conſiſtories: nevertheleſs his majeſty, out of his royal care, after having conſulted the proteſtants, will take ſuch meaſures that the organization of the conſiſtories may ſecure the rights of the litigating parties; and at the ſame time the principles by which theſe are

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to judge ſhall be tranſmitted for his inſpection and approbation. In the mean time, theſe lawſuits on marriage ſhall be tried in the civil courts according to the principles laid down of late years, that is, before the courts of juſtice, in the counties and diſtricts where theſe exiſt; and before the magiſtrates in the royal free and mining towns; yet with the right of appealing, when the circumſtances require it, to the royal court, and even to the *Septem-viral court.*

" It muſt be obſerved, that the ſentence of divorce only poſſeſſes a civil effect, and the biſhops cannot be bound to admit of the entire diſſolution of the marriage bond; nor extend it to the catholics in caſes where what is conſidered by the laws as a degree of conſanguinity prohibited in marriage is by the principles of the proteſtants allowable. His majeſty has, as it was done under the emperor Joſeph, allowed them once for all, to contract marriages in the third and fourth degree of conſanguinity, without further diſpenſation.

" As by theſe laws the free exerciſe of religion and the maintenance of the churches, ſchools, &c. &c. of the proteſtants are provided for in the ſureſt manner; it is likewiſe determined, for the further maintenance of peace and harmony between the catholics and proteſtants, that both parties ſhall remain in the poſſeſſion of the churches, ſchools, &c. &c. which they now poſſeſs; the foundations of the catholics being in future applied to the benefit of the catholics, and thoſe of the proteſtants for the uſe of the proteſtants; ſo that not only all re-

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coveries on both ſides ſhall be forbidden (except that the proteſtants are allowed to prove their claim to the Zirmay, Hrabowſky and Apaffy foundations), but likewiſe no ſuch taking poſſeſſion of churches, ſchools, &c. &c. can be permitted, and thoſe who ſhall be guilty of ſuch acts of violence ſhall be fined ſix hundred guldens (about ſixty pounds), according to the intent of the fourteenth article of 1647.

"Since the changing from the catholic religion, to either of the proteſtant religions permitted by the conſtitution, is contrary to the principles of the catholic religion, ſuch caſes muſt be made known to his majeſty, to prevent any raſh ſteps. It is likewiſe prohibited, under ſevere puniſhments, to entice by any means a catholic to the proteſtant religion.

"It has been already made known, that theſe privileges of the proteſtants are only valid in the kingdom of Hungary; wherefore the kingdoms of Dalmatia, Croatia, and Sclavonia, are left in the further enjoyment of the laws of their country. The proteſtants therefore within the limits of theſe kingdoms are not permitted to poſſeſs immoveable property, nor to fill public or private offices: yet they have the liberty of maintaining, through the medium of the laws, their ancient rights; and when they by this means obtain their poſſeſſions, his majeſty takes upon him to provide for their indemnification; and the few places in lower Sclavonia, which are partly Lutherans, partly Calviniſts, ſhall continue

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tinue in the enjoyment of free religious worſhip, as hitherto. Laſtly, the proteſtants ſhall have, on account of commerce and manufactures, free liberty to hire dwellings; but not to acquire houſes or landed property from nobles or citizens.

" Children that are, or ſhall be, born of a mixed marriage (and it is to be noticed that ſuch marriages muſt always be performed by catholic prieſts, who are ſtrictly forbid, under any pretence, to attempt to hinder them) ſhall all be of the religion of the father, if he be a catholic; but if the mother be a catholic, then the male children only are to follow the religion of the father.

" Law-ſuits on marriage, as well thoſe which exiſt from the connection between the two religions, as likewiſe thoſe which ariſe from the converſion of one ſex from the proteſtant religion to the catholic, belong to the ſpiritual catholic juriſdiction, becauſe in both caſes it is concerning a true ſacrament.

" The proteſtants of both confeſſions are bound externally to obſerve the feaſts which are now celebrated by the catholics, but not internally, as in their own dwellings, where they are allowed to carry on all their uſual profeſſions, which do not diſturb religious meditation; and it is by this ordered, that all landlords and maſters of families, under the penalty of public proſecution, do not prevent their ſubjects and ſervants, whether they be catholics or proteſtants, from the obſervance of the feſtivals and ceremonies of their religion."

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I am ſorry to be obliged to detract ſomething from this favourable account by obſerving, that the kings of Hungary, as firſt patrons of the church, have great influence in religious matters, as may be ſeen by the preceding piece; and that as the confirmation of the rights of the proteſtants has never prevented them from perſecution, ſo probably in future, ſhould Hungary have a bigoted ſovereign, they may not be entirely free from moleſtation. Many of the catholics, and even many of their prieſts, are no doubt men of liberal minds; yet there are too many ſtill ſtrenuous adherers to the principles of the church of Rome, and artful and intolerant prieſts too readily get the aſcendancy over weak men. A few years ago the lord-lieutenant of the county of Zips was called to account for excluding the Lutherans of his county from ſome public charge; and it then came out, that he had formerly taken an oath to the catholics to do ſo.

Father Coppi, an enlightened and learned man, wrote in 1792 a funeral ſermon on Count Rada, a very virtuous, reſpectable and learned proteſtant, in which he uſed theſe words: "Vive igitur, illuſtriſſime comes, vive vitam hanc, quam poſuiſti beatiorem! Mirabimini forte, hæc ab homine catholico ita dici; verum noveritis, utique nos quoque non alium vivorum atque mortuorum judicem noſſe quam qui muneris ſibi & quidem ſoli divinitus datum affirmavit." The cenſor, an Ex-Jeſuit, ordered this to be altered or omitted, ſaying, "Scandaloſum enim eſt, ut proteſtanti, nullum ſignum pœnitentiæ danti, æternam beatitatem adgratulemur."

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The proteſtants muſt not be conſidered as a ſmall inſignificant ſect. It is generally believed that the proteſtants, that is the Lutherans and Calviniſts, are equal in number to the catholics; and a couple of centuries ago they were more numerous. It is ſaid in the *Manche Hermaen*, that in 1559 *all the great families except three were proteſtants*. De Lucca ſays, the proteſtants of Hungary and Tranſylvania, in 1779, were only 450,000; but prior to the conſcription of 1785, the population of this kingdom was greatly undervalued, as we ſhall ſoon ſee. Here, as well as in Germany, they are more eſteemed for morals, good ſenſe, learning and induſtry, than the catholics. Yet they have often been treated with great ſeverity, as though they were the worſt members of ſociety: from the year 1681 to 1773, they had not leſs than 675 churches taken from them.

CHAP.

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CHAP. V.

POPULATION AND INHABITANTS—REVENUE—COMMERCE—AND MILITARY FORCE.

ON what principles the population of Hungary was formerly calculated, I know not; but on the *conſcription* under Joſeph II. in 1785, the common eſtimates were found to be much too low. Windiſh, an Hungarian, in his Geography of Hungary, publiſhed in 1780, ſays, "The population, according to a new accurate examination, is, 3,170,000, excluding Tranſylvania, Sclavonia, and Dalmatia." And the celebrated Buſching ſays, the population of Hungary in 1776 was 3,170,000; and of Tranſylvania, Sclavonia, and Croatia, 2,000,000: this gives only 5,170,000. Mr. Zimmermann, in 1787, in his *Preſent State of Europe*, probably follows the ſame calculations as Mr. Windiſh, as he ſtates Hungary alone at 3,170,000, and Illyria at 620,000, which is 3,790,000; and with Tranſylvania, which he eſtimates at 1,250,000 only, 5,040,000. In a geographical work, and the moſt common one in our iſland, printed in 1792, it is ſaid, "Both Hungaries at preſent, excluſive of Tranſylvania and Croatia, are thought to contain about two millions and a half of inhabitants."

But

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But the committee appointed by the Diet of 1791, to enquire into things of this nature, ſome of whoſe notes I have had in my hands, eſtimate the population of Hungary in its greateſt extent, but always excluding Tranſylvania, at about eight millions, which they add is 1777 ſouls per ſquare mile*: no doubt this eſtimate is founded on the conſcription of 1785. The only detailed accounts yet made public, founded upon the ſame data, as far as my knowledge extends, are in Mr. Slötzer's *Staats Anzeigen*; and in No. 61 of this work there is this table, which gives a population in round numbers of ſeven millions and a half.

3,625,617	Perſons under twelve years old:	1,894,309 females. 1,831,308 males.
3,218,039	Perſons above twelve years old, married and unmarried:	1,620,234 females. 1,581,805 males.
140,340	Widowers,	not included in the preceding articles.
167,132	Widows,	
19,103	Spiritual perſons - - -	14,240 males. 4,863 females.
34,790	Nobility of both ſexes.	
17,213	Public officers and gentlemen (*Beamte & Honoratiores*).	
96,533	Abſent for an unlimited time:	63,120 males. 33,413 females.
79,371	Abſent upon public buſineſs for a limited time, only males.	
25,377	Jews, forming 4375 families.	
7,417,415	Total population.	

* German mile?

Theſe

These live in towns and in the country, in houses and cottages, and have

1,403,120 Fire hearths.

Of this total population there are

442,411 Citizens and mechanics: { 304,106 in towns. / 137,305 in the country.

892,134 House-holders, peasants, &c. (*Hausväter, Bauren, und Halb-Bauren*) occupied in agriculture.

4,210 Estates and *prædia*.

But another table in No. 47 of the same work makes it only 7,008,574, though supposed to be taken from the same source. As this table specifies some articles not mentioned in the other, I lay it likewise before my readers, and hope in an Appendix to be able to assign the reason of these differences.

99 Cities.

548 Market towns (*Mark-flecken*).

10,776 Villages.

1,200 *Prædia*.

1,053,353 Houses.

1,314,362 Families: { 1,299,141 Christian. / 15,221 Jewish.

7,008,574 Total population: of which there are { 6,933,485 Christians. / 75,089 Jews.

13,802 Spiritual persons, male sex.

162,974 Nobility, male sex.

4,387

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4,387 Public officers and gentlemen.
83,871 Citizens in towns, and tradeſmen and mechanics in the country.
509,823 Peaſants.
511,976 Next heirs and ſucceſſors in buſineſs of the preceding citizens and peaſants.
788,993 *Häuſlers* (proprietors or occupiers of houſes?).
4,681 Soldiers abſent for an indeterminate time.
42 Carters.
183,995 People that may be applied to other wants of the ſtate.
983,871 Young people from one to twelve years old.
267,101 ——— from thirteen to ſeventeen do.
3,417,996 Female ſex.
1,399,332 Married men, Chriſtians.
2,116,157 Unmarried men and widowers.

117,919 Abſent:
- 96,851 yet not abroad.
- 3,801 abroad.
- 17,267 unknown where.

106,800 Strangers, natives of Hungary.

23,476 Strangers
- Out of the other hereditary Auſtrian dominions, 13,895 men, 3,481 women.
- Out of countries not belonging to Auſtria, 5,287 men, 813 women.

75,089 Jews:
- 38,124 males,
- 36,965 females,

15,044 married. 23,080 unmarried and widows.

The reader will be ſtruck with the enormous differences in ſome of

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the articles, and be inclined to think them ſufficient to invalidate the whole.

In the firſt table the nobility of *both* ſexes is given at		34,790
In the ſecond, the *male* ſex *alone* . . - -	at	162,974
Officers and gentlemen in the firſt - -	at	17,213
In the ſecond - - - -	at	4,387
The Jews in the firſt at 4,375 families - -		25,377
In the ſecond - at 15,221 do. - -		75,089

However theſe tables differ, they agree in this, that the population of Hungary is above ſeven millions; and we have already ſaid, that the committee appointed to enquire into this ſubject, who had no doubt the conſcription liſts before them, and acceſs to the beſt ſources of information, eſtimated in their report the population at near eight millions, which is about double the common eſtimate.

Mr. De Luca mentions * a third table, which he ſays was laid before the Emperor Joſeph II. on the termination of the *conſcription* in 1786, by the Hungarian chancery, which gives the population at 7,001,153; which is thus detailed:

Chriſtian families — — —	—	1,299,301
Jewiſh ditto — — — —	—	15,208
Number of families	—	1,314,509

* Geographiſches Handbuch, vol. iv. p. 189.

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Spiritual perſons		13,728
Nobility		162,495
Public officers and gentlemen		4,396
Citizens, and tradeſmen in the country		8,656
Peaſants		584,226
Heirs and ſucceſſors of the citizens, &c.		511,561
Häuſlers (occupiers of houſes?), gardeners, and day labourers		788,014
Abſent		
Unknown		4,125
On public buſineſs		183,830
Children from one to twelve years old		983,175
Ditto from thirteen to ſeventeen		266,853
The female ſex		3,414,366
Total of Chriſtians		6,926,025
Jews		75,128
		7,001,153
Of which there are — married		1,398,705
unmarried, and widowers		2,113,784
Abroad		95,892
Unknown (where)		3,842
Strangers (from) within the *conſcribed* countries		17,165
—— from the hereditary Auſtrian dominions — males		106,557
females		14,104
		120,661
—— from other ſtates — males		51,147
females		813
		51,960

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Mr. De Luca then makes the obſervation, that conſcription tables generally fall ſhort of the real population, rather than exceed; and concludes by ſaying, that we may fix, notwithſtanding the differences of the tables, the population of Hungary, including the *military borders*, and Tranſylvania, at about nine millions. From which if we deduct one million and a half, his eſtimate for the population of Tranſylvania, ſeven millions and a half will remain as *his* eſtimate of the population of Hungary; giving 6,974,000 to Hungary in the moſt limited ſenſe of the word, and 2,500 inhabitants for each German ſquare mile; 259,000 to Sclavonia, with 700 per ſquare mile; and 267,000 to Croatia, with 500 per ſquare mile.

Theſe inhabitants are of various diſtinct nations. The proximity of this country to the ſtorehouſe of human kind, from whence proceeded the immenſe ſwarms which over-ran the greateſt part of Europe for ſeveral centuries about the Chriſtian æra, muſt have rendered it one of the firſt ſufferers amongſt European nations on theſe emigrations weſtward. When the Roman arms made their way into Pannonia and Dacia, theſe countries were inhabited by a Sclavonian race; theſe were the original inhabitants of Hungary. But all the great eaſtern ſwarms have made it their reſidence in their march weſtward. The Vandals, the Goths, the Huns, the Gepedes, and again the Goths, the Longobards, the Avares, and laſtly the Magyars, the fathers of the preſent race of Hungarians. Even in more modern times, of which hiſtory has given us a pretty diſtinct

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diſtinct account, upon wars and diſſenſions amongſt the more eaſtern nations, large bodies have emigrated hither to form ſettlements; as the Cumanians in the twelfth century: and the irruption of the Tartars in the thirteenth was the ruin of Hungary for a long time. To theſe emigrations we may in part attribute the variety of diſtinct people we at this day find in this kingdom; for the Hungarians, who ſeem to be an Aſiatic ſwarm, and probably of Kalmuck origin rather than Finniſh, who took poſſeſſion of this country in the ninth century; and who were probably a tribe of that people who, ſeveral centuries before, had ravaged a great part of Europe under Attila, do not form above one-third of the inhabitants of Hungary *.

The Sclavonians, who are the *Aborigines*, are the moſt numerous, and may be divided into different races or tribes: as the Croats, Illyrians, Ruſſians, Vandals, and Bohemians.

The Germans form, according to Mr. Slötzer's *Staats Anzeigen*, a ninth of the inhabitants. It has been much controverted, whether theſe are the remains of ſome of the ancient emigrating ſwarms, or whether they are, though old, yet more modern colonies from Germany. It is too intricate an enquiry for me to involve myſelf

* Mr. De Luca ſays, in his Statiſtical Tables, publiſhed in 1793, that the Hungarians are the leaſt numerous of the three nations. This I think is an erroneous and partial ſtatement.

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in; yet ſo far is pretty clear, that a part of them has been invited hither, by different Hungarian ſovereigns, from various parts of Germany, to form ſettlements, with the view of increaſing the population of the kingdom, diminiſhed by its frequent wars; and of civiliſing its inhabitants by the introduction of arts. That many Germans, on the invitation of Geyſa II. ſettled themſelves in Tranſylvania, in the twelfth century, and obtained from him great privileges, is well authenticated; and many German colonies have been founded here in this very century: thoſe planted by the Empreſs Thereſa were principally from Swabia, Frankonia, and the Palatinate.

Theſe different people do not live promiſcuouſly together, but ſeparate; and in one diſtrict the traveller only meets with Hungarians, and in another diſtrict only with Sclavonians; it is likewiſe ſo with the Germans and Wallachians, as may be ſeen in the map that accompanies this work.

Beſides theſe there are Jews, Greeks, Armenians, and zigeuners or gipſies, ſcattered about the kingdom.

Seven or eight millions of men, on a fertile ſoil, ought to make a reſpectable figure on the theatre of continental politics; and Hungary has had its day, when the moſt powerful princes of Europe ſought its alliance. In the fourteenth century, under Lewis the Great of Hungary, a greater man than Lewis the Great of France, its

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its dominions extended from the Baltick to the weſt coaſt of the Black Sea, and from thence to the Adriatick; and Matthew I. (Corvinus) made it no leſs reſpected in the ſucceeding century, not only in arms but in arts. Literary men and the moſt ſkilful artiſts he called to him out of Italy; and he employed three hundred tranſcribers in different countries, but particularly in Italy, to copy valuable manuſcripts for his library. Hungary was then the reſidence of its ſovereign, and Vienna was in his poſſeſſion.

What reſources the Auſtrian monarch derives from this kingdom I do not exactly know; but certainly not what he might, were there a greater cordiality between him and his people. The nation will not, and by its laws cannot *, grant any kind of ſupplies, except in public Diet, and the ſovereign unwillingly aſſembles the ſtates. At

* Since I left Hungary I have been informed that two Hungarian noblemen have been degraded, and declared infamous, for making ſome kind of ſubſcription for the Emperor their ſovereign, for carrying on the preſent war. This is forbid by this article in their code of laws: In corpore juris Hungarici, artic. 1, anni 1504, fundatus in art. 3, anni 1222. Si quis comitatuum motu proprio, & non de conſenſu & de voluntate totius regni, extra ſcilicet conventiones regni generalis, contributionem aliquam ſeu quodcunque ſubſidium, præter ſolitum lucrum cameræ, contra videlicet antiquam regni libertatem, regiæ majeſtati quovis modo & quovis colore exquiſito offerrent et præſtarent: ex tunc univerſitas nobilium hujuſmodi comitatus univerſaliter in pœnam fidefragii ſeu perjurii, amiſſionemque honoris & humanitatis, convicta et condemnata, a conſortio ceterorum regni nobilium relegata et ſegregata habeatur ipſo facto.

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the laſt Diet, in 1792, they gave him a *don gratuit* of four millions of guldens (400,000 pounds ſterling), one thouſand horſes, and five thouſand recruits, for carrying on the preſent war.

Windiſh, the Hungarian geographer, gave the royal revenue in 1780 at near nineteen millions of guldens, which is about one million nine hundred thouſand pounds ſterling.

From the *Contribution* - - - -	3,900,000
From the Mines and other Royalties - -	15,000,000
	18,900,000

Buſching, in his *Wochenliche Nachrichten*, gives the following ſtatement:

Das Camerale (from the royal domains, &c.)	4,253,003
Das Montaniſticum (from the mines*) - -	5,300,118
Das Bancale (from the duties) - - -	2,890,731
Das Politicum - - - -	58,992
Das Contributionale (from the contribution) -	5,473,579
Das Commerciale - - - -	27,729
Guldens	18,004,153

* From a very competent judge, and one employed in the mining department, I have been informed, that the neat revenue the emperor receives from the mines is from three to four millions of guldens, and including the ſalt mines fifteen millions.

And

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And De Luca, in his *Statiſtical Tables* publiſhed in 1793, puts down eighteen millions for Hungary in the moſt limited ſenſe of the word, one million for Sclavonia, quoting *Taube* as his authority, and 200,000 for Croatia; for Hungary therefore, in the extended ſenſe of the word, 19,200,000. According to theſe eſtimates, the revenue from this kingdom is about one-fifth of the whole Auſtrian revenue, while its population is nearly one-third*.

Commerce and manufactures give now preeminence to nations; and a fertile ſoil and mines of gold, without national induſtry, with difficulty bear the burthens of a ſtate. Commercial induſtry is here very low, and the patriots lay this to the charge of the court of Vienna: and it is true that the court of Vienna, not being able to draw the ſame reſources in men and money, the two great requiſites of war, which now conſtitutes the greateſt part of the expences of governments, from this part of its dominions as from its other leſs privileged, is little inclined to favour its commerce; particularly in articles which come in competition with thoſe of its other provinces.

This is no doubt a principal cauſe of the public inactivity; but the Auſtrian government ought not to bear all the blame. Would it not be unreaſonable to expect to find agriculture, manufactures, and com-

* Crome in his Tables *ueber die Gröſſe & Bevölkerung, &c.* 1794, gives the Auſtrian revenue at ninety-one millions of guldens (about 9,100,000l. ſterling) and its population at twenty-five millions.

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merce in a flouriſhing ſtate, in a country ſo backward in its political inſtitutions? But the Hungarians will not advert to this, nor reflect that national induſtry is the aſſociate only of a particular ſtage of ſociety, to which they are not yet advanced: which they may haſten or retard, by laying aſide, or rigidly adhering to, inſtitutions calculated only for infant ſocieties.

But in Hungary how is the productive part of the nation conſidered? Where is the ſtimulus to activity? The *caſt* of the peaſants is but juſt emancipated from bondage, and ſtill remains quite deprived of the right of poſſeſſing landed property; and the *caſt* of the citizens is not much better.

The ruling principle of the court of Vienna, it is true, is to conſider this country as its magazine of raw materials; and as a conſumer of its manufactures. Againſt this principle great complaints are juſtly made; but as it has no manufactures but of the coarſeſt kind, which are for home conſumption, it is only felt as an evil preventing the riſe of manufactures.

But the clogs that are put on the exportation of its natural produce, in which the riches of the kingdom and the revenues of its opulent land-holders conſiſt, is an evil continually galling individuals. Wherever I went I was led into cellars full of wine, and into granaries full of corn, and I was ſhewn paſtures full of cattle. If I felicitated the owners upon their rich ſtores, and of articles never out of faſhion,

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I heard one common complaint—the want of a market, the want of buyers.

Some of its natural productions are rivals to the natural produce of other parts of the Auſtrian dominions, as its wines. The exportation therefore of this article is checked by impoſts and cuſtom-houſe formalities and expences *.

The local ſituation of Hungary is unfavourable: it is chiefly ſurrounded with countries which ſtand in no need of its produce. It has fine rivers, but theſe run in a different direction from the courſe of its commerce, the Auſtrian provinces, which are the markets for

* Duties on Hungarian produce entering Auſtria compared with the duties of the produce of Poland, taken from notes of the Committee. By Poland I believe is meant that part of it belonging to Auſtria, Galicia, &c.

	Hungarian.	Poliſh.
Beer per *eimer* - - -	12 creutzers.	5 creutzers.
Butter per cwt. - - -	40	32
Raw ſheep ſkins, the 100 -	flor. 2 0	flor. 1 36
Wheat the Preſburg meaſure - -	4	3
Rye - - - -	3	2
Millet - - - -	4	3
Calves ſkins, ten pieces - -	2	1 36
Mead per *eimer* - - -	48	19

N. B. Sixty creutzers are one florin, and one florin two ſhillings.

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four-fifths of its exportation; whilſt they run toward Turkey. And land carriage is rendered very expenſive by the badneſs of the roads, and territorial tolls; a thing ſeverely felt upon raw produce.

An Hungarian writer ſays, that good wine which is bought for ſix ſhillings, has an additional expence upon it of eight ſhillings when it reaches the port of Trieſte; and that corn which is bought for two ſhillings, an expence of ſix; tobacco that coſts twelve ſhillings a hundred weight, likewiſe an addition of ſix.

The annual exports, according to the following liſt, are above ſixteen millions of guldens, or 1,600,000l. pounds ſterling; and its imports eleven millions, or 1,100,000l. ſterling; which gives a balance in favour of Hungary of half a million ſterling.

In 1778 there was exported	14,262,800	
And imported	10,390,328	
	3,872,472	Balance in favour of Hungary.
In 1779. Exported	16,205,217	
Imported	9,313,191	
	6,892,026	Balance in favour of Hungary.

In

In 1780.	Exported	12,198,815	
	Imported	10,419,230	
		1,779,585	Balance in favour of Hungary.
In 1782.	Exported	13,527,124	
	Imported	9,192,743	
		4,334,381	Balance in favour of Hungary.
In 1783.	Exported	16,682,069	
	Imported	10,847,121	
		5,834,948	Balance in favour of Hungary.
In 1785.	Exported	17,510,129	
	Imported	12,049,198	
		5,460,931	Balance in favour of Hungary.
In 1786.	Exported	17,600,000	
	Imported	12,100,000	
		5,500,000	Balance in favour of Hungary.
In 1787.	Exported	17,800,000	
	Imported	13,800,000	
		4,000,000	Balance in favour of Hungary.

This balance in favour of Hungary, of about five millions of guldens, or half a million ſterling, is not the conſequence of its exported

exported manufactures, but of its great exports of raw produce, as the following table from De Luca, for the year 1783, will ſhow.

Horned cattle - -	3,670,000	
Hogs - - -	780,000	
Sheep and goats -	540,000	
Other animals -	70,000	
		5,060,000
Flour - -	1,060,000	
Wheat - -	990,000	
Rye - - -	640,000	
Oats - - -	350,000	
		3,040,000
Wine - - - - -		1,040,000
Liquors - - - - -		40,000
Wool - - - - -		2,810,000
Wax and honey - - - -		224,000
Potaſh - - - - -		122,000
Flax and hemp - - - -		64,000
Knopper-galls - - - -		62,700
Feathers - - - -		20,000
Fiſh - - - - -		80,700
Game - - - -		128,000
Fleſh meat and fruit - - - -		250,000
Colours - - - - - -		11,700
Drugs - - - - - -		7,700
Wood and wooden wares - - -		50,000
Skins, leather, and furs - - - -		360,000
Tallow, ſoap, and cart greaſe - - - -		42,700
Metals and minerals, and articles made from them, of which 1,080,000 copper		1,290,000

Linen

Linen	80,000
Woollen cloth and other woollen articles	121,000
Silk and silk goods	21,600
Paper, and articles for printing	14,500
Stone ware and other pottery	9,500
Cotton goods	4,800
Crämer Waaren	64,200
	15,019,100
Of which there was exported to	
Auſtria	9,000,000
Moravia	2,600,000
Inner-Auſtria	1,300,000
Bohemia and Sileſia	1,130,000
	14,030,000
Tranſylvania	427,000
(Therefore to the hereditary dominions)	14,457,000
Foreign countries	2,225,000
Total Exports	16,682,000

Why there is no mention of tobacco in the preceding liſt I know not. It is a ſtaple produce and article of exportation. Profeſſor Miller, of Groſs Wardein, in his *Schedium Fabricarum*, &c. gives the export of it at eight hundred thouſand florins. Nor does this liſt account for the 16,682,000 florins of exportation, only for 15,019,100. But it is ſufficient to ſhew that its exports are almoſt entirely raw produce.

Several attempts have been made to increaſe the markets by forming commercial companies, and by eſtabliſhing agents in foreign countries:

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countries: but none of theſe ſchemes have ſucceeded, and the blame, as uſual, is laid on the Auſtrian government.

Hungary we have before noticed to be much behind moſt other countries of Europe in its political inſtitutions; it is natural therefore to expect to find ſome here ſtill in vigour or hardly laid aſide, which have in other parts of Europe been long in diſuſe, and are now only ſpoken of as inſtitutions of ancient times, and have paſſed to the ſtudy of the antiquary. Though the Hungarians are of a deſcent quite different from thoſe nations which now form the poliſhed part of Europe, yet the ſame means of defending their country occurred to them, which were in uſe with theſe: the nobility throughout Europe was formerly the defence of their country: and the nobility of Hungary are ſtill the conſtitutional defence of the kingdom; though, ſince the cuſtom of keeping great ſtanding armies, they have been ſeldom called upon.

The ſtanding military forces of the kingdom are now—

9 Regiments of Infantry of 3000 men - -	27,000
13 Regiments of Frontier Militia *(Gränze Regimenter)* of 4000 - - - -	52,000
	79,000
7 Regiments of Huſſars of 1200 - - -	8,400
	87,400

And a battalion of *Tſchaikiſten* (a kind of river-guard or militia.)

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.....The regular troops are, I believe, paid out of the *contribution*, but the militia by grants of lands on feudal tenures.

Since the Turks, by extending their conquests, have become the neighbours of the Hungarians, these latter, by prescribing boundaries to them in this part of the world, have become their natural enemies, and almost perpetual hostilities between these two warlike people have been the consequences: and to prevent the inroads and ravages of the ferocious followers of Mahomet, the Hungarians have found it requisite to be always ready to repel them; and with the same view, therefore, that the ancient feudal governments, under the remains of which we live, and the rest of Europe groan, were formed, they have constituted, for the frontiers of Hungary towards Turkey, a kind of feudal government: this seems to be the work of the sixteenth century.

This district, which is called the Military Frontiers *(Militarische Gränzen)*, commences at the most western corner of Dalmatia on the Adriatic, and runs through Croatia, Sclavonia, Banat of Temeswar and Transylvania, into the Buccovine: but the local situation of this district must have varied, as the boundaries of the possessions of these two nations, through the fortune of war, have varied. It is but a little more than a century that the metropolis of Hungary was in the quiet possession of the Turks, and for a century and a half; and the last English traveller, who has published his Tour in Hungary, had there to pay his court to a Turkish Basha.

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This long tract of land which ſurrounds Hungary on the ſouth and on the eaſt, has about four hundred and twenty thouſand inhabitants, the fifth part of which is military. It is divided into * five principal diviſions, as thoſe of the Banat, of Croatia, of Dalmatia, of Sclavonia, and of Tranſylvania: theſe are again divided into provinces or regimental diſtricts, and theſe into companies. As this is quite a military government, there are no civil magiſtrates, but military ones: a regimental diſtrict may be conſidered as a county, and it has, inſtead of a lord lieutenant, a colonel; and a diſtrict of a company, which may be conſidered as a *proceſſus*, inſtead of a *judex nobilium*, a captain; and ſo likewiſe with the inferior officers, who ſupply the places of inferior civil magiſtrates. Over each of the principal diviſions there is, or was in the time of the Empreſs Thereſa, a brigadier. Theſe military magiſtrates have men of the law to aſſiſt them.

The ſoil of Hungary, the poſſeſſors of it ſay, is *allodial*. When its produce is taxed, when in the hands of the peaſants, it is not the ſoil that is taxed, but the labour of the peaſants; for as ſoon as the lands of the peaſant fall by failure of heirs, &c. to his lord, the taxes ceaſe to be paid.

* Kereſytury, in his *Introductio, &c. Vienna* 1788, gives ſix diſtricts; as 1mo. Karlſtadt, divided into four regiments; 2°. Banat into two; 3°. Waraſdin into two; 4°. Sclavonia into three; 5°. Banat of Temeſwar into two; 6°. Tranſylvania into three; which gives ſixteen regiments; ſomewhere I have read of ſeventeen; that is probably by including the Tſchaikiſts; and this gives 272 companies.

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On the military frontiers there are no nobility, and the king is the only allodial poſſeſſor of the ſoil: as ſuch, he has divided this diſtrict into parcels, which he has granted as fiefs on the condition of the occupier rendering military ſervices.

The ſmalleſt portions of land are one hundred and twenty yards long, by eighty broad: of theſe, if the land be good, eight; if middling ten, and if of the inferior kind twelve, form a fief for a foot ſoldier. Before the cavalry was laid aſide, a horſeman who equipped himſelf had ſixteen of the beſt kind, and ſo in proportion of the leſs productive: but he had only twelve if equipped by government.

The dues of each holder of a fee oblige him to devote his ſons, except the eldeſt, who is to look after the farm, to the military ſervice. If the father be old, he may keep his youngeſt ſon with him likewiſe. This military ſervice is only in lieu of rent for the land, and the feudatories pay taxes like other ſubjects.

The laws of fiefs here are:

They cannot be diſpoſed of at pleaſure; the conſent of the ſuperior officer is requiſite.

Any perſon, who has been in quiet poſſeſſion of one for twenty years, becomes proprietor of it.

Thoſe who quit them in time of war loſe them.

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They are hereditary in the male line only, and brothers have equal rights; and they may be ſhared between them, if the ſhares do not by this partition become too ſmall.

If a ſon marry away during the life of his father, he has no right to a part of the land, only of the moveables.

If a ſon be conſtantly engaged out of the diſtrict, in civil or clerical employment, he cannot poſſeſs the fief on the death of his father, but muſt within three years diſpoſe of it to one capable of rendering military ſervice; but ſhould the ſon be engaged as an officer, or as a prieſt or paſtor within the diſtrict, then he can poſſeſs it, by keeping upon it thoſe who can render the required ſervice.

If a widow marry one who belongs to the military diſtrict without land, the huſband poſſeſſes the fief to the excluſion of her children; and the children of this marriage inherit equal ſhares with thoſe of the former marriage; but with regard to the moveables, they each ſhare thoſe of their natural parents.

A daughter likewiſe, if ſhe have no brother, by forming a ſimilar marriage may keep the fief.

If a widow have no children, ſhe muſt marry; and if ſhe marry one who already poſſeſſes a fief, ſhe loſes hers. If ſhe cannot marry,

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marry, she is free from service one year; but then must get a person who can manage the fief and render the required service.

The clergy, without any respect to their religion, whether catholic or not, have no dispensation from service; but the church lands are free.

The officers are not paid for their service by fiefs, but receive pay like those of the regular troops, though they have some gratuities besides; there are therefore no great feudatories: and here this government essentially differs from ancient feudal governments.

The *Tschaikists* have a small district in the corner of land formed by the junction of the Theis and the Danube. They derive this name by serving on board of ships and boats. *Saika* is an Illyrian word, and signifies a ship.

CHAP.

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CHAP. VI.

FROM BUDE TO GYONGYES—MATRA MOUNTAINS AND THEIR FOSSILS—ALUM WORKS—PSEUDO-VOLCANIC CRATER—CURIOUS PITCH STONE—VOLCANIC TUFA.

THE hopes of finding an extinct volcano in the Matra, where Mr. Fichtel very boldly has asserted one to have been lately found, made me readily accept of an invitation from Baron Joseph Orcy, who has a very large farm and manufactory of alum amongst these mountains, to come and pass a day or two with him there; and the specimen of real volcanic *tufa* which I had lately seen, heightened my ardour in the pursuit of this volcano, and made me leave my good and hospitable friends at Bude less reluctantly. But Hainotzy, honest Hainotzy, what sad misfortune has befallen you since our late convivial parties? It is not true that you conspired against the state, and, envious of your superiors, planned their destruction; nor, imbibing the deluding spirit of the times, through mistaken patriotism rebelled against your sovereign. Rather to some cabal, by which honest men in turbulent times do often fall, I shall attribute your disaster; for plots of old, I know, were formed against you, and believe that you did not forfeit, but unjustly lose your life. Then will I be your friend,

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friend, and, when occaſion offers, vindicate your memory, and ſcratch your name out of the liſt of the deſtroyers of public felicity.

On Saturday, June 8th, I ſet off for Gyongyes; I travelled through a level country, pretty well cultivated, the ſoil ſandy. The only things I noticed in this day's journey were the ſeat of Prince Graſſalcovitz and the town of Hatvan. The palace of the prince is a vaſt pile of building, but in a ſituation not very favourable. He keeps his guards like Prince Eſterhazy. I obſerved a few trifling hop-grounds hereabouts. Hatvan is ſaid formerly to have been a very conſiderable town; it is now a very paltry one. In the walls of the church I noticed the breccia, ſo often mentioned to be uſed for building; and I found looſe fragments of the ſame in ſeveral places. In this diſtrict there are very large paſture grounds, which feed great numbers of horſes, and ſtorks are very common; they build upon the ridges of the roofs of the peaſants' cottages. As I was detained a good while at Hatvan for horſes, I did not arrive at Gyongyes before it was dark: here I found a tolerable good inn, which was the more acceptable as I had ſcarce had any thing to eat ſince I left Bude.

As ſoon as I looked about me the next morning, I found I was at the foot of the hills or mountains of Matra; and ſeeing nothing uſed for building but the breccia, I was very anxious to examine them. Immediately after breakfaſt I aſcended that branch which

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which lies immediately above the town. I walked for a long time through nothing but vineyards, which extended above half way up the hill; here I found only ſmall looſe fragments, and now and then large blocks of this breccia*: higher up I found it forming firm rocks. In other parts nothing but the decompoſed Porphyry or *Saxum metalliferum* was to be ſeen. The ſolid rock was too ſeldom laid bare to enable me to ſay which of theſe two kinds of rocks forms the greateſt part of the hill, and, what is of more importance, what is their relative ſituation to one another: as far as my few obſervations extend, the breccia is the moſt general. Yet this may only be a ſuperficial covering to the porphyry.

Near the top I had the good fortune to find a great deal of *Müller-glaſs*, or Lava glaſs, *Olivinus vitreus*. It covered one ſide of ſeveral ſmall looſe blocks of a porous kind of Porphyry †, ſuch as would be called by the volcaniſts porphyritic lava. Theſe blocks in ſome places were piled one upon another to form a wall or fence. I detached ſome moſt beautiful ſpecimens, much ſuperior to any I have ſeen from the neighbourhood of Frankfort. This foſſil, in my opinion, has been ſadly miſtaken, and geognoſtic theories are

* Ex fragmentis mediocribus & minoribus argillæ induratæ fuſcæ omnino terram coctam referentis, angulis integris, & porphyrii celluloſi fuſci ope maſſæ heterogeniæ terreæ griſeo-rubeſcentis, conglutinatis.

† Porphyrius

Fuſcus aut nigricans celluloſus, cellulis parvis; ex baſalte feldſpato albido diaphano infarcto.

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in part the cauſe of the error. The *Vulcaniſts* having ranged it amongſt the productions of fire, conſider it as a melted body, as a volcanic glaſs; and their antagoniſts the *Neptuniſts* conſider it as a Calcedony. Mr. Born, ſpeaking of that found near Francfort, though he acknowledges the ſtone to which it adheres to be volcanic, ſays, "*On la nomme improprement verre volcanique.*" Mr. Suckow, in his excellent Compendium of Mineralogy, places it amongſt the volcanic glaſſes. Profeſſor Blumenbach places it in his Compendium of Natural Hiſtory likewiſe under the head of Volcanic glaſſes, and adds that it is probably formed from melted zeolite. The learned Profeſſor Gmelin in his edition of the Syſt. Nat. places it under the genus *Olivinus*, and calls it *Olivinus vitreus*. Mr. Stütz in his Catalogue of the Imperial Collection, who has very judiciouſly excluded, in the claſſification of Foſſils, the conſideration of the means of their formation, and has conſequently ſuppreſſed the claſs, order, &c. of volcanic productions, has placed it with the *Obſidian*. Mr. Widenmann thinks it may be claſſed with the Calcedony, and quotes Mr. Links' analyſis, which he however acknowledges to differ very much from the analyſis of the Calcedony; but never mentions Mr. Gerhard's analyſis, which approaches much nearer. Mr. Kirwan, in the late edition of his Mineralogy, following, as he ſays, Mr. Werner, has called it *Hyalite*. But he has erred I imagine in conſidering, with Mr. Widenmann, Mr. Links' analyſis and his characters of "being found *in* Baſalt, or Trap, either in grains or in maſſes inclining to a rhomboidal form, or in filaments," to belong to this

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Foſſil. Theſe characters and the analyſis I would rather ſuppoſe to belong to a tranſparent *Feldſpar* or *Adularia* found in ſome kinds of Baſalt or Trap. The component parts as given in this analyſis, ought to form a very fuſible body; but Mr. Kirwan acknowledges it to be infuſible at 150 deg. My opinion is, that thoſe who have conſidered it to be a Calcedony have come neareſt the truth; without venturing, however, to make any objection to the denomination and opinion of Mr. Werner, of which I know nothing, but through Mr. Kirwan's Mineralogy. But my ſpecimens induce me to place it where no one yet has referred it, that is, with the Quartz; as it has not the fracture and tranſparency of Calcedony, but of Rock Cryſtal; and the analyſis of Mr. Gerhard, in Crell's Chemical Annals*, which ſhows it to contain only a fiftieth part of Argill, agrees with this claſſification: theſe are likewiſe the component parts of an infuſible body: I therefore ſhall denominate it *Quartzum tuberculatum*†. The effects of fire on this curious foſſil are very remarkable and intereſting; it deſtroys its tranſparency, and makes it fragile, but gives it a beautiful white pearly luſtre; and in this ſtate it is plainly ſeen to be compoſed of many intenſely thin beds covering one another, as in ſtalagmitical foſſils. Are not theſe ſucceſſive layers an argument againſt its being a melted maſs, a volcanic production?

* For 1785, I. p. 57.

† Quartzum tuberculatum.

Hyalinum, ſuperficiebus tuberculoſis tuberculis confluentibus, incruſtans.

I could

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I could have ſpent many hours with pleaſure on theſe hills; they afford fine extenſive views, and are rich in vegetable productions and inſects; but I had fixed my departure for Parad immediately after dinner, and was therefore obliged to haſten down.

As the road to Parad was over and amongſt high hills, the Judge inſiſted, on bringing my horſes, that I ſhould pay for a double ſtage. As this is not cuſtomary, and I had reaſon to believe he meant to pocket the extra pay, and not to give it to the peaſant my driver, I refuſed, and after I had abuſed him pretty freely he ſubmitted. I fined him his dram. I had taken the precaution at Bude to provide myſelf with a *foreſpan* privilege, as I knew I ſhould often be obliged to travel roads, where poſt-horſes and ſuch means of travelling were not to be had. This was like that I obtained at Œdinburgh, only it was in force through a greater extent of country, I think through two or three counties, and conſequently a greater favour to obtain.

About two miles from Gyongyes, and not far from the road ſide, is the quarry from whence moſt of the ſtone which is uſed for the buildings of that town is taken. Some of the fragments of Porphyry are ſo cellular as to be quite a Scoria, but the Feldſpar is ſtill viſible. A little further there are rocks of reddiſh brown Porphyry *. Soon after I en-

* Porphyrius

Ex Jaſpide hepatica parum et exiliter celluloſa, particulis parvis albo-rubentibus Feldſpati infarcta.

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tered the Matra, a chain of mountains about forty miles in extent. I travelled up-hill and down-hill, on the moſt abominable road, for four or five hours, till I reached Parad. I thought often my cart, for this was my vehicle, muſt have been broken in pieces. The rocks were compoſed of Porphyry, nearly ſimilar to that I juſt mentioned, which is the kind that the Volcaniſts call porphyritic lava; and in one place I ſaw ſome coarſe grained red ſandſtone. The hills were well covered with wood, principally with oaks, no firs. I received a hearty welcome from the Baron, and I ſpent two or three days with him in going over his eſtate and ſeeing his improvements. Hungary has few more active and intelligent œconomiſts than this nobleman, and few better patriots. Though his own landed property is very great, he has taken a leaſe of this eſtate from Prince Graſſalcovitz, which, as may be ſuppoſed by the annual rent, is very extenſive: the Baron pays 3,500l. a year.

The Alum Work which he has eſtabliſhed, employs twenty or thirty hands. The alum is made from Iron Pyrites, which is diſperſed through a decompoſed Argillaceous Porphyry, or *Saxum metalliferum*, of which moſt of the rocks on this eſtate are compoſed. This is detached by gunpowder, then broken in pieces and laid in heaps in the open air to decompoſe: this takes place in the ſpace of two or three months; then it is roaſted; this operation laſts about a month: afterwards it is thrown into large wooden receivers with double bottoms, filled with water, which have ſpickets in the lower diviſion to let off the impregnated water, which, after it is ſufficiently

ſtrong

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ſtrong by remaining on freſh materials, is conveyed into leaden boilers to be evaporated, and from thence into the veſſels, where it precipitates its iron, and afterwards it is cryſtallized. There is a ſimilar, but ſmaller manufactory in the neighbourhood, belonging to a company.

With a view to turn the woods which are on this eſtate to ſome account, and there is not a ſufficient demand for timber, the Baron has erected a glaſs-houſe upon it, as in Sweden iron forges are often eſtabliſhed on eſtates, uſefully to apply the produce of its foreſts: from this he clears about three hundred a-year. Coarſe common glaſs is only made, which is blown chiefly into drinking-glaſſes, bottles, and window-glaſs.

The Baron has tried his fortune in mining, but he has not been ſucceſsful: this is nothing uncommon. The vein is in a rock of *Saxum metalliferum*, and contains grey copper ore. There is likewiſe a ſpring of acidulous water on this eſtate, which, were it in a more populous country, would be a ſource of great revenue. I think I never ſaw a finer ſpring, not ſo much in regard to its quantity, as its quality.

He took me one day to ſee a natural curioſity, called the *Devil's Wall.* This I found to be nothing more than what is known in Scotland, where they are very common in ſome parts, under the name of

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Whin Dykes. I only ſaw it where it croſſes a ravine; here it forms a *façade* of thirty feet or more in height. I was told that it extends ſeveral miles over the hills, but here it is much lower: on the back it is no ways remarkable. It owes its height, no doubt, to the waſhing away of the rocks through which it runs. It is compoſed of a Porphyritic Baſaltes, a baſalt in which the feldſpar? is hardly diſtinguiſhable from the baſe, and is chiefly noticed by its ſhining. I found many looſe blocks which approached nearer to Porphyry.

The *Lucanus Cervus* and *Cerambix Heros* are very common in theſe oak woods: this was the ſeaſon of their amours. A male of the ſmall variety of the firſt mentioned inſect I found fulfilling the peremptory, yet pleaſing command of Heaven, with a female of the ordinary ſize. As I was returning one afternoon on horſeback with the Baron to Gyongyes over the Matra, a wolf croſſed the road twice with great boldneſs, within forty yards of us; we halted till our ſervants, who had our guns, came up with us, but he did not make his appearance a third time: it was conjectured that he was after ſome young folds.

Near the road, and in the higheſt part of theſe hills, the pretended Crater of Mr. Fichtel, who has given a detailed account of it in the Memoirs of a Society of Naturaliſts at Berlin, is found. He announces the diſcovery with ſuch certainty, that one might have expected, if not to ſee the flame and ſmoke, to find it ſtill warm enough to toaſt cheeſe, or to broil a beef-ſteak. I was all expectation; for

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though the preſent non-exiſtence of craters by no means proves the non-exiſtence of volcanoes in former times; yet the preſent exiſtence of one, one that could not be diſputed from its ſimilarity with the craters of indiſputable volcanic countries, would be, to the moſt violent *Neptuniſt*, a ſufficient proof: but this one may, I think, be objected to on ſufficient grounds. It is not in a conical hill with a reverſed conical cavity in the middle, as all thoſe hills neceſſarily are which are formed by the ejection of looſe fragments; but it is a vaſt cavity, whoſe ſides are compoſed of firm and ſolid rock. It is of an irregular oblong ſhape, and has a communication on one ſide, and in the direction of its greateſt diameter, with an inferior valley: here the *Volcaniſts* ſay this ſide of the crater has fallen down, and is now only occupied by a current of lava. But I think it may with equal propriety be affirmed, that this communication is only the uſual communication of one valley with another, and that the pretended current of lava is but the ruins of the rocks above; and, had they not fallen, and in part blocked up this communication, there would have been little more reaſon for ſuppoſing this to be a crater, than many ſhort deep valleys which are to be found in every chain of mountains. This valley, or crater, or whatever elſe it may be, is about half a mile in circumference, and in depth twice the height of an oak tree: at bottom it has ſeveral deep holes: in one there was ſtill ice, though this was the 11th day of June. The whole is ſo overgrown with wood, that it is very difficult to form a juſt idea of the *enſemble* of it. No conjecture of a volcano's former exiſtence in theſe hills will be confirmed,

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firmed, I think, by the inſpection of *this crater*; but Mr. Fichtel has greatly the advantage over me in boldly deciding on the ſubject, as he never ſaw it, and only obtained his account from a man who never trod the *Campi Phlegræi*, and from one who knew he was fond of volcanoes. But, as I have ſaid, though the exiſtence of a crater proves the former exiſtence of a volcano, its non-exiſtence proves nothing: they are of all volcanic remains the moſt eaſily deſtroyed; they are grand and deciſive teſtimonies when found, but, like the ſtately pile, eaſily deſtroyed in the revolutions of Nature; whilſt the more humble Pumex, like medals, however toſt about, and to whatever remote corner of the globe it is tranſported, bears upon it ſtill the marks of its origin.

When I returned to Gyongyes I took up my quarters with the Baron: he has, like moſt Hungarian Magnates, a great profuſion of Hungarian dreſſes, arms, and ſmoking pipes, and a very fine orangery.

The *Mus Cricetus*, or German Marmot, which is generally ſaid to collect, in ſummer, proviſion for the winter, and then to hybernate, the Baron aſſured me, frequents throughout the winter his barns, and does him a great deal of miſchief. To avoid a miſtake, I deſired to ſee a ſkin of one, and I was ſhown a cloak entirely lined with them.

The price of labour here is, for men employed in the vineyards, when the days are ſhort, about five-pence, and at this time of the year ſeven-

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ſeven-pence. The common working men in the alum manufactory likewiſe received ſeven-pence a-day. They all find themſelves; but the vine-dreſſers generally receive a dram and a bit of bread at the end of the day's work, gratis.

From hence I continued my route to Erlau, but accompanied the Baron to Compot, another eſtate he leaſes from Prince Graſſalcovitz. On this farm he keeps a good many buffaloes. Their milk and butter are more eſteemed here than thoſe of cows, and they are ſaid to give a greater quantity; yet the butter which I partook of was poor and white. But the bad quality of the butter and cheeſe of moſt countries in Europe ariſes more from the bad management of the dairy, than from any defect in the cattle or their paſtures; and the produce of the dairy is in little eſteem in all this part of the continent. The fleſh of the young buffaloes is preferred to veal. I ſaw two about a fortnight old; they were as well covered with hair as our common calves, though when grown up they are almoſt bare. The granaries and cellars of this nobleman were very large and well ſtocked. Some of the tubs of wine, though not ſo big as the famed one of Heidelberg, were, I think, big enough to drown a dozen, or even a ſcore, of full-grown and full-fed Aldermen in.

After dinner I took leave of my hoſpitable friend, and continued my route to Erlau; and he at the ſame time ſet off to ſee another eſtate. Through ſome intrigue, this nobleman fell into diſgrace

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with the Emperor Leopold, who deprived him of the high poſt of lord lieutenant of a county which he then filled. When he gave in his reſignation, he openly, but reſpectfully, told his ſovereign, that if he ſtood in no need of his ſervices, he ſtood in no need of his honours. His preſent majeſty, knowing his worth, promiſed to give him another lord lieutenancy if he ever ſhould become ſovereign. He kept his word, and, ſoon after his aſcent to the throne, made him lord lieutenant of the county of Zemplin. This is merely, as moſt charges in Hungary are, a poſt of honour, not of emolument. The uſual ſalary is about a hundred a year, which is not ſufficient to defray the expences of the entertainments, &c. given by him at the county meetings.

Near Compot is Débrew, famous for its tobacco. This generally ſells 12 or 15 per cent. higher than any other Hungarian tobacco. The country from Gyongyes to Compot is well cultivated, and in corn land; and from thence to Erlau, corn land intermixed with woods. The leaves of the trees in this diſtrict were ſo deſtroyed by caterpillars, that they ſeemed as though they had not yet ſhot them out.

Two or three miles on this ſide of Erlau, the roads are mended with a very remarkable foſſil. It is a *Pitch-ſtone (Pechſtein)* quite like *Gneis* in its appearance, being compoſed of ſhort ſtreaks, or interrupted layers of black and white. Both of theſe are *Pitch-ſtone*, and readily intumeſce

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intumeſce under the blow-pipe, and form a white ſcoria, as I have found ſome of the black Scotch *Pitch-ſtones* to do. It contains a few hexangular ſpangles of black Mica, and a few grains of *Adularia* or tranſparent Feldſpar.

This probably is the very foſſil which induced Mr. Gerhard, who has been followed by Mr. Kirwan, to ſay, as a proof of the *Neptunic* origin of the *Obſidian*, that it is found in *Gneis*, &c. But as all is not gold that glitters, ſo all is not *Gneis* which is ſtreaked black and white. But Mr. Fichtel, whoſe *burning ardour* in mineralogy is well known, leaves all others far behind. When I returned from Hungary to Vienna, I gave this excellent man a ſpecimen of this very foſſil: and, not without reaſon, I was very much ſurpriſed a few months after to read in his *Mineralog. Aufs.* page 314, the following account of it:

" The ſecond example of *Granit altered* by *volcanic fire* is near Erlau, in the neighbourhood of the *old Volcano Matra*, where *Granit*, *more or leſs burnt*, is uſed for repairing the road. The *Quartz* has its granulated ſhape changed into an amorphous *melted maſs*. The black glimmer is in *part become hexangular*, and part has aſſumed a *melted* amorphous appearance; but the *Feldſpar* has *not ſuffered*, no part is zeolitic; therefore this *burnt Granit* ſtill belongs to its kind." Into what ſtrange errors do not theories often lead the beſt of men! The Quartz is changed into a fuſible Pitch-ſtone, the Mica is in part

 cryſtallized,

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cryſtallized, and in part turned into Pitch-ſtone, and the *Feldſpar* remains *unaltered!!!* *Me Hercule*——No—I will rather be a plodding relater of facts through life, than give to the mineralogical world ſuch *heated effuſions of an inflamed fancy* for explanations. I ſaw the rock from whence this curious foſſil was detached, as it was by the road ſide; but I could obſerve nothing more than that it formed a bed.

Juſt on entering Erlau, on both ſides of the road there is nothing but volcanic *Tufa* *. On the right it forms a bank forty or fifty feet high: it contains a great deal of *pumex*. From the bank on the left hand I detached pieces as big as a man's head; more evident volcanic *Tufa* I never ſaw, not even in the *Campi Phlegræi*: ſome of the pumex is ſo little decompoſed, that it might almoſt be uſed for technical purpoſes: it has retained its ſilky appearance, and ſwims on immerſion in water; though after it has imbibed this fluid it ſinks.

* Cœmentum Tufa.

Ex fragmentis mediocribus & minoribus Pumicis albi fibroſi, interdumque cinerei tumque magis vitrei, in maſſa dilute griſeo-flaveſcente heterogenia terrea friabili aſpera.

CHAP.

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CHAP. VII.

FELCHO-TARKAN—BISHOP OF ERLAU—HUNGARIAN INNS—UNIVERSITY.

My firſt concern on my arrival at Erlau, was to inveſtigate further the volcanic appearances I had obſerved on entering this city. The common calcareous *Tophus (Tophus communis)* is very general. On this the fortreſs is built, and under this lies the volcanic *Tufa*; for the cellars of a wax-chandler, which are under the fortreſs, are formed in the volcanic *Tufa*.

I made an excurſion to a hill at the back of the town, but I found only lime-ſtone with petrifactions. The hills here are almoſt to the top covered with vines, and where theſe fail, the *Rhus Cotinus* grows in abundanee; this is uſed in the preparation of leather, and ſome of it is ſent to Debretzin. About Fëlcho-Tarkan, which is a few miles further, pretty good Marble is quarried, a black, a breccia, and a grey. The latter, which I ſaw, is not ſtratified, and contains no petrifactions; it is the compact kind. Further back in the hills, Slate *(Ardeſia tegularis)* is found.

Fëlcho-Tarkan is a pretty, romantic, and retired ſituation, with murmuring

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murmuring ſtreams and moſſy banks, and craggy rocks, and gloomy woods, and verdant groves: a ſelect abode for Fauns and Silens, and Fairies, and Druids, and Hermits, and Lovers, and Botaniſts. Here the late biſhop, a man of taſte, built an elegant villa, where he often uſed to retire, more for amuſement it is ſaid than for prayer. The gloomy, bigoted *temperament* of the preſent biſhop prevents him from enjoying the beauties of nature, even of the more ſerious kind. On his coming to the See, like a Viſigoth, he attacked this beautiful retirement, and has ſo completely deſtroyed it, that the place of its exiſtence is no longer known, and the plough and the harrow, in contemptuous triumph, traverſe its ſite, and now inſult this ſpot, once the reſidence of taſte and elegance.

Near the town there is a fine hot ſpring, which is uſed for bathing: the accommodations are very bad, for it belongs to the biſhop. The water where I immerſed my thermometer was 24 degrees above o of Reaumur, the river was then only 13. Frogs, I was told, do not hybernate here during winter. I was ſhown a *Snailery*, which the proprietor informed me was conſtructed upon an improved plan. No doubt it would have been called in our iſland a *Patent* or *Philoſophical Snailery*, or *Snail-Sty*. It was nothing more than a large hole dug in the ground, about two or three feet deep, with a wooden houſe as a cover. The food of theſe animals is the refuſe of the garden, which is thrown into the hole.

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From frogs and ſnails I am *naturally* led back, not to that godlike generous creature—man, but to my—biſhop; of whom, ſhould he fall into the hands of the celebrated Coſmus Necrotomus, the ſame report will certainly be made, which has already appeared of ſome monks that he diſſected; in whom he ſays he found the "*Veſica biliaria ſeu folliculus fellis major quam in homine;*" yet the heart, that part to which we attribute all our noble and generous actions, either altogether abſent, or ſmall, or diſtorted, or cartilaginous. This excellent anatomiſt, whoſe name and learned writings are, I am aſſured, known but to a few of my countrymen, expreſſes himſelf thus: "*In quodam monachi Latrappii cadavere cor plane nullum deprehendi. E monacho biſpano, ſacri olim tribunalis, quod in hæreticam pravitatem inquirit, officiali, cor piloſum & hirſutum extraxi, quod in latronibus quibuſdam ſe quoque vidiſſe teſtatur* Benivenius & Muretus. *Cartilagineum cor autem, quale in ſcelerto quodam obſervavit Riolanus, in monacho, ſacræ inquiſitionis apud nos præſide, vidi. Cæterum, in omnibus monachis cor minoris eſt voluminis quam in homine.*"

Why, thinks the reader, ſo much rancour at the biſhop?—When I travel through a country not favoured like Hungary with a warm ſun and a rich ſoil, I can without repining make a ſhift with *whiſky*, or even with water; but not to be able to enjoy what bountiful Nature has ſpread for the good of mankind with a liberal hand, always galls me much. The wine of Erlau is juſtly famed, and, when good, it is little inferior to Burgundy. I had long flattered myſelf with the hope

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hope of drinking here a bottle of the beſt; and immediately on my arrival I ordered ſome. The waiter told me I ſhould have *biſchoflichc* wine. This raiſed ſtill higher my expectation, for I thought he meant wine fit for a biſhop to drink; and I eagerly taſted what he brought me, but was ſurpriſed to find it as bad as that of Bogdon. I ſcolded the waiter; he looked gloomy, and told me, ſhrugging up his ſhoulders, that it was *biſchoflichc* wine; but the poor man only meant to inform me that it was the biſhop's wine, and that he had only the vending of it. I then ſent my ſervant about the town to ſee if he could not procure me a bottle or two, but it was all in vain; the biſhop poſſeſſing the excluſive right of retailing wine. So I was, till I had made the acquaintance of Dr. D——, obliged to drink this vile ſtuff in a country producing the beſt: it gave me the colic, which I naturally attribute to the biſhop, and I muſt retaliate the injury.

The inns in Hungary, as in ſome other countries, are on a quite different ſyſtem from ours. They belong either to the corporations of towns, or to the proprietors of the towns and villages, who draw from them a great revenue by letting them out on the condition of the innkeeper taking their wine and beer; or they give him a fixed ſalary for his trouble, and receive all the profits. In either of theſe caſes the innkeeper has little merit or demerit ariſing from the quality of his wine: indeed, where there are two ſorts, he may give his cuſtomers the inferior kind, and charge the price of the beſt, and he may lower the quality. This indeed may make bad wine ſtill worſe, but

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can never make bad wine good. From theſe monopolies it ariſes, that in Hungary, a country famous for its wine, the traveller can never get a glaſs of good wine but in private houſes; and for the vile ſtuff he drinks in the inns he is charged nearly as high as he is at Vienna for a good wholeſome wine, though there it pays a tax. I was always againſt monopolies, but now more than ever: I had here a ſtriking proof of their bad tendency.

How *bizarre* is the human character! Will it be credited that the man who exacts his rights with ſo much ſeverity, as to make himſelf conſidered by his flock, not as a father and protector, but as a hard, ſevere and unjuſt maſter, and to alienate the friendſhip and eſteem of every one, except of a few churchmen raiſed by himſelf, whom he ſelects from the lower ranks, not out of charity, but that they may be more dependant upon him—that he ſhould have erected a public edifice which would be an honour to a crowned head!

The univerſity, a very fine building, was erected entirely at his expence. It is ſaid * to have coſt him, including its furniture, 200,000 pounds. The world muſt not be ſo uncharitable as to ſuppoſe that he has gained this immenſe ſum ſolely by the monopoly of wine; nor entertain ſo high an opinion of his virtues, as to think that Heaven, in anſwer to his prayers, ſupplied him by miracles with it. No: he is an Eſterhazy,

* Korabinſky's Lexicon, art. Erlau.

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and his family eſtate is about ten thouſand a-year; and the ſee of Erlau was always conſidered as one of the richeſt in the kingdom, ſo that a few centuries ago the ſovereigns of Hungary, on account of its immenſe revenues, ordered that their fourth ſons ſhould be maintained from it: and the quota of troops from this biſhopric, in an *inſurrectio*, is the ſame as that of the primate, the archbiſhop of Gran. Its revenue is eſtimated at twenty thouſand ſterling a year. Twenty thouſand and ten thouſand make thirty thouſand; and on this a ſingle man, I think, may live; though I believe he only vegetates. His countrymen do not know what to make of him; ſome conſider him as a great bigot, others as a knave, and ſome as a mixture of both. He is a bitter enemy to the proteſtants. I would not believe it till I heard it from many, and in different places, that he carries his zeal ſo far as to buy people over to his own religion. If any of the proteſtant nobility are poor, and will change their religion, he ſettles on them a penſion according to the influence of their families. Theſe bribes are ſaid to amount to ſix or ſeven thouſand a year. *Relata refero.*

But to return to the univerſity. Whether this was founded with the benevolent deſign of ſerving as a nurſery for the mind, where youth might be taught how to attain their own happineſs and forward that of ſociety, and where budding genius might be foſtered, and directed to objects worthy of its purſuit; or whether with the ſiniſter deſign of increaſing the demand for its founder's monopolized wines, by a greater population, as ſome think; it is no leſs a princely building, and has all the

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the requiſites for a univerſity. The profeſſors are well accommodated, the lecturing-rooms are very good, and the chapel, library, and the hall for the public diſputations and for conferring academic honours, very elegant. The painted ceilings of the two laſt are, in my opinion, very fine. That of the library repreſents the Council of Trent, where the biſhop has ſhown his uncharitable bigotry by bringing down from heaven lightning to ſtrike the heretical writings. On that of the hall, the Sciences are allegorically repreſented. They have both an admirable effect, and are far beyond many I have ſeen of great fame: I think they are ſuperior to any I ſaw in Italy. The painter was a native of Hungary, and had ſtudied at Vienna: he is ſince dead. The univerſity is provided with an obſervatory, and the inſtruments are from London. A quadrant alone coſt fifteen hundred guineas. How common it is for men to be ſcrupulouſly exact in the performance of religious trifles, and yet to be negligent in the diſcharge of important moral obligations! Will it be believed that the man who had nearly been proſecuted by the crown for ſeverities ſhewn to his peaſants, ſhould have had ſcruples about the propriety of buying theſe inſtruments in England, becauſe we are heretics? Yes, I was told that he went ſo far as to ſend to Rome to know what he ought to do.—*Relata refero—Si non e vero e ben trovato.*

A muſeum of natural curioſities was begun to be formed, and many Hungarian birds neatly ſtuffed were collected; but the negligence of the overſeers, and the unremitted diligence of the *Dermeſtes lardarius*

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lardarius & pellio, with the *Ptini*, &c. have now nearly reduced the whole into ruins. The Emperor Joſeph, who could not like ſuch a man, never ſeconded the views of the biſhop, and this eſtabliſhment is at preſent little more than a college for the clergy.

I walked through the epiſcopal palace; it was poorly furniſhed, and deſtitute of every mark of ſocial comfort; and chilling gloom and mournful ſilence reigned throughout.

Though I had letters of introduction to the biſhop from ſome great men, I could not ſee him; ſickneſs was aſſigned as an excuſe: but he ſent me by his phyſician, Doctor Doſler, to whom I am indebted for many civilities, an invitation to dinner. I accepted of the invitation under the expectation of ſeeing him, but he dined by himſelf; and one or two of his canons, and two or three gloomy prieſts, and my friend the Doctor, were the only company. He had ſome very fine carriage-horſes in his ſtables. Theſe were the only cheerful beings I ſaw about the palace: they were from his own ſtud.

There is nothing in Erlau to detain a ſtranger, it is in general ill built; almoſt the only good houſes I noticed were thoſe of the canons. Here is a Turkiſh tower in very good condition. In the town wax is bleached, and not far from it Cordovan leather is prepared: red, yellow and black are made; the two firſt kinds are chiefly uſed for women's boots, but their colours do not ſtand.

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CHAP. VIII.

SALT-PETRE MANUFACTORIES—BISHOP OF ERLAU'S STUD AND DAIRY—SALT MAGAZINE—FURED—GREAT PUSZTA—STRANGE ACCIDENT.

I WILLINGLY left Erlau: but inſtead of going immediately to Tokay, now only diſtant a ſhort day's journey, which was my original plan, I was adviſed to alter my courſe, and viſit that part of Hungary which lies on the other ſide of the Theis, as this is the rudeſt part of the kingdom, where I could beſt ſee the uncontaminated Hungarians. Accordingly, leaving the hills, I directed my courſe towards the great plain. As the county engineer and the biſhop's ſteward were going in the ſame direction, I thought it convenient to accompany them.

On Sunday, June 16th, in the afternoon, I ſet off, and travelled through a flat country, with corn and paſture lands, and here and there a village. I paſſed one or two ſmall ſaltpetre manufactories; the ſoil of the floors, &c. of the peaſants' cottages is chiefly uſed. In theſe manufactories the proceſs is carried no farther than the firſt cryſtalli-

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zation, ſaltpetre being a monopoly belonging to government; and in this ſtate it muſt be delivered to the receivers of the crown at a price fixed by them, who purify it, and make it a marketable commodity. Storks were very common: they had now young ones, for which they ſhewed their affection by their reſtleſſneſs on the approach of ſtrangers. I obſerved in many places great heaps of dung, ſome of which ſeemed to have remained there for a great length of time: it was thrown there *only to get rid of it; for in many parts of Hungary the land is never manured.* It is even ſaid by the *Committee of Agriculture, that manure is not uſed in the greateſt part of Hungary.* If you aſk the true *Magyars* why, they ſay *their* ſoil is too rich. Nevertheleſs they let it reſt every third year; this is rather contradictory. Agriculture in this kingdom is in its moſt ſimple ſtate. In about four hours we reached Hedwig, where we intended to paſs the night.

This is a *puſzta* which belongs to the miſanthropic biſhop I have ſaid ſo much of. Here is his ſtud, and the groom was our hoſt, as his houſe was the only one here. He has ſeven ſtallions, and a proportionable number of brood mares under his care: the ſtallions were of the largeſt breed, and very fine; one was from England, and the reſt out of the beſt horſe countries of Germany, but not a ſingle Hungarian. I think, when writers have ſpoken in high terms of the Hungarian horſes, it has ariſen by confounding them with the Hungarian *horſe* or cavalry. The Hungarian breed of horſes is very

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ſmall; and in all the ſtuds I have ſeen, the ſtallions, and often the brood mares, are brought from other countries; and the horſes uſed by the more opulent Hungarians are either from foreign countries or of foreign extraction. All the walls or fences of the folds and incloſures were made by piling up the *uſeleſs* dung. The groom was a German, and the ſtud was conducted after the German manner; the ſtallions were kept in their ſtalls, and the foals at ſix months were ſeparated from their mothers.

About half a mile further is the biſhop's dairy, conſiſting of about ſeventy or eighty cows. The ſtalls are the fineſt I ever ſaw; they form one continued building of three hundred feet in length; in the middle there are two rows of ſtalls for the cows, and on each ſide are the ſtalls for the calves. The dairy itſelf was remarkably ſhabby and dirty. The biſhop farms this out nearly in the manner that Count Feſtitich does his ſheep. Every thing belongs to the biſhop; and he gives the produce of the cows on the conditions of receiving annually for each cow, thirty pounds of butter and three ſhillings inſtead of milk: all the calves belong to the biſhop; the paſtures are his; and in the winter he provides ſtraw for the cattle, but no hay.

In the morning we continued our route to Poroſlo, on the banks of the Theis; this was only about an hour's ride. Here are the ſalt magazines for landing and depoſiting the rock-ſalt which comes from the county of Marmaruſs; it is brought down the river on floats of pine trees, on which it is piled up like bricks, in great pieces of

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ſifty pounds to a hundred weight. In wet weather there is a conſiderable *deficit*. The quantity annually landed here is very great; laſt year it amounted to 118,000 cwt.: but this is not the only place of debarkation. The quantity of ſalt annually dug from the mines in the county of Marmaruſs is eſtimated in the Hungarian Magazine at 600,000 cwt. From hence it is ſent to the royal magazines in the towns, where it is ſold to the public. A great many carts were waiting for loading on this buſineſs: two-pence halfpenny per cwt. is given for carting it to Erlau, and ſeven-pence halfpenny to Peſt. The Marmaruſs ſalt, which lies on this ſide of the Carpathian chain, is like that of Wielitzka on the other ſide; it is of a ſparry texture, and muſt, without doubt, form great beds, as it does at Wielitzka. As the floats are here broken up and ſold, Poroſſo is likewiſe a depoſitory of wood; one of the fineſt pines ſells for about three ſhillings.

At the village we found an inn, whoſe external appearance was indicative of poſſeſſing ſomething within more than tables and ſtools: but it was deceitful; the ſight of the pantry was dreadfully alarming; it preſented us with an awful abſence of every kind of life-ſupporting object. As I had a letter of introduction to Mr. Zombati, a nobleman and farmer, we went and levied a dinner upon him: he gave us ſome excellent Erlau, little inferior to Burgundy wine. After dinner my companions returned to Erlau, and I croſſed the Theis, the greateſt river of the kingdom after the Danube, and went to Fured.

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As I did not come into this part of Hungary to ſee elegant buildings, perfectioned arts, and high poliſhed manners, but rough men and their rude contrivances, I was ſatisfied. Fured is a town, or large village, of five or ſix hundred houſes; theſe conſiſt only of the ground-floor; they are thatched with reeds, and placed without any order. The town is ſeated by the ſide of a fen, which at the overflowings of the Theis, which often happen, becomes an immenſe lake. The inhabitants are graziers and farmers. I dined with one who was a nobleman, who had near two thouſand ſheep, and five or ſix hundred head of cattle. Some of the ſheep were of the common kind, or, as they are here called, of the German breed; but the greater part were of the Hungarian breed *(Ovis Strepſiceros)*, whoſe long erect ſpiral horns, and long hairy fleeces, give them a ſingular appearance. This place is famous for Hungarian ſaddles. I was badly off for a means of communication, and I could not ſtir without my ſervant, the Hungarian language being alone ſpoken here. The ſurgeon was, I believe, the only perſon in the town who ſpoke German. As this town lies in the road to Debretzin, one of the moſt populous towns of the kingdom, and noted for its great and well-attended fairs, I expected to have found an inn, but I was obliged to go to the town-houſe*. Here I got a little dirty room

* As the public houſes, if there are any, in the villages and ſmall towns, are very bad, theſe are often provided with a ſmall building or a room to tranſact public buſineſs in, and to accommodate thoſe who travel in the ſervice of the public. This was one of them.

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with a ſtraw-bed, and I ſent out for my victuals, of which there were none to be had, except eggs and ſheep's butter; this was *à l'Eſpagnole.*

The common people of Hungary make little uſe of inns. I have often ſeen them at night halt in great parties like caravans, in the neighbourhood of a town, and paſs the night in the open air. Some watch the horſes which are turned out to paſture, whilſt the others reſt; and I have frequently, when I have been a gueſt at a nobleman's ſeat, obſerved, however roomy his houſe might be, if I walked out very early in the morning, the men-ſervants of the family ſleeping in their clothes in the court, on benches, tables, &c. and when I have been obliged to take up my night quarters in a peaſant's cottage, I have often ſeen the huſband ſneak off at bed-time, and leave his wife, to go and ſleep under a ſhed or in a hay-loft, to be cooler, and freer from fleas: ſo that I have often had the fineſt opportunities of having a *tête-à-tête* with ſome of the —— ugliеſt women in Chriſtendom. And the opulent are not ſo nice on the article of ſleeping as we are. One married gentleman I knew who always ſlept on a kind of ſofa, between two dreſt deer-ſkins, only taking off his coat and boots. Moſt of them ſleep in their drawers, and many in their waiſtcoats.

The fens abound with water-fowl, and I dare ſay with many rare ones. I went out with my gun, but was not ſucceſsful. I had no time

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time to ſpare, and the weather was very rainy and boiſterous. Herons are very common, and feed with the ſtorks in the fens, but none of them have *yet* learnt from the ſtork, from a *principle of imitation*, to build their neſts upon the peaſants' cottages. It is common at Fured to keep corn in ſubterranean cells, as in ſeveral other parts of Europe.

Not being fond of the famed golden age, which, unadorned by the fictions of poets, is but the poor uncultivated ſtate of man, I had ſoon enough of this place; for the famed cottage, emblem of contentment and innocency, neither harbours under its humble roof greater happineſs or more virtue than what is found within the accuſed ſtately manſion, ſuppoſed abode of gnawing care and anxious inquietude. Here man ought to be happy, there he might be happy: but this ſo little depends on theſe things, or rather on ſo many apparently more trifling ones, that the difference is not ſo great. Yet happy I think is the man who poſſeſſes a cultivated mind, and enjoys the elegancies of life! Twenty-four hours therefore at Fured were enough for me, and I then ſet out for Debretzin.

All the country lying between theſe two towns is a puſzta. There is not a ſingle village in the whole journey, though the diſtance is fifty miles; only about half way there is a tolerably good inn: now and then at a great diſtance I ſaw a ſolitary ſpire: all is an immenſe and boundleſs waſte. It is part of the great plain I lately mentioned.

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But though it is only ſown here and there with corn, yet it is not loſt; it feeds immenſe quantities of cattle. Their hardy keepers ſtay out with them, covered with their rough ſheep-ſkin clothing, weeks together. It is chiefly amongſt theſe herdſmen that the cuſtom of beſmearing their ſhirts with hog's lard, and the fat of bacon, with a *view to cleanlineſs*, prevails. Thus anointed they can wear them a whole ſummer without waſhing, and it is ſaid by this means they are kept free from thoſe creatures "whoſe hourly food is human gore." Ought we not to conſider this as a proof of the greater ſenſibility of the *Pulex irritans*, *Pediculus humanus & pubis*, than of man —or at leaſt of theſe men?

Some large birds of prey were very common on this waſte; in one place I ſaw fifteen together. I ſuppoſe they were vultures: they are at times ſo bold as to diſpute a carcaſe with the herdſman's dogs. My driver aſſured me, that, a few days before, a herdſman had killed one with his ſtick, which had driven away his dogs that were feeding on a dead ox. In ſome places this waſte is marſhy: here water-fowl abound. I ſhot from my carriage a *Glareolus auſtriacus*. Theſe birds were very common, and no ways ſhy. The immenſity of this plain, its birds of prey, its herds of cattle, and their rough keepers, form a ſcene ſomewhat exotic.

Soon after ſetting out, a hare croſſed the road. I perceived my ſervant ſhake his head, and mutter ſomething in a ſullen manner. I aſked

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aſked him the cauſe of this. He ſaid, he was ſure a misfortune would happen to ſome of us, as a hare croſſing the road was an ill omen; and he himſelf had ſeen the vulgar opinion juſtified by misfortunes happening after ſuch an occurrence. As the greateſt misfortune I had ever met with in my travels was a bad meal, or, what was worſe, no meal at all, to which I was now pretty well inured, I was not much alarmed; though I could not help ſaying, that I ſhould much rather have ſeen the evil omen on the ſpit, and ſtill more on the table weltering in its gore repreſented by currant jelly. Yet, ſtrange to tell, ſoon the omened misfortune happened. The weather was remarkably windy and boiſterous the whole day. When we arrived at the half-way-houſe, the expounder of omens opened the great folding-doors of the barn to let my carriage in; but a violent ſquall of wind came and blew them to, and caught his fingers between them, and his foot underneath, and in this ſituation he remained till I could get to his aſſiſtance. My driver calmly looked on, and rather ſmiled on ſeeing the tips of his fingers peeping out between the doors: he never offered to go to his aſſiſtance. Should twenty ſuch omens in future remain unaccompliſhed, this will never, I dare ſay, prevent the fears of this man on the occurring of ſuch appearances. I do not know whether this ſuperſtition exiſts with us: but it is very ancient; it is mentioned in a very old Latin treatiſe called *Lagographia*.

CHAP. IX.

DEBRETZIN—UNIVERSITY—NATRON—SOAP—BREAD—GUBA—SALTPETRE MANUFACTORY—HORNED CATTLE—COURT OF JUSTICE.

TO what circumſtance Debretzin owes its exiſtence I don't know; nor can I divine what can have induced thirty thouſand people to ſelect a country deſtitute of ſprings, rivers, building materials, fuel, and the heart-cheering vine, for their reſidence. Debretzin, though it has the title and privileges of a town, muſt be conſidered as a village; and then it is perhaps the greateſt village in Europe. But ſhould it be conſidered as a town, it is one of the worſt, though its inhabitants are not the pooreſt. It is ſurrounded with a hedge, and the town-gates are like our field-gates, and ſtuck with thorns and brambles. The houſes, with only a few exceptions, conſiſt merely of the ground-floor; they are thatched, and have the gable-end turned towards the ſtreet: theſe are not paved; but, in a few of the moſt frequented, balks are laid down in the middle for the *Pietons*.

By far the greateſt part of the inhabitants are Calviniſts: their gloomy manners and dreſs, together with the gloomy weather that happened

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happened during my ſtay here, made this altogether a diſmal place. The principal college of this ſect in the kingdom is here. The building is irregular, old and decaying; much reſembling one of our alms-houſes, when on the point of being taken down and ſold for old materials: yet often in ſuch diſmal abodes, not only deep learning has been acquired, but genius has been taught to ſhine in works of fancy. The ſtudents are very numerous: the *Togati*, who alone are lodged in it, are about four hundred; theſe attend the lectures on the higher branches of learning: eight of them are packed together in one ſmall room, but each has his ſeparate bed. The younger ſcholars are near a thouſand, but they only paſs the hours of ſtudy here: theſe are ſix, three in the forenoon and three in the afternoon. As there are only four profeſſors or teachers, nine of the Togati aſſiſt in teaching the younger ſcholars; for their trouble they receive a ſmall *douceur* from the parents of thoſe they teach: it is but a mean preſent, yet ſuch as has in rude times formed the recompenſe of heroes: it is a—plate of victuals as an addition to their frugal repaſts. The teachers receive a ſalary of about ſixty pounds a year. I was invited by, I think, the head profeſſor, to be preſent at the exerciſes of ſome of the togati. The one in which he choſe they ſhould exhibit before me was—pſalm-ſinging: they were fine ſtout fellows, and roared luſtily. The library was in uniſon with the reſt of the eſtabliſhment. I ſcarce ſaw any thing but claſſics, ſcholaſtic works, and muſty books of divinity. It poſſeſſed two or three jaw-teeth of an elephant, and the head and horns of an elk. It is ſuppoſed they were

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were found in the Theis. I would not ſo far deviate from common juſtice, as to relate, for anecdote ſake, an ill-natured and falſe fact; but, if I am not much miſtaken, it was here that a Courſe of Hiſtory laſted ſo long, that after the profeſſor had lectured *nine years, he was not advanced further than the middle ages.*"

Beſides the college, Debretzin is famous for its ſoap manufactories, its bread, *Guba*, and pipes, and its quarterly fairs. Theſe are the principal ſources of the opulence of its inhabitants; but the vending of juſtice by the members of the *Diſtrictual Court* muſt not be omitted in the accurate *Statiſtic* of the induſtry and ſources of wealth of this town.

The ſoap is ſent all over the kingdom, and even to foreign countries. It is made from natural Mineral Alkali or Natron; here called *Székſo*. This is found as an efflorescence on a ſandy ſoil in many parts of Hungary, but particularly about a lake near Kis-maria, which is but a few miles from Debretzin. It is not purified, nor does it undergo any alteration, but as it is ſcraped or bruſhed off the ſoil, it is uſed. The proceſs of ſoap-boiling here is this:—The Natron is thrown into a large wooden vat ſunk in the ground; upon this boiling water is poured; to this lixivium lime is added, and thus the lie is made, the ſand and heterogeneous matter falling to the bottom. The other ingredient, fat, is melted as uſual in a great copper-boiler very wide above; no *Axungia* is uſed. The lie is then added to the melted fat by pailfulls: as it boils up, the imperfect ſoap or mixture

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of fat and lie is ladled out into a neighbouring vat, and then freſh lie is added to what is in the boiler: now what was ladled out is put back again into the boiler: this is repeated ſeveral times. Whether this is only requiſite on account of the relative ſmallneſs of the boilers or not, I dare not ſay, ſo much depends, in the common arts, on apparent trifles: towards the concluſion common ſalt is added by degrees. When the ſoap is ſufficiently boiled, it is poured into parallelolipedal wooden boxes or cheſts, lined on the inſide with a ſtrong linen cloth. The boxes are about a yard high, a yard long, and half a yard broad, and take to pieces. When the ſoap is quite cold, it is divided into four pieces, and then ſubdivided and laid by.

I gave myſelf a good deal of trouble to learn the proportions of the materials; but more from the ignorance of the boilers, than a deſire of concealing their *myſteries*, I could obtain no exact *formula*; it ſeemed all gueſs-work. The following proportions given me by two different boilers, do not materially diſagree:

Fat -	7 cwt.	Fat -	9 cwt.
Impure Natron	8 *kible*	Impure Natron	9 *kible*
Quick Lime	1½ cwt.	Quick Lime	1½ *kible*
Common Salt above	1 cwt.	Common Salt	1 cwt.

The kible is a meaſure containing about 8656 cubic inches.

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The ſoap is white, and remarkably light and ſpongy; and ſome idea of the quantity fabricated may be formed from knowing that there are about ſeventy maſter boilers.

Lighter, whiter, and better flavoured bread than that made here I never ate; nor did I ever ſee elſewhere ſuch large loaves. Were I not afraid of being accuſed of taking advantage of the privilege of travellers, I ſhould ſay they were near half a yard cubed. As this bread is made without yeaſt, about which ſuch a hue and cry is often raiſed, and with a ſubſtitute which is a dry maſs, that may be eaſily tranſported, and kept half a year or more, I think it may be of uſe to my country, for me to detail the Debretzin art of making bread. The ferment is thus made: Two good handfulls of hops are boiled in four quarts of water; this is poured upon as much wheaten bran as can be well moiſtened by it; to this are added four or five pounds of leaven: when this is only warm, the maſs is well worked together to mix the different parts. This maſs is then put in a warm place for twenty-four hours, and after that it is divided into ſmall pieces about the ſize of a hen's egg or a ſmall orange, which are dried by being placed upon a board and expoſed to a dry air, but not to the ſun: when dry they are laid by for uſe, and may be kept half a year. This is the ferment, and it is to be uſed in the following manner: For a baking of ſix large loaves, ſix good handfulls of theſe balls are taken and diſſolved in ſeven or eight quarts of warm water. This is poured through a ſieve into one end of the bread-trough, and three quarts more

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of warm water are poured through the ſieve after it, and what remains in the ſieve is well preſſed out: this liquor is mixed up with ſo much flour as to form a maſs of the ſize of a large loaf: this is ſtrewed over with flour, the ſieve with its contents is put upon it, and then the whole is covered up warm, and left till it has riſen enough, and its ſurface has begun to crack: this forms the leaven. Then fifteen quarts of warm water, in which ſix handfulls of ſalt have been diſſolved, are poured through the ſieve upon it, and the neceſſary quantity of flour is added, and mixed and kneaded with the leaven; this is covered up warm, and left for about an hour. It is then formed into loaves, which are kept in a warm room half an hour; and after that they are put in the oven, where they remain two or three hours according to the ſize. The great advantage of this ferment is, that it may be made in great quantities at a time, and kept for uſe. Might it not on this account be uſeful on board of ſhips, and likewiſe for armies when in the field?

Guba, as far as I know, is an article peculiar to Hungary, and here it is only made in a few places. It is very convenient for thoſe whoſe occupations expoſe them to be out in inclement weather; as ſhepherds and herdſmen. It may be fabricated wherever long-wooled ſheep are bred: it exactly imitates a ſheep's-ſkin. The chain, or warp, is about as thick as a ſmall crow quill, and pretty faſt ſpun. The woof, or weft, is on the contrary very looſely ſpun, and nearly as thick as one's little finger: this is wound on a piece of wood half a yard long, in the direction of its length: this is the

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ſhuttle. Though the cloth is only a yard wide, two weavers work together on the ſame bench: no *temples* are uſed, and the loom has only two *treadles*. What is peculiar in this cloth is this; that after every four throws of the ſhuttle, that is after every fourth thread, a ſmall lock of the long wool of the *Ovis Strepſiceros*, or Hungarian ſheep, is put in with the fingers; it paſſes laterally over and under four threads of the warp: one end of the lock, and that is its baſe, only juſt comes out; but the other end is four or five inches long, and hangs down as on the ſheep's back. Thus there is only one lock to four threads of the chain, and one row of locks to four threads of woof: but as the locks, which are put in by both weavers, are made to come out a thread of the warp more to the right after each throw of the ſhuttle, the whole cloth is equally covered by theſe locks. That this may be more eaſily underſtood; let it be ſuppoſed that 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24 repreſent the threads of the chain, and *a*, *b*, *c*, *d*, *e*, *f*, the locks; *a* goes over 1, under 2, over 3 and under 4, and then is brought out; *b* goes over 5, under 6, over 7, under 8, and then is brought out; *c* goes over 9, under 10, over 11, under 12, and then is brought out; ſo with *d*, which comes out at 16, and *e* at 20, and *f* at 24. This forms one row of locks; then ſucceed four throws of the ſhuttle, and another row of locks; but the firſt lock, or *a*, of this ſecond row, goes over 2, under 3, over 4, under 5, and then is brought out; *b* likewiſe of this ſecond row goes over 6, under 7, over 8, under 9, and then is brought out; *c* goes over 10, under 11, over 12, under 13, and then is brought out, and ſo on; *d* coming out

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out at 17, *e* at 21, *f* at 25: then again four threads of woof, and another row of locks; here *a* comes out at 6, *b* at 10, *c* at 14, *d* at 18, and ſo on. After the guba is wove, it is ſent to Groſs Wardein to be waſhed in the hot-ſprings there, and this, I believe, is all the milling it has: it is then dyed, and generally black: it is only worn by the common people, and coſts about half-a-guinea, made into *matelots*, or looſe great-coats. A finer ſort is made from the wool of lambs or young ſheep: theſe are dyed blue, look very well, and are very good for winter uſe inſtead of furs: they coſt thrice as much as the common ſort.

Juſt out of town there is an Imperial Saltpetre manufactory. This ſalt is not produced by an artificial compoſition of vegetable and animal ſubſtances, but ſoil from the neighbourhood is collected and formed into ſtacks or heaps twenty feet long, ſix feet high and ſix feet thick, but ſmaller at top than at bottom: of theſe there are a good many. As the ſaltpetre appears on the ſurface, it is ſcraped or bruſhed off with the ſoil, and thrown into tubs with ſtraw at the bottom, and provided with a ſpicket and foſſet. Water is then poured on, which diſſolves the ſaline matter, and, percolating ſlowly through the ſtraw, runs out, and is received into a general receiver. Of theſe tubs there are a great many. This lixivium is poured upon freſh materials, till it is ſufficiently impregnated; it is then evaporated, cryſtallized, and purified as in other manufactories. The director was a German. But the purification of what is received from the ſmall

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ſmall manufactories, ſuch as thoſe I met with between Erlau and Hedwig, is the principal concern. Of about 1000 cwt. which is annually ſent from hence to the Imperial magazine at Caſhaw, 200 cwt. is only produced here; the remainder is received in the impure ſtate, and is only purified. Theſe ſmall manufacturers receive for it in this ſtate; for one ſort eight-and-thirty ſhillings, and for another ſort ſix-and-forty ſhillings the cwt.

Horned cattle are another principal ſource of riches to this town. Mr. Korabinſky mentions in his Lexicon, as a proof of the greatneſs of its herds, that a certain Biró is ſaid often to have driven ten thouſand head of cattle upon the neighbouring common; and that in the year 1739, when on account of the ſeverity and length of the winter a ſcarcity of fodder prevailed, and it was requiſite to ſlaughter more than eight thouſand head, they were never miſſed.

The four annual fairs bring hither a great number of ſtrangers, and many more are brought by law-ſuits in the *Diſtrictual* Court of Juſtice held here, of which there are only four in the kingdom. Before this Court the civil cauſes of the nobility are pleaded. Its members have the vile practice of receiving *incidents*. Are theſe bribes? the reader will aſk. God forbid! They are *only douceurs*, to engage the Judges, or the *Referendaries*, to examine more *ſtrictly* into the nature of a cauſe. Theſe *incidents*, for I would not call them bribes for the world, form the greater part of the incomes of the members of this court.

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court. And the courts of law at Buda are not leſs venal; and as the cauſes which come before them are of greater importance, their *incidents* are greater.

Nothing ſurpriſed me more in France, than to ſee in the parliament towns the litigating parties, with letters of introduction and recommendation in their hands, pay their court to *Monſieur Le Premier Preſident* and his aſſociates, and this not ſecretly, but openly, as complying with a received cuſtom. If, where juſtice is impartially diſtributed, the loſing party attributes but too often its misfortune, not to the badneſs of its cauſe, but to the defects of the law, and the partiality of the judges; what muſt be its ſentiments here, and how great its vexation, where the miniſters of juſtice are ſued for judgments with money in their hands! I hardly know what ſum to give as the fixed ſalary of theſe judges; I find eighty pounds a year noted down in my journal, and eighty pounds at Debretzin is not ſo ſmall a ſum as it is at London; but Mr. Kereſztury in his *Introductio*, &c. whoſe accuracy I cannot doubt, gives 250l. as the ſalary of the preſident, 150l. as that of the firſt aſſeſſor, 120l. for each of the nine aſſeſſors, and 80l. for the ſecretaries. This was according to the regulations of Joſeph the Second; but whether theſe ſalaries have been continued whilſt the reſt of this ſovereign's regulations in law matters have been laid aſide, I cannot ſay.

I was a good deal ſurpriſed to find in this very diſtant country

four

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four or five gentlemen who had visited our island: one or two of the professors had been there. It is a custom for the Calvinist ministers to make a tour to a protestant country; some go to Holland, some to Switzerland, and others to Great Britain. Pastor Benedict is well acquainted with the language of the gypsies, or, as they are called in Hungary, Ziguiners; he assured me that when he was in England, he conversed with some English gypsies who understood him very well. Dr. Vesprim, the oldest physician in the town, studied some time I think at Edinburgh.

Debretzin has a tolerably good inn. Travellers in this country often carry about with them their own feather-beds, &c. and the innkeepers find only the bed-steads: this probably was a custom formerly in Germany; for at this day, in some parts of it, a large leather *valise* or portmanteau is called a *bettsack*. Just without the town there are a few vineyards, but they yield a very poor wine. This is the last place where I would fix my residence; a deep Calvinistic gloom pervades every thing, and the dull rainy weather which happened during my two or three days' stay here added considerably to it. For water the inhabitants are obliged to go near a quarter of a mile, and they have no stone nearer than Gross Wardein or Tokay.

CHAP.

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CHAP. X.

GROSS WARDEIN—COUNTY MEETING—HOT BATHS—NATRON —ZIGUINERS, ETC.

DEBRETZIN was to have been the extent of my travels eaſtward; but as I was informed that ſome high mountains which I ſaw from hence were cloſe to Groſs Wardein, only a ſhort day's journey diſtant, I was deſirous of examining them, as I ſhould then have ſeen the mountains or hills that bound the great plain as well on the eaſt as the weſt; and as Baron Voray, who was at Debretzin on ſome law buſineſs, was returning to his eſtate in the county of Arad, for the ſake of company we agreed to travel together.

Sunday the 23d of June I left gloomy Debretzin, and travelled over much ſuch a country as that of my laſt day's journey; but this was better inhabited. I paſſed through ſeveral good large villages, but the road was much worſe. Near a fen between Bogaſh and Kis-Maria, are ſome remains of one of the fortreſſes of the famous Botſkai. This *patriot* was ſo zealous, and ſo little delicate in the means by which he was to execute his deſigns, that he invited both

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Turks and Tartars to his assistance. We stopped and dined at the last-mentioned place: as the baron had informed the judge of his coming, he had prepared a comfortable dinner for us. This little village Kis-Maria was Botskai's birth-place and his property; and when he was elected to the principality of Transylvania, he gave his peasants their liberty.

My hills fled before me; and when I arrived at Gross Wardein, I found the mountains which I was told were here, to be only hills; and the mountains which I saw from Debretzin were those that divide Hungary from Transylvania, and were still a day's journey off. The poverty of the German language in this instance was in part the cause of the mistake: *berg* signifies both hill and mountain: so, often in works translated from the German, I have found these two words misapplied.

I was not, however, displeased at having made this mistake. Gross Wardein is one of the prettiest towns in Hungary; and in every respect the reverse of Debretzin. Every thing here looked gay; music and dancing were heard in every house; and buggies, gigs, and chariots were bowling about as with us: this was Sunday, and the inhabitants are catholics, to them therefore a day of festivity.

I waited immediately upon the deputy lieutenant of the county, or *vicecomes*, though I had no letter of introduction to him; and this

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did not prevent him from receiving me in the moſt polite manner. I now thought myſelf very fortunate; for I learnt I was come at a moſt favourable time, as the next day there was to be a meeting of the county: I was kindly invited to attend, and likewiſe to dine with them. I then began my mineralogical inveſtigations; but I did not find any porphyrous rocks or breccia as on the weſtern ſide of the plain; nor did I ſee any indications of ſuch: in the brooks, and in the bed of the river, I found limeſtone pebbles; and in the buildings ſandſtone was uſed.

The next day I attended the county meeting, and received every mark of civility and attention. It was a very brilliant aſſembly: the gentlemen were all in elegant Hungarian dreſſes. The debates were carried on in the Hungarian language; it was therefore by their looks, and not by their converſation, I was to learn what was going on. Some from the tone of voice I conjectured to be much out of humour: theſe frequently twiſted their *mouſtaches* very rapidly between the fingers; but this did not ſignify, like the bull's rubbing his horns, or the boar his tuſks, againſt a tree, defiance; buſineſs was peaceably tranſacted, and about two o'clock we ſat down to a hoſpitable dinner, given us by the deputy lieutenant.

German cookery and German manners and cuſtoms prevailed here as they do in the reſt of Hungary. Before we ſat down we all ſtood round the table, and each for himſelf prayed or pretended to

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pray: this was what we call *grace*. Towards the concluſion of the dinner, which laſted a long time, a few glaſſes of good wine were ſent round; and then we all roſe up, ſtood behind our chairs, prayed again for about a minute, and then withdrew for our coffee.

I was introduced to the biſhop, and to the provoſt Count Sauer, by both of whom I was invited to dinner for the next day. The biſhop ſeemed to be a good honeſt fellow, and ſupplied his inns with ſound wholeſome wine. He is not indebted to his birth or connections for this high dignity: he was only chaplain to a regiment when the Emperor Joſeph gave him this See, which was formerly a very rich one; but his predeceſſor, by his bad management, greatly involved it in debt, ſo that the clear revenue now is only about five thouſand a-year. The epiſcopal palace is a vaſt pile of building, but not finiſhed. In the church are the tombs of ſome Hungarian kings, and amongſt theſe that of Saint Ladiſlaus: on this account, when Uladiſlaus, King of Poland, accompanied the Emperor Sigiſmond hither from Debretzin, as an act of piety he walked.

In the afternoon I went to the hot-baths, which are about four or five miles from the town. Some of theſe are only covered by a ſhed, others are quite open. Here I ſaw the ſtrangeſt ſight ſure mortal ever beheld. At Groſs Wardein begins the diſtrict of Hungary inhabited by the Wallachians, as may be ſeen in the map, and many of

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of the lower orders of the inhabitants of this town are of this nation, which is a member of the Greek church, and follows the old-ſtyle. This, therefore, was the Pentecoſt of the Wallachians; and a ſwarm of them was come here to enjoy the pleaſures and advantages of the baths, ſo that moſt of them were full, and preſented really a ſight which my pen is no way capable of deſcribing. All ages and ſexes, with ſkins of all hues, and with features of all expreſſions, were waſhing their hides in theſe cleanſing waters. From what I ſaid of the baths of Bude, it is not neceſſary to ſay, that the fair were without their ſhifts, yet not without their petticoats.—Oh! happy man!—Oh! fortunate traveller! ſays ſecretly my reader, thus to have been permitted to feaſt your eyes on ſo much beauty. Reader, be not unhappy nor envious: much you have not loſt; and if you will drive your pigs into a horſe-pond, and view them with poetic fancy, your pleaſure may equal mine: diſguſt, not deſire, was raiſed at this ſight. Old women here prevailed, with pendent flabby dugs, and withered ſkins. In *zoological terminology*, *Mammæ pendentes flaccidæ marceſcentes, rugoſæ tuberculate furfuroſæ flavo-fuſcæ.* Some of theſe good women had their little children in their arms. I noticed two or three young *Ziguiners* amongſt them; theſe, though ſo young, were as dark as Mulattoes: no doubt with this colour they came into the world. But this was not all I ſaw: this odious ſight only ſerved to ſet off to greater advantage a ſolitary nymph in another bath; and now you have cauſe, reader, to envy my good fortune. For here alone, and only under the grey canopy of heaven, "whilſt evening drew her crimſon curtains round,"

and

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and the ſerenity of the air and the melody of the neighbouring woods awakened ſweet ſenſibility, friend to our pleaſures, but often enemy, alas! to our peace; ſeparate from the vulgar throng and all alone, as if conſcious of her ſuperior beauty, the loveliest girl face Nature ever formed lay quite expoſed, reclining in a ſhallow bath in the very attitude of deſire. A thin ſhort petticoat, which the tepid water wrapped cloſe about her limbs, or elſe wantonly ſpread wide abroad, as if, proud of its beauteous gueſt, it was eager to ſhew her delicate ſhape, or elſe expoſe all her charms, was the only covering ſhe had on. Youth, the youthfulneſs of eighteen years, ſparkled in her eyes and glowed in her lovely countenance; and her heaving boſom and ſwelling breaſts announced that ſhe had reached that happy period of life, at which kind Nature having inveſted her fair offspring with their brighteſt charms, warms them with love, and teaches them to exult in being loved. She ſuffered my enamoured gaze, and ſmiled; and by her melting looks expreſſed ſhe felt the preſence of the God of Love and her own frailty.——*Oh! che boccone!* what a contraſt to thoſe in the other baths! Here I ſhould ſay *Mammæ hemiſphæricæ prominentes firmæ dilute roſeæ——Oh! che boccone!*——Why, O kind Providence! haſt thou ſo often made ſo great a difference between our duty and our deſires, and placed ſo many barriers to keep us from the but little bliſs we ſee, often the only we can expect and the only worth deſiring?——Are theſe the reſtraints of thy governing care? or are they the machinations of thy perverſe children; who, though thou art willing to lead them through life by the path of pleaſure,

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pleaſure, like gloomy *fakirs* prefer that of auſterity and uſeleſs mortification? If ſo, let ſome philoſopher ariſe amongſt us, to teach us a morality more compatible with human nature. For what is this world, viewed even on its faireſt ſide, with all its pomp and glitter, undiminiſhed by the detracting eye of experience, without the delights of love, but inſipidity, or toil and drudgery? It is this alone which can make the nauſeous or inſipid draught of life go down, and repay us for bearing the oppreſſive load of care which ſociety and cruel fortune often with mercileſs hands heap upon us; and without this we either become children and amuſe ourſelves with trifles, or turning moroſe, and then ſeeing every thing in diſmal colouring, refuſe to act our part in life.

Theſe are the natural conſequences of a ſevere morality, which, like the chilling wind of hard penury and grief, depreſſes the generous feelings of the ſoul; whilſt thoſe who with a full pulſe enjoy theſe the ſweets of life, and remain uncorrupted by the world, breathe in every wiſh general benevolence and good will, and delight in ſeeing a happy world.

After ſuch a bewitching ſight as this, how could I deſcend to the common affairs of life and think of——reptiles? The charming girl made me loſe a ſnake I had juſt killed by the ſide of the warm waters which run from the baths, and which I had half examined. I think it was the *Natrix longiſſima* of Laurentius, and the *Natrix*

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Var. b. of the *Syst. Natur.* If I had examined it more carefully, I believe I should have ventured to say it was a distinct species from the *Natrix vulgaris*: it not only varied in the characters mentioned by Laurentius, but the eyes were quite different. Near the baths I saw some rocks of compact limestone.

This county is endeavouring to promote the cultivation of silk-worms. Last year it produced five hundred pounds worth of silk; and some ribband-weavers have been enticed from Vienna to work it up. Attempts are likewise making to purify the native Natron, which is found in such great abundance in this part of Hungary. Some samples given me were very good; but I could not learn the price: and on this in commerce all depends.

I visited the prisons, and I found them but too full. The Wallachians are the most uncultivated and ferocious people of Hungary, and justice is obliged to be administered to them in all its horrors. In 1785 they rebelled in Transylvania, and with great cruelty murdered many of the nobility. Their priests, whom they call *Popes*, are uncommonly brutish, and it is calculated that in twenty executions there is always a *Pope*. Now, or till within a few years, the most frightful punishments were inflicted upon them, flaying, empaling, &c. &c. But the most shocking punishments I have read of, were those which were inflicted on the leaders of the peasants' war in the beginning of the sixteenth century in the Banat. They are too frightful

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frightful to detail. The chief, as king, was ſet upon a red hot iron throne, and an iron crown was put on his head, and a ſceptre of the ſame in his hand, both red hot. In this ſtate, half roaſted, nine of his principal accomplices, nearly ſtarved to death with hunger, were let looſe upon him, with threats of inſtant death, if they did not fly upon and eat their pretended king. Six obeyed, and fell upon him and ate him. Three others who would not, were immediately cut to pieces. Yet under all this torment the unfortunate man never murmured!!

I know not if ever an Engliſh traveller was at Groſs Wardein before; but I was here made as much of as though I had been a very great perſonage. I had invitations from all quarters; and the *Vicecomes*, or lieutenant of the county, was ſo kind as to offer me every aſſiſtance I could want, if I would take the trouble to examine the mountains towards Tranſylvania: but my time, unfortunately, would not permit me to extend my journey further, and I fixed my departure for next morning. The morning came, but not my horſes; the Judge, or his ſubſtitute, got drunk, and forgot to give notice to the peaſants; and it was ten o'clock before I ſet out. I took the ſame road I came, and returned to Debretzin. I ſtopped at the lake near Kis-maria, where the Natron is collected and purified; but there was nothing in the proceſs worth relating. The *Szekſo* is collected on the ſides of the lake, and in ſome other places: in dry weather,

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when the lake is low, the water of this is likewiſe rich in Natron. A *kible* of *Szekſo*, or impure Natron, is ſold for two ſhillings and eight-pence, and ſix *kible* yield about one hundred weight of pure Natron. It is ſaid by Mr. Rückert, in Crell's Chem. Annals for 1792, that 10,000 cwt. of pure Soda, or Natron, might be made yearly, and ſold at the price of potaſh.——Ten thouſand hundred weight? If I have not made an error in tranſcribing, he muſt certainly mean in all Hungary.

I only paſſed the night at gloomy Debretzin, and then puſhed on to Tokay, which I reached about four in the afternoon. I paſſed through the diſtrict of the Haydukes: ſix or ſeven towns, with two-and-twenty thouſand inhabitants, form this diſtrict. They are the deſcendants of ſome troops which, in the beginning of the laſt century, at the termination of a war, were ſettled here, and received lands on condition of rendering military ſervice. They have their own magiſtrates, and are not under the government of the county. Judging from externals, they are not more opulent than their neighbours. From Debretzin to Tokay the country is quite flat, being part of the great plain: it grows a good deal of corn and Indian wheat, but it is chiefly paſture land.

By the road-ſide I found a large party of zigeuners. How admirably they are pourtrayed by Cowper in theſe lines:

I ſee

I ſee a column of ſlow-riſing ſmoke.
O'ertop the lofty wood that ſkirts the wild.
A vagabond and uſeleſs tribe there eat
Their miſerable meal. A kettle ſlung
Between two poles upon a ſtick tranſverſe,
Receives the morſel; fleſh obſcene of dog,
Or vermin, or, at beſt, of cock purloined
From his accuſtomed perch. Hard-faring race!
They pick their fuel out of every hedge,
Which kindled with dry leaves, juſt ſaves unquen
The ſpark of life. The ſportive wind blows wide
Their fluttering rags, and ſhows a tawny ſkin,
The vellum of the pedigree they claim.

Hungary may be conſidered as the ſeat of this people. They are here very numerous, and lead the ſame vagabond life they do in other countries. Several of the later Hungarian ſovereigns have endeavoured to render them ſedentary, but with not much ſucceſs; they ſtill ſtroll about the country as tinkers and muſicians, but are not ſeen in ſuch hordes as formerly. It is but a few years ago (I think under Joſeph II.) that about a ſcore of them were condemned and executed in the Great Hontor county for being—*Anthropophagiſts;* but, when it was too late, it was *ſuſpected* that their Judges had been too haſty in their condemnation. They were not ſeen in Hungary before 1418. What their numbers are I could never learn; but when the neighbouring country of the Buccovine

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was lately ceded to Auſtria, of ſeventy thouſand inhabitants, *one thouſand were gipſies.*

The *Citillus*, earleſs Marmot, had begun its depredations on the corn, though it was ſtill green: at the mouths of their holes lay heaps of *ariſtæ* and chaff.

CHAP.

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CHAP. XI.

TOKAY—ITS VINEYARDS AND WINE—SOIL—LITHOLOGY—AND SALT MAGAZINE.

FROM the ſituation of this town, on a rich ſoil, and at the junction of two conſiderable rivers, one would expect to find it great and opulent: why it is not, I do not know. It is but a little paltry town, though it has certainly a fine ſituation. The inn was ſo bad, that the Director of the Royal Salt Magazine, to whom I had a letter of introduction, would not ſuffer me to ſtay there, but brought me to his own houſe, where I remained, and was hoſpitably entertained during my ſtay here.

Tokay, not unlike a great part of mankind, derives fame from the merits of others. It produces only a ſmall part of the excellent wine that bears its name; but it has had the good fortune of giving it to a hilly diſtrict extending twenty or thirty miles northward: in breadth it is much leſs conſiderable. In this tract of country lie Tarczal, Zombor, Made, Ratka, Talya, Szanto, Kereſztur, Kiſs-falu, Benye, Tolcſva, Liſzka, Horvati, Zſadany, Vamos-Uifalu, Olaſzi, Patak, Karoly falva, Trautzon falva and Uihilly. Some of theſe towns

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are much greater than Tokay, and produce a wine no ways inferior to it. But Tokay has not always had this honour. Nicholas Olaus, who wrote in the ſixteenth century, does not place the county of Zemplin, which Tokay is in, amongſt thoſe which produce the beſt wine; he enumerates only Sermia, Sumeg, Barony, Preſburgh, Oedenberg, Heves Borſod, Abauivar, Veſprim, and Salad; yet he ſpeaks of Szanto and Liſzka, which belong to the Tokay diſtrict, and ſays "*Oppida vini optimi feracia.*" It ſeems that Tokay obtained this diſtinguiſhing honour under the government of Rakotzy, through his keeping here the wine which he received from this diſtrict.

But the wine generally known in foreign countries by the name of Tokay, is a particular kind, and made only in ſmall quantities in different parts of this diſtrict, and is ſold even here very dear; it is here called *Auſbruche*, and is made by mixing a portion of luſcious half-dried and ſhrivelled grapes with the common ones. As it will probably be agreeable to moſt of my readers to know the whole œconomy of the vineyards of the celebrated Tokay, I will devote the greateſt part of the preſent chapter to this ſubject, and relate the management of them from the firſt planting of the vine to the perfection of its juice.

The vines when firſt planted are cut down at a knot, to within a ſpan of the ſoil, and the ſuperfluous young ſhoots are cut off every ſpring at the ſame place: by this means a head is formed, which

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increaſes yearly; ſometimes they are very large, but the beſt ſize is that of a child's head. When the vines have repaid by their fruit the induſtrious labourer for his trouble, which is late in autumn, the ſtumps are covered an inch or two thick with ſoil, and then each repreſents a mole-hill. Often, it is ſaid, the huſbandman is ſeen following his gatherers occupied in this work, leſt early froſt or ſnow ſhould prevent its being done; ſometimes even the branches, if deſigned for layers, are covered. Some vine-dreſſers take out the ſticks and lay them in bundles, others leave them ſtanding. As ſoon as the winter is over, and the weather begins to grow milder, which is about the middle of March, and often at the beginning, the ſtumps are again uncovered, and the ſoil about them turned up: this labour is followed by the dreſſing, which is generally done as ſoon as the ſeaſon will permit; that is, at the end of March, or at the beginning of April. Time, ſevere winters, and ſpring froſts, cauſe ravages in the vineyards: to make good theſe deficiencies, freſh vines muſt be raiſed. This is done in different ways, by tranſplanting, and more commonly by planting the cuttings of known good and ſound vines; and this is the next buſineſs to be performed. The cuttings (the points of which ſoon withering muſt be cut away) ſhould be put knee-deep in the ſoil, with a little dung, the other end to be only a ſpan above ground, which ſhould be covered up till it is probable it has begun to ſhoot, and the ſpring weather is no longer to be feared. Or they are raiſed by layers. Here the ſoil is dug out from about the ſtump and roots till the hole is a foot and a half deep; theſe then are trod

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trod to the bottom of it, ſo that the branches, where they are inſerted in the ſtump, are under ground, and the remaining part is laid down and covered with the ſoil mixed with a little dung, ſo that their points only reach a few inches above the ſurface of the ſoil. To each of theſe branches, which with time becomes a new vine, a ſtick is given. Then follows the ſevereſt labour of the vineyard, the digging or turning up the ſoil: this is repeated three or four times before the vintage. Soon after the firſt digging, the ſticks are driven in, to which the ſhoots, when they are about two feet long, are lightly bound: when they are grown to five feet they are better bound, once pretty faſt above, and once looſer in the middle. Weeds by this time again begin to grow, and the ſoil is again turned up to deſtroy them, and to keep it light: but during the flowering of the vine, nothing is done; Nature is left entirely to herſelf. This being over, the ſticks are driven firmer in the ground; the vines which may have come untied are better ſecured; the too luxurious growth is taken away, and the vines are ſo ordered that they may require no farther care till the vintage; only the ſoil is once more turned up. Now the huſbandman's toil is over, and he waits for the bleſſing of Providence in a fine vintage—with anxiety—for very uncertain are his profits.

Though in warm ſeaſons the earlieſt grapes are ripe in the middle of Auguſt, it is the latter end of September before the greater part are eatable; and as the grapes for preſſing muſt be fully ripe, the vintage

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vintage is delayed as long as poſſible; generally to the feaſt of Saint Simon and Saint Jude, which is the 28th of October; and if the weather is fine, the later the better, on account of having the greater quantity of the half-dried luſcious grapes, or, as they are here called, *Troken-beers*; which are abſolutely neceſſary to form the *Auſbruche*, that kind of Tokay wine which is ſo much eſteemed, and which is called by us Tokay. As ſoon as the grapes begin to grow ripe, guards are placed in the vineyards, not only to prevent the grapes from being ſtolen, but to drive away the birds from them.

At laſt the ſeaſon of rejoicing comes, the vintage. In every country this is a time of mirth and gaiety; but particularly ſo about Tokay. Many of the great nobility, though they have no eſtate here, and live in diſtant parts of Hungary, have a vineyard here, and buſineſs as well as pleaſure brings many of them at this ſeaſon; and the dealers in this article come likewiſe to make their contracts, and the friends of all concerned, from a tacit invitation, come to join in the general feſtivity: the vintage is preceded by fairs, ſo that during this ſeaſon all is life and buſtle.

To the *Troken-beers*, or half-dried luſcious grapes, Tokay, that is, the Tokay *Auſbruche*, is indebted for all its richneſs: but theſe depend greatly on the weather; every year does not produce them either in the ſame quantity or quality; in ſome years they fail altogether. If the froſty mornings ſet in too ſoon, and, before the grapes are

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ripe, deſtroy the connection between them and the vines, the *Auſbruche* is harſh and ſour; yet froſty mornings, when not too ſoon, are advantageous to them: if wet weather ſets in at the time they ought, through the influence of the ſun, to loſe their watery parts, and to be turned to ſirup, it may eaſily be conceived what will be the conſequence. Theſe *Troken-beers* are always trifling in quantity compared with the other grapes; and in ſome years, as I have juſt ſaid, there are none at all.

The ſeaſon for gathering being come, young and old, with merry hearts and active hands, repair to the vineyards, and eaſe the vines of their precious loads: but in doing this, the *Troken-beers* are picked from the reſt, and kept apart; and they are often ſold to thoſe who make *Auſbruche*, by thoſe who do not. The ſpoil carried home, the ordinary grapes are trod apart, and the juice is taken out, and then the remaining juice is preſſed out from the ſkins and ſtalks: both are commonly put together in tubs, no difference being generally made between the juice trod out and that preſſed out. This when fermented forms the common wine; which is not ſent out of the country as a delicacy, and never reaches our iſland. The *Troken-beers* are likewiſe trod, and then have the conſiſtency of honey: to this is added the common juice; and as the richneſs of the *Auſbruche* or *Maſcklaſs* depends on the greater quantity of the juice of the *Troken-beers*, the proportions vary according to the intent of the owner. The common proportion for an *antal* of *Auſbruche*, which

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which contains ſeventeen or eighteen Engliſh gallons, is two buſhels of *Troken-beers*; and for a caſk of *Maſchlaſs*, which is only a leſs rich liquor, the ſame quantity is taken: but then the caſk is about equal to two *antals*; ſo that only half the quantity of *Troken-beers* are uſed to make *Maſchlaſs* as are uſed to make *Auſbruche*. But as the *police* does not interfere in this matter, and every one does as he thinks proper, theſe two liquors are often very near alike, and the principal difference then conſiſts in the ſize of the caſks.

The mixture being made, it is ſtrongly ſtirred together. By this operation the ſeeds are ſeparated from the fleſh of the grapes, and come to the top, and are taken out with a net or ſieve: thus it remains in the ſame veſſel, covered over for a couple of days, till fermentation begins; and this is ſuffered to continue about three days, according to the weather; that is, till the fermentation has properly mixed the fleſhy pulp of the *Troken-beers* with the common juice: it ſhould be ſtirred every morning and evening, and the ſeeds carefully taken out. If the fermentation is continued too long, the wine receives from the ſkins a diſagreeable brown colour, and forms a deal of yeaſt and ſediment in the caſk. Nothing now remains to be done, but to pour this liquor through a cloth or ſieve into the barrels in which it is to be kept. The reſiduum is then preſſed: ſome even after this, pour the common juice upon this preſſed reſiduum; but if the preſs is good the common wine gains little by it.

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When a conſiderable quantity of the *Troken-beers* remains a ſhort time together, ſome of their thick juice or ſirup is expreſſed and runs out: this is carefully collected as a great delicacy; it is called *eſſence*, and has the conſiſtence of treacle. No art is uſed to fine theſe wines, nor to make them keep. The barrels ſhould be kept full, and their outſides free from wet and mildew.

Auſbruche is not excluſively made about Tokay: there is a Saint George, a Ratſchdorf, and a Meniſche *Auſbruche*, and this latter I prefer to that of Tokay; it is red: ſome is made likewiſe in the county of Oedenberg.

The beſt wine does not long remain in the place of its growth: a great part of it is ſoon ſent into the cellars of the nobility in other parts of Hungary; and the greateſt quantity is to be found in the counties of Zips and Liptau in the north, from whence it is ſent into Poland. The Poliſh Magnates are the beſt cuſtomers, particularly for the *Auſbruche*, which is the deareſt European wine that is: here in the country, a bottle of the beſt is valued always at about a ducat, that is near half-a-guinea. I dined once at the coffee-houſe at Peſt with a few friends: we had only a plain dinner, for which we paid but a moderate price: beſides common wine we had ſome Tokay: when the waiter came to be paid, he aſked each how many glaſſes he had drank of it, and then added twenty creutzers (about eightpence) for each glaſs to the ſcot of every drinker of Tokay.———

Tokay

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Tokay is no doubt a fine wine, but I think no ways adequate to its price: there are few of my countrymen, except on account of its ſcarceneſs, who would not preſer to it good claret or burgundy, which do not coſt above one-fourth of the price. Some of the ſweetiſh Spaniſh wines, begging its pardon, are in my opinion equally good; and unleſs it be very old, it is too ſweet for an Engliſhman's palate: but, as I have often ſaid, *de guſtibus non eſt diſputandum;* and I hope my good Hungarian friends will pardon my want of judgment, though I know how much they are prepoſſeſſed in favour of their *cara patria* and its dear produce. I have heard many of them ſay, that the worſt Hungarian wines were ſuperior to the beſt French. How much they have ſaid about *their vegetable gold*, found growing amongſt the bunches of grapes, is pretty well known, as this ſtory is to be found almoſt in every Hungarian author who has ſung the praiſes of his country, though the *gens éclairés* pretend not to believe it. Mr. Groſſinger, who within this year or two has written a large work in Latin upon the natural hiſtory of Hungary, gives this explanation of the colour of the teeth of ſheep. "*Si vero fulgor perennis eſt, auro tribui poteſt, quod in vegetabilibus Montanæ Hungariæ delitescit.*" And Mr. Windiſh, one of their beſt Geographers, ſays in a work written about 1780, nay I will write it at full length, about *ſeventeen hundred and eighty*, leſt the reader ſhould think the printer by miſtake had put a ſeven for a four, that rye, through the excellency of the Hungarian ſoil, is turned into wheat. ——But happy are the people who are thus proud of their country,

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and who think their territory an earthly paradiſe, and their government a model of perfection; yes, and happy is the pair who find in each other every charm and every virtue; and the parents who ſee in their children every juvenile merit; and the children who look up to their parents as their guardian angels. Without theſe inſtinctive attachments, patriotiſm, connubial love, parental kindneſs, and filial affection, would hang by a very ſlender thread, and the ſmalleſt breath of jarring intereſts would overturn public and private felicity: and ſo I am glad when I ſee the Hollander look ſour when he hears his country curſed as a foggy bog, fit only to ſerve as a peat-moſs for the reſt of Europe; and I have often at *Auld Reeky* heard with pleaſure the North Briton greet his friend with:—"Weel, Donald, is na this a *fine* cauld rainy morning?"—"Indeed is it, Sandy, a *fine* cauld rainy morning."

Though all Tokay wine does not grow at Tokay, yet all the favourable ſituations about this town are covered with vines. The ſoil is remarkably fine and light, juſt like *Tripoli*: it is quite a powder, of a light brown colour, and makes a conſiderable effervescence with acids: it has nothing of the nature of ſand, nor is it at all mixed with gravel or ſtones; only now and then a few looſe pieces of Porphyry are found amongſt it. It is very deep: where ravines have been formed by the rains it may be ſeen that it is ſeveral yards thick. Towards the top of the hill, immediately above the town, it is more rocky, and there probably it is not ſo deep. I was

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in doubt of what nature I ſhould conſider this ſoil to be; and at a loſs to explain how ſo deep and light a ſoil ſhould exiſt upon ſo rapidly ſloping a hill. Towards the bottom, facing the river, there are ſome precipices which throw, I think, conſiderable light upon this matter. Here, in this ſoft, friable ſoil, I obſerved the ſame ſtructure I had often ſeen in traps and baſaltes, when in an incipient ſtate of decompoſition—a diſpoſition to aſſume rude and irregular priſmatic and columnar forms: but a large angular block imbedded in the ſoil threw the greateſt light upon it. This, though with the angular ſhape of a fragment of ſtone, differed from the ſoil only in being a little darker in colour, and not quite ſo friable; yet it might be cut like cheeſe, and it made an effervescence with acids. From theſe circumſtances, I am led to conſider the ſoil, as well as the block, to be ſome kind of trap or baſalt decompoſed.

In a deep ravine, where a narrow road has been made, I found the rocks compoſed of that kind of Porphyry called by Mr. Werner *Porphyrſchiefer*, the *Porphyrius ſchiſtoſus* of the Syſt. N. Lin.*; though Mr. Born, in his nineteenth letter to Mr. Ferber, ſays, the hill on which the Tokay wine grows, is Argillaceous Shiſtus (*Thonſchiefer*), and from hence infers that the *Obſidian* found here is not indigenous,

* Porphyrius ſchiſtoſus.

Ex Petroſilice fuſca lineis vel venis interruptis tenuibus ſubparallelis albidis, particulis albis Feldſpati, & pellucidis Adulariæ.

but

but has been brought by ſome means or other from the Carpathian mountains. It muſt be mentioned in extenuation of ſuch an erroneous account, that Mr. Born's journey to Tokay happened ſoon after he met with the dreadful accident at Felſo-Banya; and this ſo ruined his health as to prevent him from examining theſe hills himſelf: and this he confeſſes in his nineteenth letter to his friend Ferber, dated at Schemnitz—" It is impoſſible (ſays he) for me to tell you how much I have ſuffered in my journey of ten days from Nagy-Banya to this place: I was chiefly carried in and out the carriage; each ſtone on which I touched; each ſhaking of the carriage, doubled the pains which I feel throughout my whole body. The dry cough, which does not leave me, ſtill prevents my ſleep. In this painful ſtate of body it was impoſſible for me to examine the hills I paſſed by." Indeed, in his laſt work, his *Catalogue Méthodique*, he gives a quite different account of theſe hills, and on the ſame ſubject, the Obſidian. For on the article "*Verre volcanique en grains noirs*, &c." he ſays, "*Les collines de Tokay ſont formées d'un Tuf Volcanique, qui, dans quelques endroits, eſt entrecoupé de bandes larges d'une ou de deux toiſes de lave compacte renfermant de ſes grains vitreux, noirs opaques.*"—As Mr. Born was never here after his return in 1770, he muſt have obtained this intelligence likewiſe from his friends. No one, I hope, will think, from my taking now and then the liberty of correcting the miſtakes of this great man, that I do not feel the greateſt reſpect for him: he was the very light of Auſtria.

On

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On the back of this hill, towards the top, which is covered, not with vines, but with under-wood, I found a great many looſe blocks of a very remarkable kind of *Pitch-ſtone Porphyry*. Its baſe, or ground, is a black *Pitch-ſtone*, containing red feldſpar, chiefly in fragments, or in very irregular ſhaped parallelopipedal cryſtals: this is the beſt characterized. But this foſſil by degrees changes materially its nature; the feldſpar becomes more terreous and of a duller colour; and the black pitch-ſtone loſes its ſhining glaſſy appearance, and only forms ſpots and ſtreaks mixed with red matter. The red feldſpar, under the blowpipe, melts into a white enamel: the pitch-ſtone likewiſe melts, and forms a black glaſs. The Botaniſt might have amuſed himſelf here as well as the Mineraliſt. I found three ſpecies of *Linum*, exotics of our iſland, the *hirſutum*, *tenuifolium*, and *flavum*, and ſome other plants; and ſome of the inſects mentioned in the annexed catalogue I collected here. From this hill there is a very fine extenſive proſpect of the neighbouring hills, and of thoſe which run towards Marmaruſs: theſe ſkirt the great plain on this ſide, which lies below like the bed of the retired ocean. With a good mineralogical guide, and a longer ſtay, I doubt not but I might have collected ſome curious foſſils, and have made ſome intereſting geognoſtic remarks.

An immenſe quantity of ſalt comes here down the river from the county of Marmaruſs. Near a hundred thouſand hundred weight is

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annually ſold at this magazine: the price is three florins and thirty-two creutzers (about ſeven ſhillings) per cwt. and the price throughout Hungary is the ſame, making allowance for the difference of the price of carriage to different places.

CHAP.

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CHAP. XII.

ACCOUNT OF FOSSILS—AND MINERALOGICAL REMARKS.

AT Tokay I had quitted the plain, and entered the hilly country: this continues to the great Carpathian Alps, a diſtance of two or three days journey, where I was very anxious to be during the fine ſeaſon, that I might botanize there. Yet, being informed that ſome very remarkable foſſils had been found in theſe hills, I thought it worth while going a little out of my direct road in queſt of them.

The 29th of June I left Tokay. The moment I was out of town I obſerved great rocks of baſalt overhanging the road, and a mile or two further, the *Volcanic Zeolite* of Mr. Fichtel. This is certainly a very curious foſſil, and it as certainly forms rocks: but whether it be volcanic, and, if volcanic, whether it be *Zeolite* or not; every one will decide, on the firſt queſtion, as he is prepoſſeſſed in favour of *Plutonic* or *Neptunic* theories; and on the laſt, according to the definition he may give of Zeolite. It formed on the left hand ſide of the road a bank, which in ſome places was fairly expoſed to view.

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It is of an ash colour *, here and there variegated with red, very fragile, and the texture like a congeries of small tunicated ill-shaped beads, of a rather greasy lustre. It greatly intumesces under the blow-pipe, even to thrice its bulk, and forms a white scoria; but it only slightly phosphoresces, and forms no gelly with nitrous acid, which are two of the principal characters of Zeolite. In some parts the little globules, which are formed of different coats, contain a *nucleus* of *Obsidian;* the thin coats are easily detached. Of these *nuclei* I picked up a great many at the foot of the bank, mostly of the size of a pea, but some of the size of a bean: they are more or less angular, but never crystallized as Mr. Fichtel informs us. I have seen his pretended crystals, and can assure my readers, that none but those who are blinded by mineralogical hypotheses; and call in conceding fancy instead of severe judgment to be their counsellors, can think them such. These globules likewise swell under the blow-pipe, and form a whitish glass. Mr. Fichtel, who, I know, is very expert with the blow-pipe, says, in his *Mineralog. Aufsat.* page 277, that he could only melt the Lipary Obsidian; and those of Hekla, Transylvania and Hungary, he found to be altogether infusible. This greatly surprises me; and the infusibility of this fossil is asserted by him likewise in his account of the Carpathian mountains, page 580. I have tried the small grains, and fragments of pieces two or three

* Cinereus durus fragilis unctuoso-nitens, textura crasse granulata ex globulis parvis angulosis tunicatis.

Tubi Ferruminatorii ope ter volumen auget & scoriam albam cum parum phosphorescentiæ præbet.

pounds

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pounds weight, but they all proved fuſible. This is probably the "*Verre volcanique en grains noirs, réunis par une Lave compacte griſe,*" of Mr. Born's *Catalogue Raiſonné*, page 449, and the looſe grains, his "*Verre volcanique noir, en grains iſolés,*" page 450.

Mr. Klaproth has been ſo obliging as to analyſe this foſſil for me (I mean the pearly Matrix). He found it to ſwell up only moderately, when heated, and leſs than the other varieties of the ſame foſſil; and that a piece of it, in a clay crucible, after remaining in a wind furnace for two hours, was not melted, and continued of the ſame ſhape; but the colour was changed to a reddiſh brown, and it had loſt 4½ per cent. of its weight. Another piece of the ſame, expoſed in a clay crucible, to the heat of a porcelain furnace, melted into a whitiſh grey glaſs with an even and poliſhed ſurface: in the fracture, however, it was full of fine froth-bubbles, ſcattered with white, black, and oker coloured grains imperfectly vitrified, about the ſize of millet ſeed; from whence the glaſs had a variegated and ſpotted appearance. Analyſed in the wet way, it gave,

Weighed in the red hot ſtate,	Siliceous Earth	71½
	Argillaceous	18½
	Calcareous	1½
	Calx of Iron	1
		92½
The volatile parts loſt in the fire		4½
		97
Loſs		3
		100

The

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The ſpecific gravity of this piece was 2,332; another, which was variegated with red, 2,342; another, with more red in it, 2,381.

In Mr. Pallas's *Nordiſche Beyträge* there is an account of a foſſil lately found near that diſtant corner of the world, Kamſchatka, which ſo perfectly correſponds with this, that I think, as works in the German language are ſo ſeldom tranſlated into ours, I ſhall be thanked, by our Engliſh mineralogiſts, for laying a tranſlation of it before them.

"If we wiſh to increaſe the names of foſſils," ſays Mr. Pallas, "which is now much the faſhion, the ſtone from the Marekanian mountains, on account of its ſingular nature and properties, deſerves a particular name, much more than many new-named foſſils. Moſt foſſils, with ſcarce any variation, are common to different places: this is particularly the caſe with the *mountain rocks*, which are repeated in every chain of mountains; but I know of no example of one being found in any part of our globe, ſimilar to this. The (Bergart) mountain-rock is very fragile, and conſiſts of remarkably thin, pearl-coloured, glaſſy, ſhining, and tranſparent leaves, which are curved and interwoven in one another in all poſſible ways; they may be crumbled between the fingers, although when united together they ſcratch glaſs: it is not porous like pumex, and has ſtill leſs the appearance of lava: it has much more the appearance of foliaceous zeolite, and when broken looks like pounded glaſs. In this

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maſs vaſt numbers of ſmooth, hard, in every way compreſſed, obtuſe-angular, roundiſh, or longiſh pebbles, which here imitate water-worn pebbles of ſmoked quartz *(Rauchtopas)*, there drops of opake enamel, lie enveloped and variouſly interwoven with, and ſurrounded by, theſe leaves or ſcales. They are of the ſize of a great or ſmall nut, though often much ſmaller, even not bigger ſometimes than millet or poppy-ſeed.

" Long ago theſe pebbles, or whatever you pleaſe to call them, were found in muſeums; and when I was in Siberia, the ſmoke-coloured tranſparent kind were brought in abundance to Irkutz, where they were ſold for poliſhed ſmoked topazes. Yet I do not find them mentioned by Steller in his Mineralogical Remarks, although he was on the ſpot, and has given an account of other remarkable things. The fine leafy *mountain-rock*, which ſometimes entirely forms little balls which have no other ſtony *nucleus*, but are compoſed, to the very centre, of concave leaves lying one upon another, and ſometimes ſurrounds theſe pebbles, which we ſhall next deſcribe, has the very remarkable and ſtriking property, without any addition, to ſwell up under the blow-pipe, with ſome noiſe, as quick as alum or borax, and to be changed into a fine white frothy light and friable ſubſtance. If we increaſe the blaſt, it increaſes in bulk, till it is quite ſpongy, and it then cannot by any means be brought into a glaſs bead, either with or without fluxes: ſome pieces crackle and fly before they are red hot, others do not. This particular effect

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effect of fire, with perfect inſolubility in acids, drew firſt my attention to this ſubſtance, and induced me to requeſt Mr. Lowitz, apothecary, and member of our academy, to undertake the chemical analyſis of it; which I ſhall ſubjoin, after I have deſcribed the great and ſmall pebbles, which are contained in it in quantities as in a pudding ſtone.

"Theſe pebbles, according to the ſpecimens which have been ſent me, are of two kinds: one kind is juſt like water-worn poliſhed fragments of ſmoked cryſtal, commonly called ſmoked topaz, and was at firſt conſidered as ſuch; but in poliſhing it is ſeen immediately that they are much ſofter, and they readily crack; they are ſcratched with the file, and fly when ſtruck with a ſteel, with which they however give fire if ſtruck on a ſharp edge; yet they are hardly to be broken when ſtruck with great violence with a hammer. Many are uniformly clear, tinged (clouded) of a yellowiſh ſmoke colour, which is hardly obſervable in very ſmall ones; others have very evident, yet fine ſtreaks or beds of a darker ſooty ſmoke colour. Theſe more or leſs fine, and quite parallel, beds run completely through the ſtone, and are in ſome more abundant and crowded together, in others leſs frequent, and render the ſtone more or leſs cloudy. In one of theſe ſtones I have found, on one of its ſides, near the ſurface, an oval ſooty ſpot with a curved ſurface like a thin leaf grown in it. The ſhape of theſe pebbles is generally irregularly round or oval, more ſeldom oblong, but always amorphous through various ſuperficial

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ficial impreſſions; likewiſe polygonal with rounded angles, like the ſhape that wax or clay aſſumes when careleſsly rounded by the fingers, but they are all outwardly quite ſmooth and poliſhed, and look as if they had been melted. The darker-coloured beds are not parallel to the longer or ſhorter diameter of the peb' 'es, but deviate from it, and run in all directions; and when the ſtone breaks, it is not in the direction of theſe apparent beds, but in indeterminate fragments, quite accidental, and with a concavo-convex and ſplittry fracture, like ſoft glaſs *(weiches glaſs)*. The edges and corners do indeed cut glaſs a little, but they are ſoon worn away. The ſize of theſe pebbles is very various, and they are found from the ſize of muſtard or poppy-ſeed to that of a haſel-nut, ſeldom greater; yet ſometimes they are almoſt as big as a walnut. This ſubſtance, which has all the appearance of glaſſy quartz, in a moderate red heat, or before the blow-pipe, likewiſe begins, yet in a leſs degree, to turn white and become frothy, and changes to a fine ſubſtance like pumex, which may be impreſſed with the nail. In heating it ſeems to emit a white phoſphoreſcent light. The ſcorification hardly enters above a quarter of a line, and the internal part remains ſtill firm and tranſparent: if this is broken, every fragment ſhews the ſame appearance when heated; commonly the external parts begin to crackle and fly before they are throughout red hot.

"The other kind, which, according to the following obſervation of Surgeon Allegretti, are found in a different part of the mountain,

have the ſame ſhape as the preceding; they are generally a little bigger and harder, quite opake, of a more or leſs pale or deep brick colour, marked more or leſs with blackiſh ſpots and ſtreaks, and veined or reticulated like a gland. They fully reſemble a marbled enamel, are generally on one ſide more rounded, on the other more preſſed (concavo-convex), and round about edged as a melted ſubſtance poured into ſmall holes or cavities. Struck with a ſteel they give more fire than the preceding, and reſiſt the greateſt ſtroke of a hammer; under the blow-pipe they ſtill more readily than the tranſparent ones change to a pearl or whitiſh colour on the ſurface, without great expanſion, and this ſcorified ſurface then very eaſily falls off in ſcales. Such are the external qualities of theſe remarkable ſtones, and of the ſtill more remarkable *mountain-rock* in which they are included. How far the following chemical analyſis of Mr. Lowitz, which I give in his own words, can throw light upon their remarkable properties, I leave to the deciſion of others, till I ſhall receive a greater proviſion of them (which I am waiting for), and have it then in my power to ſupply the learned of foreign countries.

'Chemical analyſis of a kind of foſſil like Quartz Pebbles, with the mountain-rock in which they are found.—Theſe roundiſh ſtones, which are given out for volcanic productions, are chiefly of the ſize of a hazel nut, and have a ſmoky tranſparent appearance; but there are ſome which are opake, and of a liver colour ſprinkled with blackiſh and reddiſh ſpots; they are conſiderably hard, ſcratch glaſs

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and ſtrike fire difficultly with a ſteel. The ſpecific gravity of the tranſparent kind is to water as 2,3651 to 1,0000, of the opake kind as 2,3592, and of the mountain-rock as 2,3333. One of theſe clear pebbles, which weighed ſeventy-five grains, was repeatedly made red hot in a covered crucible, and each time quenched in cold water; by this operation it became white, and ſomewhat ſpongy on its ſurface; in the middle neither its clearneſs nor tranſparency was changed in the leaſt. I then broke it into ſmall pieces, and placed them once more for two hours in a ſtrong red heat, by which not the leaſt change was now produced on their new ſurfaces, but they remained conſtantly clear, with the edges ſharp and tranſparent. After all this long proceſs in the fire, I only found a loſs of one grain in weight.

The pebble which had been thus treated was ground very fine, and fifty grains of it were placed in a crucible with three times its weight of decompoſed mineral alkali, and heated as much as poſſible for three hours, (yet) without ſuffering it to melt: then the cooled white ſubſtance was ſuperſaturated with aqua regis, and boiled for a few hours in a ſand-bath; then filtered, and the undiſſolved ſiliceous earth carefully waſhed with diſtilled water; then dried, and at laſt ſtrongly heated in a crucible. This then weighed thirty-ſeven grains. Fourthly, A little dry phlogiſticated alkaline ſalt was added to the filtered ſolution, and Pruſſian blue was then precipitated; eight grains were required to its entire precipitation. Then all was boiled in a retort till it was reduced to a few ounces, then filtered, the Pruſſian blue

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well waſhed, dried, and at laſt, together with the paper, burnt and calcined in the crucible; which, deducting for the aſhes of the paper, and for the reſiduum of the iron from the phlogiſticated alkaline ſalt, gave half a grain of iron.

5thly, Upon dropping a few drops of vitriolic acid into this ſolution, now free from metal, there was not the ſmalleſt indication of ponderous earth.

6thly, The ſolution was evaporated to a few ounces, and its contents precipitated by cauſtic volatile alkali; but the earthy precipitate, after being filtered and waſhed, but not dried, was perfectly diſſolved in a ſuperfluous quantity of vitriolic acid.

7thly, This ſolution had the taſte of alum; its contents I precipitated by boiling it ſtrongly with dry earth of magneſia: I then boiled it with depurated mineral alkali, placed it on the filtrum, waſhed, dried, and at laſt heated it in a crucible, by which means I obtained ſix grains of argil.

8thly, The ſolution, containing the earth of magneſia, was precipitated by a ſolution of mineral alkali: this precipitate, after being edulcorated and dried, weighed three grains more than the magneſia that had been uſed to precipitate the argil. Theſe three grains, after being heated red hot, produced one and a half grain of cauſtic earth of magneſia.

9thly, Now the fluid which had remained after the precipitation of the argil and magneſia by the volatile alkali (No. 6) remained to be examined. This was likewiſe evaporated to a few ounces, which,

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by the addition of a pure ſolution of vegetable alkali, yielded an earthy precipitate; this being waſhed and dried, gave ſix grains of aërated calcareous earth, and, being heated red hot, yielded three and a half grains of quick lime.——From theſe experiments it appears, that one hundred grains of the clear pebble have the following component parts:

Siliceous Earth	74	grains weighed in the red hot ſtate.
Argil -	12	
Lime -	7	
Magneſia	3	
Iron -	1	
	97	
Loſs	3	
	100	

10thly, The Mountain-Rock, which contains the pebbles juſt examined, was analyſed in the ſame manner, and gave the ſame products; but with a trifling difference in their proportions. Yet the following remarkable circumſtance deſerves to be noticed:—With the blow-pipe it ſwells up like alum or borax, with a crackling noiſe and phoſphoreſcent light, into a remarkably porous, frothy, very fragile ſnow-white ſubſtance, which afterwards is infuſible. But not leſs ſingular is it, that the juſt mentioned property of this Mountain-Rock entirely ceaſes, without loſing its remarkable appearance, without a viſible alteration of this appearance, and even without a conſiderable loſs of its weight, as ſoon as it is made red hot:

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hot in a covered crucible; after this the blow-pipe has no effect upon it. As the analyſis of this foſſil gave nothing but known earths as its fixed component parts, ſo I am induced to think, that the remarkable appearance produced by the blow-pipe probably depends on ſome kind of elaſtic fluid, which is expelled by the effect of the fire, and which produces that appearance only by the immediate contact of free air and flame; whereas, on the contrary, when heated in a covered veſſel, it vaniſhes unnoticed, without producing any effect on the mineral itſelf.'——The analyſis of the red pebbles, which was not terminated at the concluſion of this volume, will be given ſome other time."

The deſcription of the foſſil from near Kamſchatka ſo admirably agrees with the characters of this from Tokay, that I have purpoſely abridged my own deſcription, as that of the one anſwers for the other; except that the glaſs globules of the Siberian foſſil are more diaphanous than thoſe from Tokay, and here they are never red. Yet theſe are more diaphanous than the Obſidian from Iceland or Lipari; and Mr. Fichtel * mentions one kind found at Pecklin, in the ſame diſtrict, which is juſt like bottle-glaſs, conſequently with nearly a ſimilar tranſparency. Nor, if we examine the matter more cloſely, will the abſence of the red pebbles or globules make a difference; for by the analyſis it is found, that the globules and their matrix, however

* Mineral. Bemerkungen von den Carpathen, page 578.

they

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they differ in their external appearance, are the ſame, even in the diſpoſition to loſe their property of intumeſcing on heating, by this being performed in a covered veſſel *. For it is clear, though the learned chemiſt did not advert to it, that it is exactly the ſame cauſe, which made the clear and tranſparent fragments of the previouſly heated pebbles not loſe their qualities on being again placed in the furnace, which made their matrix remain unaffected by fire when heated in a cloſe veſſel, and then be not affected by the blow-pipe: and I lately ſaid that the grey matrix was intermixed with red, and I have ſmall ſpecimens in which the red predominates; this need therefore only have had untunicated *nuclei* (for the red pebbles, it will be recollected, were quite opake) to be perfectly ſimilar, and it really has; but they are generally tunicated till they become by exfoliation of the ſize of a poppy ſeed, and it is then difficult to examine them.——The reſemblance of the two, that from near Kamſchatka and that from Tokay, is ſtrikingly alike.

The foſſil on which I have been ſo diffuſe, is not a rare foſſil in this part of Hungary. The matrix forms, according to Mr. Fichtel,

* On this point Mr. Pallas and Mr. Lowitz ſeem to differ: for the former ſays, that the fragments of the internal part of one of theſe pebbles which had been heated, gave the ſame appearance, on being again heated, as the pebble itſelf did at firſt; whilſt Mr. Lowitz not only ſays that the internal part continues clear when in the pebble, but its fragments on ſubſequent heating loſe nothing of their tranſparency.

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the mountains or hills of, Pap-Laſſo, Cſcherhezy-Farka, and in part the Schators, and ſeveral other hills about Telke-Banya and Tokay; in ſome of which places it contains the globules of Obſidian: theſe are likewiſe found looſe and ſcattered about in many places in theſe Hungarian *Campi Phlegræi*, as may be learned from Mr. Fichtel's work, and Mr. Born's *Catalogue Raiſonné*.

Mr. Fichtel gave me ſome of his black coal-like Zeolite, deſcribed by him, page 652; and Mr. Klaproth was ſo kind as to examine it for me. He found it ſwell up under the blow-pipe more, and more readily than that mentioned page 277: being heated in the ſame manner for two hours, it likewiſe loſt $4\frac{1}{2}$ per cent. and placed in a porcelain furnace in a clay crucible, it melted into a ſimilar glaſs; but the colour was of a browner caſt. The analyſis in the wet way gave,

Siliceous Earth	68	weighed in the red hot ſtate.
Argillaceous	20	
Calcareous -	$3\frac{1}{4}$	
Calx of Iron	2	
	$93\frac{1}{4}$	
Volatilized in the fire	$4\frac{1}{2}$	
	$97\frac{3}{4}$	
Loſs	$2\frac{1}{4}$	
	100	

Its ſpecific gravity is 2,357.

Had

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Had I heard of theſe curious rocks when I was at Tokay, I ſhould certainly have arranged things ſo as to have ſeen them more at leiſure; but after keeping my driver a few minutes, I was obliged to continue my journey. A mile or two ſtill further, I came to the ſtone quarry from whence the light white cellular ſtone, uſed at Tokay for building, is taken. It is what the Germans call hardened clay *, but cellular; the cells in ſome places are partly filled up with a fibrous ſubſtance like decompoſed pumice. Is this rock a decompoſed porphyry or baſalt, lava, &c.? Theſe never contain pumice, if this ſtriated matter be pumice: it is certainly not a volcanic tufa? It has a few grains of pellucid quartz mixed in it, as ſome porphyries have, but they are very few. The ſhorteſt and moſt faſhionable way would be, to call it boldly a decompoſed Lava.

The country from Tokay to Maad is very pleaſant, particularly ſoon after leaving Tokay, where on one hand you have hills covered with vines, and a fine plain variegated with woods, and the river Bodrog meandring through it on the other. In four or five hours I reached Maad, where I took up my quarters with Baron Orcy's ſteward, and

* Argilla indurata Germanorum.

Alba fractura inequalis, textura terrea impalpabilis, cultro facile rafilis, foraminibus mediocribus & parvis ſparſis, vacuis, aut materia dilute ochracea friabili carioſa fibroſa repletis.

Tubi ferruminatorii ope, et baſis & concretiones vitrum album opacum præbent ſine phoſphoreſcentia aut intumeſcentia.

Obſ. Particulæ paucæ Quartzi pellucidi quæ ſæpe in porphyriis inveniuntur, adſunt, ſed raræ.

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in the afternoon, accompanied by a new acquaintance, who was to be my Cicerone, I went to Tallia; he was neither a naturaliſt nor a philoſopher, and got ſo beaſtly drunk, that I was obliged to get rid of him. At Tallia I found another quarry of the white indurated clay; and in returning I obſerved a great quantity of fragments of whitiſh petroſilex, containing vegetable petrifactions or impreſſions, ſcattered about on a common. In the ſtreets of Maad lay great heaps of a *breccia* of *petroſilex*, ſome of which was very pretty, and of a greeniſh caſt: it is probably uſed here for building. The Baron's cellar is formed in the white indurated clay.

From thence I went to Tolchva, which is only a ſtage diſtant. By the road ſide, near Liſka, there is a bank of fine white ſand, or a ſtone ſo friable as to fall readily into ſand: from the demand for it, I ſuppoſe for houſehold purpoſes, a great excavation has been formed. It feels very harſh between the fingers; under the blow-pipe it at firſt crackles, and then ſwells up to thrice its bulk, phoſphoreſcing and producing a white light ſcoria that ſwims in water, which in a ſtronger fire is turned to a white glaſs. This is nothing but a kind of tufa, formed entirely of the detritus of pumice, or rather of ſomething very analogous to it; it contains ſome ſmall fragments of grey volcanic glaſs *. In ſome places it is much coarſer, being mixed with

* Tufa.

Alba heterogenia terrea inequale-granulata aſperrima valde friabilis, granulis Obſidiani nigri & cinerei rarius inſperſis.

Tubi ferruminatorii ope crepitat intumeſcens ter volumen auget, phoſphoreſcit, ſcoriam aquæ innatantem præbet, & in igne fortiori vitrum album.

an

an imperfect kind of pumice in small fragments, and the grey volcanic glass *. This is covered by another kind, composed of fragments of pumice of the size of a pea, intermixed with a few fragments of the same grey volcanic glass, lightly cemented by an earthy ochre-coloured substance †.

Tolschva is like Maad, a disagreeable ill-built town, and doubly disagreeable to me from the quantity of Jews in it. Though it only contains about 3000 inhabitants, there are 160 families of Jews, as a gentleman, who had been engaged in drawing up the *conscription lists*, assured me. A dislike to a people whose sole concern is gain; who consider cunning and deceit as estimable qualities, and are insensible to the beauties of nature, does not, I hope, indicate a bigoted mind. Jews are very common in Hungary, not in the great towns alone, but in the small ones, and in the villages. Some gentlemen will not suffer them on their estates, though they are always ready to give a higher rent than other tenants. In countries where they are restricted to the great commercial towns, where they have full scope for their trafficking

* Tufa.

Alba ex fragmentis minoribus & parvis Pumicis, in massa alba heterogenia terrea inequale-granulata asperrima valde friabili; granulis Obsidiani nigri & cinerei insperfis.

† Tufa.

Ex fragmentis minoribus & parvis Pumicis, ope terræ ferruginiæ friabilis, leviter conglutinatis.

Obs. Granulæ Obsidiani non omnino desunt.

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talents, they do leſs harm: it is there pretty much Jew againſt Jew; but when they get into ſmall towns and villages, they do great miſchief, and frequently ruin the peaſants and lower kind of people, by furniſhing them with luxuries on credit, and then artfully come upon them, and ſeize upon their property for payment. In Germany and Bohemia I likewiſe found too many of them fixed in the ſmall towns and villages: how they ſwarm in Poland is well known. The Emperor Joſeph was at great pains to make this people more uſeful, and leſs detrimental to the ſtate, but he met with inſurmountable obſtacles. As a fair and honeſt diſpoſition is of the greateſt advantage to a nation, this ſhould not be damped by examples of men getting forward in the world by being deſtitute of it. All religions, and all principles of morality and politics, are not equally beneficial to a ſtate, and I can ſee no reaſon why the increaſe of a dangerous ſect ſhould not be prevented, or the whole ſtock removed.

I examined ſome hills covered with vineyards near the town; they are compoſed of a reddiſh porphyritic baſalt, which is ſeen in many places where the heavy rains have waſhed away the ſoil and formed ravines. The quantity of jaſper found here is ſurpriſing; the walls or diviſions of the vineyards are made by piling up great looſe blocks or fragments of it: it varies much in its colours; it forms veins in theſe porphyrous hills. In other neighbouring hills ſome attempts have been made in mining, which have not been crowned with ſucceſs: one gentleman has loſt near two thouſand pounds,

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almoſt all he had to loſe. Near theſe mines I found another bed of the white clay, but here it was ſo little indurated, or rather ſo much decompoſed, as to crumble between the fingers. Not far from hence I picked up ſome globules of *Obſidian*.

In the walls of the houſes, and in the ſtreets, I noticed a very beautiful breccia *, formed of ſmall fragments of a lively green-coloured petroſilex, united by an almoſt imperceptible coating of chalcedony.

I ſhould not have ſtaid here above half a day, for the ſquire of the place, Mr. Sirmay, for whom I had a letter of introduction, was not at home, but no horſes were to be had: they were all employed in tranſporting the *don gratuit* of corn made by the nobility to the emperor †, and on this account I was detained a day longer, and then I went to Uihelly with Mr. Berhelly, the gentleman who was both

* Breccia.

Ex fragmentis minoribus Petroſilicis viridis cultro vix rafilis ſcintillantis, ad angulos ſubdiaphanæ, & paucis Jaſpidis rubræ, ope Chalcedonii albo-cæruleſcentis vix nudo oculo diſcernendi, conglutinatis.

Tubi ferruminatorii ope color viridis evaneſcit, & ad angulos vitrum album præbet.

† This is another grievance under which the peaſants labour; and at particular times and on particular roads it is a very ſevere one. They are obliged to tranſport the ammunition and proviſions for the army, and every thing that is for the public ſervice, and they receive ſtill leſs pay than from travellers.

my

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my hoſt and Cicerone, as he and ſome more gentlemen of the town were going to the county meeting. We made a large party, a whole waggon full; for this was the vehicle of conveyance. The ſubject of converſation on the road were the Germans, who had been ſettled here by the Emperor Joſeph, againſt whom they raiſed great complaints for having neglected and miſmanaged the farms which had been given them; I was hardly ſuffered to ſay a word in favour of German induſtry, though my companions acknowledged that againſt the German colonies, planted by the empreſs Thereſa, they had nothing to ſay.

On the road I found ſeveral kinds of Baſaltes, one ſo glaſſy as to be almoſt a *pitch-ſtone*, and the *Saxum metalliferum*, but the mica ſo fine as to require almoſt the aid of a lens to be viſible, and a Porphyry * which has the white indurated clay for its baſe; but this is ſo hard as to give fire with ſteel: it contains large grains of pellucid Quartz and Feldſpar, or rather Adularia. This was only a ride of four or five hours; we paſſed by Patax, where the Calviniſts have a college which is only inferior to that of Debretzin, and the ruins of an old fortreſs, which formerly belonged to Rakotſy. Corn, Indian wheat, and potatoes, were the produce of the plain through which we paſſed.

* Porphyrius.

Ex argilla indurata alba, cultro vix rafili facile ſcintillanti, particulis parvis amorphis Quartzi pellucidi & parallelopipedis Adulariæ.

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I was as unfortunate at Uihelly as at Tolſchva. Dr. Weis, phyſician to the county, for whom I had letters of introduction, was out, and as there was a fair here, as well as a county meeting, the inns and alehouſes, if ſuch exiſted, muſt have been full; but I had no loſs in the doctor's abſence except that of his company, for his lady received me in the moſt friendly manner, and was as kind to me as a mother.

There are ſome very high hills cloſe to the town, which go under the name of Schator; as I recollected to have read in *Mr. Born's Catalogue Raiſonné* of a "*Granite alteré par le feu volcanique*," from a mountain of this name, I immediately began to hunt after it. I aſcended two or three of the higheſt, but I found nothing that could be conſidered by the moſt *fiery* mineralogiſt to have been a granit. I ſaw nothing but porphyry * of a reddiſh brown ground, well charged with particles of *Adularia*, and ſcattered with ſmall cryſtals of black *Hornblende*; the white particles having rather a roundiſh than a parallelopipedal form, I ſuſpected them to be *Leucites*, or white Veſuvian Garnets, but they melt with the blow-pipe like Adularia, and have a ſparry appearance when viewed with a *lens*.

* Porphyrius.

Ex Jaſpide? hepatica particulis albis ſubdiaphanis Adulariæ, & ſparſis criſtallis parvis Hornblendæ Baſaltinæ, compoſitus.

Tubi ferruminatorii ope baſis ſcoriam albam, & concretiones albæ vitrum diaphanum, præbent.

In

In this town there is another quarry of the white indurated clay, which is here likewiſe uſed for building; it is not cellular, like that of Tokay, but almoſt as ſoft as chalk; carefully examined, and with a lens, ſome fine black mica may be perceived. My hoſt cultivates the *Iſatis tinctoria* for making indigo. I ſtayed here two or three days in hopes of his return, but I was altogether deprived of the advantages of his acquaintance.

Where civilization is backward, there the government is obliged to extend its attention to things which at another period it leaves to the care of the public. In Hungary, as in ſome other countries, the health of the public is an object of care of government; and in each county there is a phyſician appointed and paid by it, who has ſurgeons under him. In the ſmaller towns the phyſician's ſalary is forty pounds a year, and the ſurgeon's twenty, beſides other advantages, and their practice. At Uihelly the Sclavonian language begins to be general.

July 5th, I ſet out for Telkobanya; the vineyards ſoon diſappeared, and the ſides of the hills were then covered with underwood inſtead of vines. The vallies between the hills were part corn, part paſture land. The road as far as Balhaſy is frightfully bad. Here I changed horſes and ate ſome eggs, the only thing the village afforded. The peaſants were met at the judge's cottage to adjuſt ſome differences concerning the extent of a field or farm. I have often

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often admired the reſpectable conduct of the Hungarian peaſantry; I never obſerved in them any of that ferocity of which they are accuſed in Auſtria, nor that mean and ſneaking diſpoſition, though they treat their ſuperiors with great reſpect, which one might expect to find in a peaſantry hardly emerged from a ſtate of bondage.

Soon after leaving this village, there is on the right hand, overhanging the road, a moſt remarkable rock: it is a ſtrange mixture indeed; a *Breccia* compoſed of fragments of glaſſy *pitch-ſtone (pechſtein)*, both compact and cellular, both grey and black, ſcattered with parallelopipeds of *adularia*, with fragments of pumex, and here and there fragments of a porphyry with a baſe of reddiſh white *petroſilex* with grains of pellucid *Quartz*. Theſe fragments, more heterogeneous in their appearance than in their nature, are imbedded in, or cemented by, a maſs no leſs curious; it is in appearance like ſand-ſtone, or rather granulated *Quartz*, in ſome parts, particularly if viewed with a lens, it has a contorted fibrous texture, in other parts it is more like *pitch-ſtone*, but diaphanous and ſomewhat granulated; where it is moſt compact it ſtrikes fire. Though this *Breccia* appears ſo very heterogeneous, yet it is very homogeneous in its nature; the fragments of the different coloured *pitch-ſtones*, and likewiſe the *pumex* and the cementing matter, are all of the ſame nature: they all intumeſce under the blow-pipe with phoſphoreſcence, and form a white light ſcoria which ſwims in water: ſome ſwell by

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heat to five or six times their original bulk.——Here we have again Mr. Fichtel's *zeolites*, and some part of this mass is his black fibrous pumex-like zeolite mentioned by him page 653. This gentleman there makes this just observation, that "all these zeolites, from the light grey to the coal black, run into one another; and I have," says he, "collected a suite of fourteen specimens, in which each variety is closely connected with another, not only in colour, but likewise in texture."——In what countries are such fossils found, and in what catalogues do we meet with such fossils described? Is it not in indisputable volcanic countries, and often where the fire still rages; and in the catalogues of their products? *Neptunismus*, to which I am ready to attribute much of the formation of our globe, or rather of its thin epidermis, with which we are only acquainted, must somewhere cease, and *vulcanismus* begin; and the only difficulty, and where the learned so little agree, is, where shall the one cease and the other begin? I always thought with the great Linneus, "*Ubicunque pumices copiosiores, ibi quondam vivi vulcani exstitere, licet dudum emortui & oblivioni traditi.*" This curious rock appeared to rest on the decomposed argillaceous porphyry.

A little further on are rocks formed of large blocks of basaltes; and still further, I found a great many loose fragments of silex or petrosilex, containing impressions of organic bodies.——Early in the evening I reached Telkobanya, a large ill built village or town. I

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took up my lodging, as there are no gentlemen here, with the Judge, and he let me have the beſt he had, which was very little; a ſtraw bed on the floor, milk and eggs and coarſe bread.

I came here in ſearch of the Telkobanya *Chryſopal* and *Waxopal*, but I ſought and ſought in vain. I could find nobody here who knew any thing of it; and afterwards I learnt that it is found three or four miles off. But as Mrs. Weis, my laſt hoſpitable hoſteſs, had given me a handſome proviſion of it, I was leſs anxious about it, and Mr. Fichtel has informed us how it is found. His account is this, that in the Gſcherhezy-Farka hill, which is compoſed of that kind of zeolite which I found near Tokay, there are very large veins of jaſper, ſome ſo large as to form rocks (probably like thoſe I ſaw near Tolſchva): in ſome places it is half decompoſed and cellular; in this, this beautiful foſſil is found; ſometimes forming veins, ſometimes nodules, and theſe latter vary in ſize from the ſize of a man's head to ſmall grains. The veins of jaſper this gentleman conſiders as ſtreams of lava, and ſuppoſes the opal, which it contains, to be afterwards formed by percolation.———The red ſort, which Mr. Born places amongſt the pitch-ſtones, is found on the Feketehegy hill, ten or fifteen miles from Telkobanya. This ſupplies here the place of the jaſper, forming entire and large veins, but the hill itſelf is Porphyry.

Though I did not find what I principally came for, yet I found here ſome intereſting foſſils, not mentioned by Mr. Fichtel.—Cloſe to

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the town are zeolite rocks like thoſe near Tokay. In one place, where it is of a more earthy appearance, it is very cellular, and the cells are uncommonly deep and cloſe together, quite like a honey-comb. The blow-pipe ſhewed it, however it differed in appearance, to be of the ſame nature. A little further from the town, I found a bank of very fine white ſtone, like that near Liſka, but ſtill finer; were it not for its harſh feel, it might be taken for chalk, it is ſo very fine: the blow-pipe ſhows its nature at once, it intumeſces greatly.——Further on, in a deep ravine, I met with a rock as curious as any I had hitherto ſeen. It was a breccia of fragments of an imperfect kind of pumice, in which the ſilky appearance of this foſſil was very evident, though it had but little of its fibrous texture: this forms the greateſt part: this is mixed with a much ſmaller quantity of the grey glaſſy pitch-ſtone: theſe two by degrees paſs into one another. Theſe fragments, which are from a quarter of an inch to a pin's head in bulk, ſeem to be cemented by a very thin glaſſy coating, but ſtill of the ſame nature. In ſome of the beds, where all the parts are ſmaller, it looks juſt like a ſand ſtone; and I found a thin bed about half an inch thick, which might eaſily be taken for granulated quartz: this gives fire freely with a ſteel. Here again, however heterogeneous the components of this foſſil may appear to the eye, they are not ſo in their nature; they all greatly intumeſce under the blow-pipe, and form a white ſcoria. Beſides theſe rocks, I found ſome looſe blocks of the aſh-coloured glaſſy pitch-ſtone paſſing into pumice; in ſome parts, particularly if broken in a certain direction, it has nothing

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of a fibrous texture; but this, in other parts, is quite evident: it is ſcattered with parallelopipeds of *adularia*, and, if carefully examined, a few particles of black *mica* may be ſeen. Another kind was much more like pumice: the contorted fibrous texture in this is here and there very evident; it is likewiſe ſcattered with a few particles of *adularia* and black *mica* with grains of pellucid *quartz*?

In one of my excurſions in ſearch of the Telkobanya yellow Opal, I met with a vein of jaſper, but a jaſper approaching to the pitch-ſtone; in the middle of a fragment of this, there was a ſmall piece of the *Milk-Opal* which had ſome degree of *fire*. This ſituation agrees with the account of Mr. Fichtel, relative to the ſituation of the Telkobanya Opal. In the road to Caſchau there are great blocks of Petroſilex, or ſomething between Petroſilex and Chalcedony, containing great abundance of vegetable petrifactions. I knocked out of one of theſe blocks a piece of petrified wood near half a foot long, and an inch in diameter; its fibrous texture was very evident.

I only ſtaid a day at Telkobanya, and the evening after my arrival I left it for Caſchau, which is two ſtages diſtant; but as no horſes were to be procured, I was obliged to take up with oxen. I think there is not a greater *ſecatura* a poor mortal meets with in this vale of tears, than that of being obliged to travel ſlow when he wiſhes to travel faſt; and beſides the ſlowneſs of the progreſſion of theſe animals, they indicated by their actions, that they had views quite

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quite oppoſite to mine; wiſhing to ſtop when I wiſhed to go on, and to turn to the right when I wanted to go to the left: they carried their obſtinacy ſo far as to endanger the waggon, but not my neck, which I thought proper to ſecure by walking on the outſide of it. I never wiſh to travel poſt again with horned cattle. Halfway, with ſome difficulty, I exchanged my oxen for horſes. A large party of recruits were halting here for the night; they were ſo ſtrictly watched that they were obliged to ——— in the ſtreet before the door of a barn, which was to be their ſhelter for the night. I enquired of a man, whoſe attention they had likewiſe attracted, what they were.—O, Sir, ſaid he, you *ſee* they are *volunteers*.—It immediately brought to my recollection a circumſtance which happened a few years ago in the Highlands of Scotland, where a great Highland chief thought proper to raiſe a regiment, and to complete it, I imagine, the quicker, ſent his peaſants, *nolens volens*, as ſoldiers. Some of theſe, in whoſe breaſts the martial ſpirit was extinct, and who had but little ambition for military glory, he ſent in a cart, bound or hand-cuffed.—Well, ſaid a traveller who met them, what's all this; what are you doing there my lads?—O, Sir, replied they, we are only his Grace's *volunteers*.

This was Saturday, and the inn, or ale-houſe, was kept, as they often are in this part of the country, by a Jew. I walked in, and found it, as I expected, a filthy place. I called for ſomething, it was brought me by a Chriſtian girl, and when I wanted to pay the miſtreſs

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miſtreſs for it, ſhe made me lay the money on the table, but as I ſaw no more on it, I imagine at her leiſure ſhe would put it in her pocket.———Religion, what art thou?——but too often a ſubſtitute for moral goodneſs!———What ſhould thou be?——a penal code to vice, and a declaration of reward to virtue.

I now travelled on with my unhorned cattle a little faſter. The road paſſed through a broad valley, with high hills at ſome diſtance. Whether theſe were of volcanic, or of neptunic origin, I cannot ſay; but about a mile on this ſide Caſchau, there is a paltry ſtone-quarry, and here the rock is a kind of *Micaceous Schiſtus*, where the *Gneiſſum micaceum*, & *Gneiſſum fornacum* are mixed together.

CHAP.

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CHAP. XIII.

CASCHAU—BATHS OF RANK—OPAL MINES—REMARKABLE CAVERNS, &c.

CASCHAU is the metropolis of Upper Hungary; the principal ſtreet is very broad and pretty regular, and contains ſome very good houſes of the nobility, and an elegant coffee-houſe, over which are the aſſembly rooms. The inhabitants are only eſtimated at about ſix thouſand. The principal church is the only thing worth ſeeing here: it is in Gothic taſte, and in good preſervation. But the Black Eagle is another public building which intereſts the traveller; this is an inn where the hungry traveller may find ſomething to eat, which is not always the caſe with inns in this country; but I made little uſe of it, from the hoſpitality of the Counteſs Sirmay, Dr. Fucker and others, whoſe houſes were always open to me. Many of the inhabitants of this town are proteſtants; but they are not ſuch ſtrict obſervers of the Sabbath, as not to frequent balls and routes on the Sunday. I walked into the aſſembly rooms on the Sunday evening, but on account of the fine weather the company was very ſmall. The ſuite of rooms is fine. The good people come here to eat as well as to dance, and the eaters are the moſt numerous; and the

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the gentlemen are allowed to enjoy a comfortable pipe, but not in the ball room, where it is notified in large characters that ſmoking is not allowed. I ſtaid whilſt a few minuets were danced; they are danced in the German ſtyle, at the rate of three miles and a half to four miles an hour.

Czerwenitza, the country of the true Opal, is only a ſhort day's journey from Caſchau; I could not therefore avoid making an excurſion thither. Rank, which has a mineral water, lies nearly in the road: this I took in my way, as Baron Vechey, whoſe poſt conſtitutes him director of the Opal mines, and who alone could give me permiſſion to examine them, was taking the advantage of theſe waters. Rank has poor accommodations for valetudinarians; they are obliged to bring every thing with them, bedding, cooking apparatus and proviſions. I juſt arrived as the Baron and his party were ſitting down to dinner. I was invited to make one of them, which I did without much entreaty, as I ſhould otherwiſe have fared very ill, not having brought any thing with me. It is chiefly frequented by thoſe Caſchauvians who have not time to go to Bartfeld, which is the great watering place of this part of Hungary.

The waters of Rank are chalybeate and aërated; they are taken inwardly, and uſed warm for bathing. But, as in moſt watering-places, it is the cheerful company, exerciſe, &c. which make the moſt cures. One of theſe *etcæteras* ſome of the ſick had brought

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with them. I made the acquaintance of a very handſome young lady of nineteen, who had been lately married to an old infirm *Septuagenaire*, who had grand-children almoſt as old as his wife. Finding herſelf ill, at leaſt *incommodée*, ſhe was come here for the benefit of the waters, and had brought with her, for diſorders under which ſhe laboured, the ableſt of phyſicians, a ſtout handſome young fellow. She gravely told me, after informing me of the ſtate of her connubial connection, that ſhe had found great benefit from the waters, but muſt acknowledge, that the *regimen* ſhe had followed had not a little contributed towards her recovery. The only moral obſervation I would make on this occaſion is this, that old and infirm men ſhould not marry young women, if they would not be cuckolded. This advice is as proper for Britain as it is for Hungary.

After dinner I examined ſome very bold cliffs in the neighbourhood: they are of a *breccia* like that about Gran, which I have ſo repeatedly mentioned: in ſome places there are needles or ſpires of it almoſt detached from the main rock. Here it is plainly ſeen that this *breccia* is not a mere ſuperficial covering to other rocks, but conſtitutes rocks itſelf. I ſlept at Rank: a clean ſheet thrown over ſome ſtraw, was all the bed I could procure; and for this, and ſome bread and butter and common wine, I was charged about two ſhillings.

In the morning, as ſoon as it was light, I continued my journey, full

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full of expectation, to the country of Opals. I ſtopt at the houſe of the prieſt of Czerwenitza; for this is a poor miſerable village, and has no kind of public houſe; and from thence on foot I aſcended a large ſwelling hill of conſiderable height towards the Opal mines. As I aſcended, I found the rock to be formed of decompoſed Porphyry and *Traſs*. The hill is ſome miles in extent, and has been opened in ſeveral places, but in three with the greateſt ſucceſs; and here guards are placed, who receive about ſix-pence a-day, to prevent any one from digging for this precious ſtone. Formerly the peaſants were allowed to ſearch for them on their own account; but within theſe few years, as this land belongs to the royal domains, the emperor has prohibited it, and they have been dug for on his account. Now again this has been diſcontinued for theſe laſt three or four years, the ſervants of the crown finding that the royal treaſury ſuffered by it.

As I had obtained permiſſion, I found no difficulty in ſatisfying my curioſity. In one place this precious ſtone had been ſought for by mining; but this was only by a gallery of a few yards in length: in moſt places the rock is taken out as in a common ſtone quarry, and they ſeldom go deeper than three or four yards *. The holes I ſaw,

* So I find it noted in my Journal. Delius gives nearly a ſimilar account: he ſays, that the rock which contains the Opal lies under the ſoil, and ſeldom extends deeper than a few fathoms. But Mr. Fichtel ſays it is quite the reverſe, and that the upper bed, for about four yards, is unproductive, ſo that this precious ſtone is only found after this bed has been dug through.

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where they had been digging, ſeemed to be without any plan. The rock is thrown out, and then broken and examined. I am ſurpriſed Mr. Born can ſay, in his *Catalogue Raiſonné*, under the article *Opale*, "*La matrice eſt une terre argilleuſe griſe et jaunatre mêlée de ſable.*" It is nothing more or leſs than an argillaceous decompoſed porphyry: I wonder he did not here recogniſe his *Saxum metalliferum*. In ſome ſpecimens I could plainly diſtinguiſh both the feldſpar and ſome few particles of hexangular glimmer; though in others the decompoſition is ſo far advanced, that nothing of a porphyrous nature can be obſerved. One of the excavations, made in ſearch of this valuable foſſil, is in an undecompoſed baſalt, or ſomething between a *wacke* and a baſalt; but here nothing had been found.

Several very different kinds of Opal are found here, and ſome of no value to the jeweller; yet they have all one common origin, however different their value and brilliancy of colours: they form ſmall veins, neſts, grains, &c. and it is where the Opal is mixed in ſmall particles, but cloſe together in the ſtone, that it forms what is called Mother of Opal. It is likewiſe ſometimes found in the ſame manner in a kind of breccia of this decompoſed porphyry. As theſe mines, or quarries, had not been worked for theſe laſt three or four years, I had no expectation of finding any thing; but the views of the naturaliſt and the jeweller are very different, and I found ſome ſpecimens which, though of no value to the latter, would be highly prized by the former.

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The different kinds pass insensibly into one another. I collected the following: The true Opal * disseminated in the matrix; the *Water-Opal* † and *Milk-Opal* ‡ in one vein, and these passing into the true Opal: the *Water-Opal* § tinged of a beautiful lavender colour; another of a topaz colour ||, and most of these in a state of decomposition, being so many *Hydrophanes*. I have a *Milk-Opal* ¶ which, on immersion in water, acquires the fire of the true Opal; another *Milk-Opal* **, which by a similar procedure immediately becomes a *Water-Opal*; another *Milk-Opal* ††, but without the lustre of Opal, which acquires lustre by an immersion in water, and

* Opalus nobilis.

Splendens, colorum vividorum viridi violacii & aurantiaci, pro situ spectatoris variantium fulgens.

† Opalus hyalinus.

Splendens, hyalinus.

‡ Opalus lacteus.

Splendens, diaphanus lacteus.

§ Opalus violaceus.

Splendens, diaphanus colore dilutiore florum lavendulæ.

|| Opalus luteus.

Splendens diaphanus colore topasii.

¶ Opalus lacteus.

Splendens diaphanus lacteus, aqua imbutus coloribus Opali nobilis fulget.

** Opalus lacteus.

Nitens subdiaphanus lacteus, aqua imbutus Opalus hyalinus evadit.

†† Opalus hebes.

Hebes opacus albus, aqua imbutus Opalus nitens diaphanus lactescens evadit.

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thus becomes a true milk opal; another * of nearly a ſimilar nature, but brown, which acquires likewiſe by immerſion in water a conſiderable degree of tranſparency; and the ſame ſo terreous and ſoft as to be ſcraped with the nail, yet on immerſion acquiring ſome degree of fire.

It is now generally ſuppoſed that all the more valuable Opals, which paſs in commerce under the name of Oriental Opals, are from theſe mines. Tavernier ſays † "*Pour ce qui eſt de la Hongrie, il y a une mine d'où l'on tire des Opales; & il ne s'en trouve en aucun lieu de la terre qu'en celui-là.*" Mr. Fichtel is of the ſame opinion, and he ſays ‡ there are papers in the archives at Caſchau, which ſhow that, about four centuries ago, three hundred men were engaged in theſe mines, and by this endeavours to account for the quantity that has been for ſo long a time in the market. If ſo, then perhaps I have trod on the very rock which produced that Opal, to obtain which, Antony could proſcribe a Roman ſenator; and to keep which, a Roman ſenator could ſuffer baniſhment. It is certain, however, that ſome other countries even of Europe produce them, though not probably of the firſt beauty.

* Opalus ferrugineus.

Nitens ſubdiaphanus ferrugineus, aqua imbutus diaphanus ferrugineus evadit.

† Seconde partie, page 293.

‡ Fichtel's Mineralogiſche Bemerkungen von den Carpathen, page 595.

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After wandering about these hills for three or four hours (for the mines are scattered about in different parts), I returned to the priest's to dinner; and from thence I went to Pecklin. Here, where I was to change horses, none were to be got; and, after waiting a good while, I was obliged to continue my journey with the same horses; it was soon dark after setting out, and I had to pass through thick woods and bye-roads; yet I was neither robbed nor overturned, but it was eleven at night before I reached Caschau. Near Pecklin the soil is so unfruitful, that two thousand square fathoms are allowed for an acre. The woods, chiefly of oaks and beaches, are divided into falls of fifty years.

Saturday, July 12th, I left Caschau; but I again left the direct road to the Carpathian Alps, and struck off to the west. I was induced to this from hearing at Caschau, and not from the vulgar, but from learned doctors and professors, that at the distance of about a day's journey there were two great caverns; in one of which water froze during the summer, and ice thawed during the winter: whilst the other was so vast that one might wander about in it for a week without finding an end. Soon after leaving Caschau, I came to a quarry of the *Corneus fissilis* of Wallerius. At Cfees, where I changed horses, the road began to draw nearer the hills, and the country became more pleasant: this is chiefly a corn country, Indian wheat was a good deal cultivated. Early in the evening I reached Nadaska, the seat of Countess Giulais. The hills here, which are very high, are of unstratified compact limestone, without any petrifactions, but

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it is full of holes; ſome of theſe are ſo deep, and at the ſame time ſo round, that they look as if they had been formed by art. I paſſed the evening in a very dull manner; a rough gloomy prieſt was come here to be ready to perform divine ſervice the next day; and though he ate copiouſly himſelf, he allowed none of the family to do ſo; and the Counteſs, and her niece, who was a very nice girl, and ſpoke very good French, who were all that ſat down to ſupper, faſted. I was a dreadful thorn in the ſide of this fellow, and vexed him grievouſly by eating a hearty ſupper, the whole of which he ſeemed to wiſh to poſſeſs.

Next morning I ſet out again for the caverns. I travelled at the foot of the ſame chain of hills; now and then ſome *Schiſtus* made its appearance, but in general the lately mentioned limeſtone prevailed. About half way I changed my horſes for oxen; but as they were only to draw me, or rather my baggage, over a high hill, where horſes could have gone no faſter, I did not ſuffer as in the laſt horned cattle expedition. About one o'clock I reached Akteleg, and I took up my quarters with the Calviniſt pariſh miniſter: he knew not a word of German, much leſs French or Engliſh, only the Hungarian and the Latin. Though this was Sunday, and the villagers were Calviniſts, they were dancing and making merry.

I procured a guide, and the ſame evening I entered the cave; but it was chiefly with a view to aſcertain the medium temperature of this part of Hungary. The thermometer in the ſhade, in the open air,

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air, ſtood at 15 above 0 of Reaumur, but in the cave, a good way from the mouth, immerſed in a running ſtream in different places, it ſtood at ſeven degrees; yet out of the water by the ſide of the rock it ſtood at ſeven and an half. Shall we ſuppoſe that all, or part of this water, came from melting ſnow, which, hid in ſome deep hole or cavern, had now only begun to thaw? this would render every experiment fallacious: or ſhall we ſuppoſe that the rock, however thick, was nevertheleſs affected by the heat of the atmoſphere? As I left my thermometer an hour, it certainly, as it had but a ſmall bulb, had time to take the true temperature of the medium which it was in. The water in the wells in the village was eight degrees. The above obſervations, though rendered leſs deciſive by this difference, agree pretty well with thoſe made by Mr. Haquet on the medicinal waters of Bartfeld: he ſays, "at ſix o'clock in the morning, the water was ten degrees of Reaumur colder than the atmoſphere, which was then 16 degrees." This brings the temperature of the waters to ſix degrees, which is a degree colder than that of this cavern; but Bartfeld is about half a degree of latitude further north, and in a more elevated ſituation.

In the morning I returned to the cavern, to ſee how far I could penetrate into it, and to repeat my experiment with the thermometer, but by accident this was left behind. The report here is, that this cavern extends ſeveral miles under the hills, and that it would require ſeveral days to ſee the whole of it. The mouth of it is at

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the bottom of a precipice about 150 feet high, at the weſt end of a compact unſtratified limeſtone hill, which runs eaſt and weſt. This entrance is about two yards broad, but ſo low that I was obliged to bend conſiderably to get in. I deſcended rapidly for a ſhort diſtance, and then I found myſelf in an immenſe cave, with a very lofty vault; this has in different parts communication with other caves and paſſages, and theſe again with others. Some of theſe caverns are over one another; in ſome places I came to conſiderable ſtreams of water; in one great cave my guide conducted me over a hill formed of great blocks of ſtone, which moſt probably had fallen down from the roof: in one place I had to get down a hole like the funnel of a chimney; then I was led into a cave where large ſtalactites, as thick as my body, hung pendent from the roof, and I was ſhown others where the ſides were ornamented in the manner of the moſt curious Gothic workmanſhip. In ſome the ſtalactites were ſo thick and cloſe together, that we were in danger of loſing one another if we ſeparated but a few yards. Here aged ſtalactites, overloaded with their own weight, had fallen down, and lay proſtrate; and there an embryo ſtalactite was juſt ſhooting into exiſtence. The moſt curious cavern was one apparently of modern date; the ſides, and particularly the roof, ſeemed as if recently ſeparated: and it was probably ſo, for I think moſt of theſe caverns have been formed by the falling in of the rock: very white and ſlender ſtalactites were only found here.

After

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After I had wandered about for three or four hours in this awful gloom, and had reached the end of the caverns in one direction, I thought it time to come out, and I desired my guide to return. After we had returned, as we thought, some way, we found no passage further; yet the guide was sure he was right. I thought I recognised the same rocks we had just left, and which had prevented our proceeding further, but the guide was positive he was in a right direction. Luckily for us I had written my name on the soft clay of the bottom of the cave, which had been the extent of our journey; on seeing this the guide was as thunderstruck, and ran this way and that way, and knew not where he was, nor what to do. I desired him not to be frightened, but to go calmly to work to extricate us from this labyrinth. As the wood which we burnt instead of lamps was nearly exhausted, and as I never adverted either to one of the guides whom we had left above, who by being charged with wood could not get down the funnel-like hole, being so near; nor to the people of the village being acquainted with our being in the cavern, who no doubt would have taken every possible means of coming to our assistance had we stayed much longer than usual, I was a good deal alarmed for our safety, and there was good reason; had our torches gone out, we should never have been able to find our way out; nor, had any accident have happened to our guide, could we by ourselves, though we had had lights, have had any hopes of extricating ourselves. After wandering about till all our wood was nearly exhausted, we found a great stalactite from which, on account

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of its remarkable whiteneſs, I had been induced to knock off a ſpecimen as I came by: I recollected how I ſtood when I ſtruck it: this at once ſet us right; and after walking a little further we made ourſelves heard to the other guide, from whom we got freſh torches, and we then continued our route homewards without further difficulty.

So complete a labyrinth as theſe caverns are in ſome places, is not I am ſure to be found but in ſimilar caverns: large open paſſages proved *cul de ſacs*, whilſt our road was over and under, through and amongſt grotto-work of the moſt intricate nature. I firmly believe, that though a man ſhould have lights and food enough to laſt him a month, he would not be able to find his way out.

On the ſoil at the bottom of the cavern, my guides ſhewed me impreſſions which, they ſaid, were from the wheels of a carriage. I thought immediately to have detected the error by meaſuring the diſtance of the marks of the two wheels at different diſtances: but I was miſtaken; the marks were throughout parallel. Whether theſe were really the marks of a carriage I cannot ſay: I only obſerved them in the firſt part of the caverns. If the ſoil at the bottom at the mouth of the cave was taken away, I do not ſee any impoſſibility, through the aſſiſtance of men, to get ſuch a thing in thus far. It is known to have ſerved as a hiding-place to the weak and unfortunate in time of war, and a fitter hiding-place there cannot be.

I thought

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I thought it probable that I was the firſt Engliſh traveller who had examined this immenſe cavern; but Mr. Korabinſky ſays *, "that it is of ſuch aſtoniſhing dimenſions in length, that two members of the Royal Society of London, who were ſent ſome years ago into Hungary by the Society, to examine this and other curioſities, after remaining in it three days, could never get to the end of it, nor find an opening."

After dining with the paſtor, who ſeemed to poſſeſs but a ſmall portion of the good things of this world, I ſet out for the other famous cavern near Szilitze. I travelled by a bye road through a pleaſant, hilly, and woody country, chiefly with paſture land. There I ſaw again my favourite little animal the Earleſs Marmot, which I had not ſeen ſince I left the great plain. I reached Szilitze early in the evening, and as before, I aſked hoſpitality of the Calviniſt miniſter, who likewiſe only knew his own language, the Hungarian, and the Latin. He ſeemed to be in more eaſy circumſtances than the laſt, and to be a conſiderable farmer: all this diſtrict is inhabited by Calviniſts. As the cavern is a mile from the village, I deferred ſeeing it till the next morning, when my hoſt, who had nothing of the four Calviniſt about him, accompanied me.

The immenſe vaults, and the glittering ſtalactites arranged in

* Lexicon von Ungarn, page 6.

Gothic

Gothic ſtyle, of the laſt cavern, are not to be ſought for here. This is only famed for poſſeſſing the remarkable nature of being *really* colder in ſummer than in winter; ſo that when the north eaſt in winter blows, and the whole country is defaced with ice and ſnow, then the ice within this cavern begins to thaw; but when the parching heat of the canicule reigns, then its dripping rocks begin to be adorned with pellucid icicles.

This is not the opinion of the vulgar alone, but, in this country, of the learned likewiſe; it has even reached our country, and found its way into our Philoſophical Tranſactions. The celebrated Hungarian hiſtorian Matthew Bell ſent the following account of it to the Royal Society, who have inſerted it in the 41ſt volume. "Natura Antri id habet prodigii, quod cum extus bruma intenſiſſime riget, tepido ſit intus aëre; frigido contra, immo glaciali, cum ſunt fervidiſſimi ſoles. Nimirum, ſimul diffugientibus nivibus ver inire cæpit, interior antri concameratio, qua ea meridiano ſoli dorſo objicit, aquam limpidam et paſſim diſtillantem exſudat: quæ, interni frigoris vi, in pellucidam glaciem concreſcens, ſtirias efficit, ad ingentium doliorum molem craſſas, ac pendulas, inque ramos abeuntes miris illuſos ſpeciebus." And further adds, "Glaciale iſtud ſpecûs ingenium, totum æſtivum eſt: quod ideo admirationis habet plurium; augeſcit enim cum increſcente ſolis ardore. Primo, nimirum, vere, hibernus ille tepor ceſſare; mox, ubi id adolevit, intendi frigus occipit, tantis acceſſionibus, ut quo magis aër incaleſcit, eo antrum frigeat exquiſitius.

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The Cavern of Sednitze near Szilitze.

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quiſitius. At ubi æſtas iniit, jamque fervet canicula, in glacialem brumam intus abeunt omnia."

This account agrees perfectly with the information I received at Caſchau, and with what I heard on the ſpot likewiſe. Yet I know I ſhall have no difficulty to perſuade Natural Philoſophers of the preſent day, that there is a fallacy in the obſervations, and that this has ariſen from depending too much on our feelings, and neglecting the only proper gage of heat and cold, the thermometer.

This cavern is about a hundred feet broad, a hundred and fifty deep or long, and twenty or thirty feet high at the mouth or entrance which faces the north: the deſcent is pretty rapid, the laſt third part of the bottom or floor was covered with ice; but this was ſo thin that I could ſee the rock under it. From the roof at the further end, which was here much lower than at the entrance, hung an immenſe icicle, or rather a congeries of icicles; and in a corner to the right, which was not only deprived of the influence of the ſun, as the whole cavern is, but likewiſe of light, there was a great maſs of ice. It was a fine forenoon when I viſited this natural ice-houſe, and the air was heated by a July ſun: as ſoon as I approached the mouth of the cave, I felt a chill, which increaſed the further I went in, and which rendered my continuance there, to obſerve the ſtate of the thermometer, very diſagreeable.

Ice

Ice I truly found here in abundance, and it was near midſummer, but in a ſtate of thaw: the bed of ice, which covered the floor of the cavern, was thinly covered with water, and the icicles dropped: every thing announced a thaw. I had no need to uſe my thermometer: however, I placed it in the ice, and it fell to o of Reaumur; I then wiped it and placed it in a niche in the rock, at the further part of the cavern, a yard above the ice, and here it remained near an hour: when I returned I found it at o. Thinking it might not have had time to take the real degree of heat of the medium in which it was in; I tried this by breathing upon it till it roſe one degree above o; I then left it for a quarter of an hour only, and when I returned I found it again at o. Every thing here, therefore, ice, water, and the atmoſphere in the neighbourhood of theſe, had the ſame temperature, and that was the temperature of melting ice, o of Reaumur.

When then is the ice which is found here, and in ſuch quantities that this cavern ſerves the few opulent nobility in the neighbourhood as an ice-houſe, formed? Surely in winter, though not by the firſt froſt, not ſo ſoon as ice is formed in the open air. No doubt, from the little communication this cavern has with the atmoſphere, it will be but little and ſlowly affected by its changes. Should, therefore, Mr. Bell, or any of his friends, have come here to verify the common report at the commencement of a ſevere froſt, when the whole country was covered with ice and ſnow, they might ſtill have found here nothing but water, or the ice of the preceding winter in a ſtate of thaw, and

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the cavern relatively warm: and likewiſe, ſhould they have viſited it in a warm ſpring, which had ſucceeded to a ſevere winter, they might have found nothing here but froſt and ice; and even the freſh melted ſnow, percolating through the roof of this cavern, might again have been congealed to ice.——I obſerved frequently in Germany, in the ſevere winter of 1794-5, on a ſudden thaw, that the walls of churches and other public buildings, on the outſide were white, and covered with a hoar froſt, and their windows on the ſame ſide covered with a rime. I certainly ſhould not have ſaid ſo much on this ſubject, were not the opinion I have been combating ſo very general. This cavern is like all that I have ſeen, in a primitive or unſtratified compact lime-ſtone; and it is curious to obſerve, that the moſt famous in the world are in this kind of rock. I think they ariſe from the rock, whatever that may be, giving way which ſupports them.

The miniſter had a good deal of the *Dianthus deltoides* drying in the window; he called it Centauria, and ſaid it was much uſed, ſteeped in wine, for the ague.——Near the houſe door a great block of ſalt was placed: when the cows came home, I obſerved them walk up to it and lick it. He told me, that if the common peaſants did not uſe it, it was becauſe they thought it too expenſive.——In the afternoon I ſet off for Roſenau, and my hoſt bore me company. We continually deſcended, and for a long way by a very ſteep road, into a well cultivated valley. A fine ſtream of water

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which runs through it, has induced ſome Smelters to eſtabliſh iron furnaces here. The ores ſmelted are the white ſparry iron ore, *Ferrum ſpatoſum*, and the blood ſtone *Hematites*: low furnaces are uſed.———This valley ſeparates the calcareous mountains, which are not metalliferous, from the ſchiſtus, which are. The bold perpendicular cliffs of the former eaſily diſtinguiſh them from the latter. I reached Roſenau in the evening.

CHAP.

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CHAP. XIV.

ROSENAU—SCHMÖLNITZ AND ITS MINES—IGLO—LEUTCHAU, AND MISFORTUNE THERE—COUNTY-MEETING—REPRESENTATIONS AGAINST DIMINISHING THE LIBERTY OF THE PRESS, ETC.

ROSENAU is a ſmall, but pretty well built town, and the ſeat of a biſhop. Formerly it had in the neighbouring hills ſome very conſiderable mines: ſome of theſe are now no longer worked. I have in my collection a few ſpecimens of cinnabar, ſaid to be from hence, of the moſt lively red; but the cinnabar mines are no longer worked. The mines of antimony are very rich; they yield annually about 2000 cwt. which is ſold for 10½ guldens (about a guinea) the hundred weight. The ore is of two ſorts, a ſteel grained *, and a ſtriped †. The inn here was pretty good.

I only ſpent half a day at Roſenau, and then continued my journey to Schmölnitz. Juſt without the town there is an old caſtle in

* Stibium vulgare. Syſt. Nat.

Var. α. Textura ſubtiliſſime granulata.

† Var. γ. Textura radiata, Radiis parallelis ſplendentibus $\frac{1}{8}$ pollicis latitudine æquantibus.

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ruins: this is ſeated upon a calcareous rock, which is quite disjoined from the great calcareous chain, and connected with the ſchiſtus. On leaving this I aſcended for two or three hours by a winding road, and entered a mountainous country: argillaceous and micaceous ſchiſtus ſeemed to be the materials of theſe mountains. As I aſcended, oaks and beeches, the trees I had always hitherto found forming the woods, diſappeared; and as ſoon as I had paſſed the top, the fir ſupplied their place, and theſe were the firſt I had ſeen in Hungary. They gave the country a quite different aſpect; the hills put on now a dreary and wild appearance, and ſome dark clouds coming on, increaſed the contraſt of the northern and ſouthern ſide of the mountain. Theſe fir woods have not yet been divided into regular falls; but this is to be done ſoon, and into falls of ſeventy years. They are a good deal frequented by bears.

Schmölnitz is an old irregular ill built town, and the public houſe wretched. The town is ſituated in a narrow valley, and in the hills on each ſide, which are of argillaceous ſchiſtus, are the copper mines which formerly gave exiſtence to this town, and now ſupport it. The copper ore, which is the *Cuprum fulvum*, is not only dug, but it is ſmelted here, and made into copper boilers and ſimilar common utenſils. The remains of an amalgamation apparatus are here, but the ores containing ſilver are now ſent to Neuſohl.——The copper gained by cementation amounts annually to twelve or fifteen hundred hundred weight. Moſt of the water in the mines is impregnated with copper

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vitriol, which is conducted into old galleries to be further impregnated: about a hundred and ſixty pounds of iron is conſumed in forming one hundred pounds of copper. Seven ſhillings per cwt. are paid for new iron, and five ſhillings for old.

I went into a mine of iron Pyrites in a ſtate of decompoſition; our lamps going out through the badneſs of the air, we had a ſufficient hint not to proceed very far; but the heat even here was great, 23 degrees above o of Reaumur.——Though I find no note of it in my Journal, and the thing is almoſt obliterated from my memory, yet I cannot paſs over in total ſilence, that in this ſchiſtus I obſerved in one place a very large thick vein of an imperfect kind of granit, which would be called by ſome regenerated granit: it ſeemed intimately connected, and in ſome places interwoven with the ſchiſtus.——I ſtaid at Schmölnitz two days, and am indebted to Mr. Drevenjak for his hoſpitality: hoſpitality in ſuch a town as this, and with ſuch an inn, is humanity and charity.

On leaving Schmölnitz I made the beſt of my way towards the Carpathian Alps. My road was ſtill amongſt *Argillaceous Schiſtus*, *Hornblende Schiſtus*, and Ferber's *Horn-ſchieffer*, till I came near Iglo. Here I met again with the unſtratified compact lime-ſtone, and likewiſe a coarſe-grained ſand-ſtone: this has ſome impreſſions of vegetables. I was entertained with ſome fine wild ſcenery in this day's journey: the view of the plain in which Iglo and ſeveral other towns and villages are ſituated, is very fine.

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Iglo is one of the principal of the ſixteen towns of Zips: it conſiſts chiefly of one fine broad and regular built ſtreet: it has mines belonging to it, but they are at ſome diſtance from the town. I only ſtaid here half a day, and early next morning travelled on to Leutchau, through a flat corn country.

Leutchau the county town of Zips, is tolerably well built, and contains between four and five thouſand inhabitants. I ſhould immediately have continued my journey, but here I was to meet with Mr. Horvaths, the deputy lieutenant of the county, whoſe eſtate lies at the foot of the Alps, who was to give me the requiſite information on the beſt means of ſeeing them to advantage: he unfortunately was not at home.——*En attendant* I took a walk about the environs of the town; I ſaw nothing but ſand-ſtone ſtrata, with ſome indications of coal. Baron Gordon, the poſt-maſter, has a conſiderable collection of inſtruments for natural philoſophy: he has obſerved for many years the ſtate of the barometer, which gives the height of Leutchau at 25 inches 11½ lines French meaſure.

When dinner time came my landlord begged I would permit two other ſtrangers to dine with me: to this I readily conſented, and the converſation immediately began upon thieves; and upon a band of thieves in the Carpathian Alps, who laid the whole country under contribution, and who had had the boldneſs to invite themſelves to dinner at ſome of the ſeats of the neighbouring nobility. I knew,

as

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as the ſtory was intereſting by the numbers and boldneſs of the robbers, that ſome deductions muſt be made, as from moſt entertaining ſtories; but I did not think, though this was the caſe, that there was not a ſingle word of truth in the relation, and that the whole had ariſen from a few young men, from the other ſide of theſe alps, having fled into theſe receſſes to avoid being ſent for ſoldiers.

The next day the town magiſtrates ſent for my paſſport, which I immediately gave them. The magiſtrates of Caſchau had done the ſame; and when they returned it me, they very politely ſent me an offer of their ſervices, if I ſtood in need of them. But theſe fellows, ſoon after, ſent me an order to come before them at the town-hall, which ſummons I obeyed. Here I found ſeveral *anthropomorphous* animals, whiſkered and unwhiſkered *(barbata & imberbia)*, which could not certainly belong to that noble ſpecies of animal *Homo ſapiens* Lin. as will ſhortly appear. They were, however, ſitting round a large table, and endeavoured to imitate men tranſacting weighty public buſineſs; they muttered ſomething amongſt themſelves, looked grave, knit their brows, wrinkled their foreheads, and ſhook their heads and ſtroked their whiſkers; then one of them growled to the following purport: "We are our moſt gracious ſovereign the king his imperial and apoſtolic majeſty's magiſtrates of Leutchau, and to him we owe our lives and fortunes; as wiſe and judicious ſervants of the crown it becomes us to watch over the ſafety of the public intruſted to *our* care; *we* have therefore in *our* wiſdom.

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wiſdom called you, Robert Townſon, who give yourſelf out for an Engliſh traveller, before us, entertaining ſuſpicions of your being a French Jacobin emiſſary: we have condeſcended to inſpect your paſſport, which indeed aſſerts that you are an Engliſh gentleman on a tour through Hungary, but this paſſport we have declared to be a forged one, and you muſt be a Jacobin emiſſary; for it would indeed be a thing truly ſurpriſing, and as yet unheard of, that an Engliſh miniſter ſhould give an Engliſhman a paſſport in French." I was going to explain, but was ſtopped. "Moreover we know, and you acknowledge, that you ſpeak French; and it is clear to us all that you have a French phyſiognomy; and thoſe long Hungarian breeches which you wear, do they not indicate that you wiſh to paſs for ſomething which you are not? and why ſo?—No no, we ſhall keep your paſſport, and you muſt remain here till we have orders from Bude." In vain I told them that the French was quite the diplomatic language, and that if they were ſuffered to approach the court of their own ſovereign, they would there hear the French univerſally ſpoken, and that I had found almoſt every well-bred Hungarian nobleman ſpeak it. I told them, they were of all people the moſt incompetent to judge by my perſon, whether I was a Frenchman or an Engliſhman, as it muſt be very difficult for them to ſee either the one or the other in this remote corner of the world; and that I wore the Hungarian breeches partly for the conveniency of travelling, and partly as a compliment to the people amongſt whom I travelled, whom I highly eſteemed; that I deteſted the French

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French principles, I was ſure, not leſs than they did, and reſpected their ſovereign as much. I ſoon found they were too ignorant to be reaſoned with, and that they knew almoſt as little of civilized manners as Tartars; and I left them.

The deputy lieutenant fortunately for me was now returned; and, according to Hungarian hoſpitality, he would not ſuffer me to remain at the inn, which was very indifferent, not to ſay bad; and ſent his ſervants to bring my baggage from thence to his own houſe. Theſe officious magiſtrates, notwithſtanding the ſuperiority of my friend's rank and fortune, had the impudence to ſend their officers and tear them out of their hands, and carry themto the to wn-houſe. Now I began to think myſelf in a woful plight, not in regard to my perſon, but to my property, for I ſuppoſed they had voted me a Jacobin, that they might with impunity ſeize upon my baggage; and the idea ſtruck me that they might have heard of the excellency of Engliſh workmanſhip, and as they were moſt of them taylors, ſhoemakers, &c. &c. they might poſſeſs the patriotic wiſh of perfecting their arts by following as models the articles they found amongſt my baggage. But the zeal of the deputy lieutenant made them ſoon give them up again: yet they had the obſtinacy not to do this till he had promiſed to be ſurety for me. The paſſport they ſtill kept, and ſent it to Bude, from whence I received it ſome time after, acknowledged as a proper paſſport. I learned the names of ſome of theſe fellows, and they ſhall be handed down to poſterity with my new ſpecies of

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plants and inſects—Kohlman, Gerſtorfer, Haas, Weiſs, Eichner, Pridmanſky, Prahary, Ketſkes, &c. I know Kohlman was a taylor: I therefore have placed him at the head, ſuppoſing him naturally to have been the man of the greateſt weight in this auguſt aſſembly, and to have been its preſident; and I ought to have ſtyled him ILLUSTRISSIMUS INCLYTUS ET INVICTUS KOHLMAN, SARTOR.

The next day there was a meeting of the county; the nobility were aſhamed that a ſtranger ſhould have received ſuch treatment in their country, and one who had ſo many letters of introduction to them. They begged me to attribute it only to the great ignorance of the individuals who were engaged in it, and I received many civilities and invitations from them.

A ſimilar misfortune befell profeſſor Haquet of Lemberg in Galicia, a very zealous naturaliſt, a ſhort time before; but I believe this was on the other ſide of the alps, and it was attended with more diſagreeable circumſtances, probably from there not being any nobleman in the neighbourhood, to whom he could apply for protection. This gentleman was upon a tour ſimilar to mine, when ſome ignorant officious inferior magiſtrate took it into his head that he was a ſpy, or ſomething of this kind, and inſiſted on ſeeing his *paſs*; this Mr. Haquet produced, and put in his hands: the judge, or whatever elſe he might be called, ſaid he could not read French. Mr. Haquet told him it was

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was in Latin. Now the judge was obliged to underſtand it, or pretend to underſtand it. When he came to "*ubique locorum*," he exclaimed he was now ſure he was right in his conjectures, for he knew all Galicia, and was certain there was not a *town* in the whole province of this name. He ordered the profeſſor therefore into cuſtody, and a guard of four ſoldiers was ſet upon him; and in the morning he was ſent twenty miles off to ſome ſuperior officer or magiſtrate. But how was he guarded? By an old invalid with a ruſty muſket; whilſt the profeſſor and his ſervant had both rifle-barrel guns with them, and could at their eaſe have diſpatched him; which they certainly would have done, had they been what the magiſtrate conjectured them to be. But as the profeſſor knew the ſuperior magiſtrate would immediately give him ſatisfaction, he ſuffered his convoy to live, and himſelf to be brought to his deſtination, where he was inſtantly honourably acquitted, and the officious magiſtrate puniſhed; but whether this was done by a copious baſtinading or horſe-whipping, or by cutting off his ears, I did not learn. I forgot to mention, in relating my adventure, one fact which will make our misfortunes more ſimilar. The Leutchau magiſtrates gave orders to the keepers of the town gates, not to ſuffer me to leave the town; when its walls were in ſuch a ſtate of dilapidation, that I could have gone off in ſtate, without paſſing through them. They ſent to the innkeeper at whoſe houſe I had been, to know whether I had had ſecret conferences with the town's-people, &c. &c. and threatened the poor man with puniſhment for not letting them

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know that he had harboured ſuch a dangerous man in his houſe. In travelling through Germany on my return from Hungary, I was ſeveral times incommoded, if on foot, on entering the towns of ſome of the little German princes, by the guards and keepers at the gates; and generally bluſtering and a little abuſe gave me a more eaſy entrance than entreaty, or calmly reaſoning with them. The ſuſpicion of my being a Frenchman was the reaſon of this likewiſe. There is not perhaps a greater misfortune incidental to governments, than the neceſſity they are under of employing low ill-educated men in their ſervice. This it is which renders the police of a country ſo difficult, and cuſtom-houſes, &c. &c. ſo diſguſting.

I attended the county meeting. The buſineſs was tranſacted in the Latin language; nothing very important was agitated, though often, beſides the county buſineſs (for it has the care of the police of the county, and, when it forms itſelf into a court of juſtice, tries civil and criminal cauſes), affairs of great weight are here canvaſſed; for the orders of the ſovereign, though they may concern the whole kingdom, come before it, being ſent to the county magiſtrates to be enforced; and though it can by no means put a *veto* upon the royal mandates, yet it greatly impedes deſpotiſm by its ſpirited remonſtrances and delays. Joſeph the Second found this. From them it was he received the very bold remonſtrances on his unconſtitutional proceedings; and now that the court of Vienna, alarmed at the prevalence of dangerous opinions, is endeavouring to diminiſh the liberty of the preſs, theſe

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are not leſs active in maintaining this moſt valuable privilege. The annexed ſpirited remonſtrances of the counties of Abaujvar and Bihar * will fully demonſtrate this, and at the ſame time ſhew their political

* I. KASCHAU, 12 Aug. 1793.

Sereniſſime regie hæreditarie Princeps, &c. &c. &c.

IN illa Reſolutione, quæ per hoc Dicaſterium, quoad tollendas *privatas* et privilegio non gaudentes Typographias, juriſdictionibus regni, ſub 25 Jun. a. c. de juſſu regis circulariter intimata eſt, complura continentur, quæ non ſolum cum legibus conciliari nequeunt, adeoque novam in *Nobis* excitant attentionem, ſed ipſam etiam *Conſtitutionis* noſtræ *baſin* et *eſſentiam* ferire videntur. In hoc enim Intimato,

I. Id, quod ſemper ad legiſlativam poteſtatem pertinuiſſe, leges clariſſime docent, *juris regalis* eſſe prætenditur. Jura regis, in conſtitutione regni definita, nobis quidem ſacra ſunt, et eſſe debent: verum ut ea ultra limites ſuos, lege deſcriptos, extendantur, jurave illa, quæ Status regni, poteſtate legiſlativa cum rege gaudentes, communia eſſe voluere, coarctentur, admittere, citra generalem in Comitiis regni manifeſtandam Nationis voluntatem, non poſſumus. Jam vero jus de editione *impreſſioneque librorum* ſtatuendi, inde ab eo tempore, quo typorum in legibus primum mentio fit, penes *Status* et *Ordines Regni* fuiſſe indubium eſt; et per ipſos etiam ab hoc conſilio citatos legum articulos, quippe xxivtum A. 1553 et xlvtum A. 1599, clare demonſtratur. Sed vero nec pervidere poſſumus, quonam pacto et fine leges hæ in præfato Intimato, exempli monſtrandique juris regii gratia, adduci potuerint, cum eæ diſertis verbis contrarium doceant.

II. In eodem Intimato ordinatur, ut " prædicto Mandato contravenientes actione fiſcali conveniantur." Hic pœnam arbitrariam ſtatui in aperto eſt. Neque enim caſus ille interdicti *veteris calendarii*, pro quo per legiſlativam poteſtatem 1000 florenorum mulcta in ſpecie dictata fuit, iſthic applicari, et exemplo ſervire ullatenus poteſt; etiamſi interpretationem legum ſoli Regi non competere, in penultimis quoque Comitiis declaratum haud eſſet. Aſt, quod plus,

III. Nec in toto juris noſtri corpore uſpiam vel veſtigium reperire eſt, quod unquam Typographiam *ſine privilegio* poſſidere, privatorum cuiquam interdictum fuiſſet. Quidquid autem lege non vetatur, id in qualibet bene conſtituta civitate licere ac liberum eſſe, noſtrûm cuique perſpectum eſt. Imo, nonnullas ejuſmodi Typographias, citra ullum privilegium erectas, hodiedum in patria noſtra exiſtere et florere, relatum habemus.

Quod

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political conſequence. They are of more real importance than the Diets of many countries.

The

Quod porro eluſionem cenſuræ attinet, de hac ſequentia adferre conſtituimus.

Primum: omnes ii, qui rem typographicam commerciumque literarium tantiſper norunt, ejuſdem ſunt ſententiæ, abuſui typorum ſimilibus mediis nequaquam conſuli. Libri enim vel perniciosiſſimi, in privilegiatis non minus quam privatis typographiis, occulte excudi poſſunt, et omnem cujuſcunque vigilantiam effugiunt. Ut adeo non tam eo adnitendum eſſe cenſeatur publicæ auctoritati, ut ipſam librorum impreſſionem antevertere velit (quod alioquin, teſte longiſſima temporum et populorum experientia, nunquam obtinebit), quam ut clam impreſſorum, ſi publicæ tranquillitati *omnino* periculoſi forent, diſtractionem propagationemque modis *congruis* impedire, et maleſanos eorundem autores cognoſcere, ac dictatæ talibus per legem pœnæ ſubjicere poſſit.

Dein: infinitis, iiſque quotidianis exemplis, probatum eſt, eo plura, vehementiorique calamo conſcripta, ubique locorum in lucem prodire opera anonyma, quo librorum *cenſura* rigida magis eſt et indiſcreta. Hinc fit, ut non pauci ſcriptorum, celato nomine, tales tamque acerbos ſæpe in lucem protrudant exaſperati animi ſui fœtus, quales certe, ſi iiſdem aperta, etiamſi fortaſſe liberiori fronte, in publicum prodire licuiſſet, nunquam fuiſſent editûri. Non id quidem bene: ſed quia homines ſunt, humana faciunt debilitate; cujus utique legiſlatorum nunquam obliviſci, ſed eidem ſapientibus mediis occurrere, oportet. In cauſas, in originem morbi, inquirere opus eſt, ne medela non bene allata, ipſo evadat morbo funeſtior.

Denique, quod in hocce Intimato ſilentio præterire non poſſumus, eſt novum illud periculum, quod *libertati preli* imminere videmus. Hæc nobis (prout jam ſub 10 Jun. a. c. uberius remonſtravimus) ſummopere cordi eſt. Hanc nos, cum *nobiliori longeque maxima* Nationis noſtræ parte, uti et tota, qua late patet, cultiori Europa, velut civilis et politicæ libertatis *palladium* veneramur. Et quantopere eadem in regno hoc, penes innatam etiam Conſtitutioni noſtræ publicitatem, neceſſaria ſit, id ipſum novo ac manifeſto eſſe debet argumento; quod, licet Status et Ordines jam ante integrum fere triennium, annuente Rege, *Deputationem* regnicolarem, ſyſtema generalium principiorum nationalis educationis et *libertatis preli* elaboraturam, denominaverint, tamen hodiedum, et quidem ſub ipſum adhuc xviii^vi ſæculi exitum! noſtra etiam *defenſione* egere videatur. Quæ quidem longe facillima foret; ſed hoc Dicaſterium ea opus non habet. Optime eidem nota ſunt omnia illa, quæ hanc in rem adferri poſſent. Sane ſi quis reipſa ignoraret, ſi quis noſſe cuperet, quid arti typographicæ, quid libertati preli debeat genus humanum; eum non niſi circumſpicere oporteret, et quid nationes hodiernæ

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The county magiſtracy conſiſts of a count or lord lieutenant, a deputy lieutenant, who has ſometimes an adjunct; a notary, a receiver

diernæ fuerint olim, quid nunc ſint, videre ac judicare. Si *Anglia* adhuc libertate ſua gloriari poteſt; ſi *Dania* cum *Suecia* reviviſcit, et ad ſummam civilem beatitatem admirandis imitandiſque greſſibus properat; ſi *Germania* veneranda philoſophiæ aliarumque ſcientiarum ac omnigenarum artium mater effecta eſt, et præprimis SAXONIA inter tantas utrinque procellas alma pace fruitur et floret; ſi *Septemtrionalis Americæ Status* jam nunc vivum quoddam felicitatis civilis exemplar et ſpeculum præbent; ſi denique *Orientales* vicini noſtri adhucdum in triſti, hominibuſque adeo indigna, barbarie gemunt, et maximorum perfectæ civitatis commodorum expertes ſub viliſſimo deſpotiſmo proſtrati jacent: *illi* ſuam fortunam ſalutari huic humanæ mentis et induſtriæ invento ejuſque uſui prudenti ac libero, *hi* contra infelicitatem ſuam ejuſdem defectui, adſcribendam habent.

Non immerito igitur Nos ſollicitudinem noſtram nuper huic Conſilio remonſtravimus: non immerito nunc quoque ob intentatum tanto bono periculum anxii ſumus. Dignabatur quidem idem Dicaſterium ſub 2 præt. menſis Jul. nos de eo ſecuros reddere velle, quod *activitas Cenſorum congruis limitibus circumſcripta ſit*, nullumque libertati preli per eos inferri poſſit periculum. At nos inde ab eo etiam tempore de novis eorundem arbitrariæ manipulationis exemplis edocti ſumus. Non ſine reſenſu vidimus nuperrime, ipſam etiam Univerſitatis hujus circularem de erigendo *nationali theatro* determinationem, in *Novis Ungricis* mancam et per Cenſorem obtruncatam, in publicum prodiiſſe. Non ſine reſenſu vidimus et hodie in conſpectum noſtrum produci originales ipſius Budenſis Librorum Reviſoris literas, quibus idem diſertis verbis fatetur, ſe orationem unius ex præſtantiſſimis patriæ noſtræ civibus et literatis, " ob unum alterumve epiſodion, quo in *patriam laudeſque* JOSEFI Imperatoris digreditur orator," Suæ Majeſtati ſubmiſiſſe. Quaſi in laudes patriæ et principis excurrere piaculum foret!

Ex his igitur pervidere dignabitur hoc Dicaſterium, quantopere neceſſarium ſit, ut hominibus his, quibus cura revidendorum librorum, adeoque (prout jam nuper dixeramus) ipſa *clavis culturæ Nationis*, concredita eſt, magis etiam invigiletur; et quantopere denique interſit reipublicæ, ut efficaciſſimum iſthoc communis felicitatis adminiculum intactum ſervetur, ac omni quo fieri poteſt meliori modo cuſtodiatur.

In reliquo Benignitati, &c. &c. &c.

Ex generali Congregatione noſtra, Caſſoviæ
d. 12 Aug. 1793 celebrata.

UNIVERSITAS COMITATUS ABAUJVARIENSIS.

II. E ge-

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ceiver or treaſurer, a fiſcal, the judges and deputy judges of the nobles, the ſworn aſſeſſors and the commiſſaries. Except the lord lieutenant,

II.

E generali Congregatione noſtra in oppido Dióſzegh d. 30 Septembr. 1793 celebrata.

Sereniſſime Regie, &c. &c. &c.

DIVERSA inde ab aliquo tempore ad Nos pertigerunt *Celſitudinis Veſtræ Regiæ* et Conſilii Locumtenentialis Regii intimata, quæ libertatem preli feriunt: ſignantur dd. 19 Febr. a. c. 9 Mart. 12 Apr. æque a. c. quibus *Hiſtoria Univerſalis* authore Abbate Millot edita, et in linguam Ungricam tranſverſa, *Diſſertatio* item de *Regiæ Poteſtatis in Ungria Limitibus*, et alia de *Comitiis Regni Ungriæ*, deque *Organiſatione* eorundem, ad claſſem *prohibitorum* relatæ eſſe ſignificantur.

Pertigit porro nunc recenter aliud etiam, ſub d. 25 Jun. a. c. circa tollendas *privatas* et privilegio haud proviſas typographias, circulariter expeditum Intimatum.

Quæ omnia cum ad reſtringendam *preli libertatem* tendant, in proponendis eatenus noſtris reflexionibus conjungenda eſſe cenſuimus.

Quantum itaque Reſolutiones illas attinet, quibus Diſſertationes ſuperius provocatæ, de *Regiæ* ſcilicet *Poteſtatis Limitibus*, atque de *Comitiis Regni* Ungriæ tractantes, interdicuntur; non ea eſt intentio noſtra, ut opiniones et principia in his libris pertractata defendamus, vel auctores eorum excuſatum ire velimus, quum tenor librorum horum nobis incognitus ſit, et nec principia in his aſſumpta examinare velimus. Verum id nos præcipue attentos reddit, quod in his libris, prout ex titulo operis collimare poſſumus, materiæ ad regnicolares Deputationes relegatæ pertractentur, de quibus *Artic.* lxviimus A. 1791 diſponit, ut eatenus ſenſa ſua etiam *privati* Regnicolæ exprimere valeant; et quod de poteſtate legiſlativa, de objectis ſtatum regni publicum concernentibus, differentes libelli prohibeantur; quaſi de his objectis ſcribere periculoſum et piaculum eſſet, quum tamen *admitendum potius eo fore cenſeamus*, ut, *per libros pro* et *contra ſcribendos*, *Regnicolæ jus publicum* et conſtitutionem regni adæquate elucubratam habeant.

Solicitos præterea reddidit nos hæc prohibitio etiam ideo, ne ſequela ſimilium prohibitionum *Votorum* Diætalium reſtrictio ſit. Quodſi enim de his in Comitiis libere *loqui* licet: non pervidemus, qua ratione poſſit quis prohiberi, ne ſenſa ſua *ſcripto* etiam publica reddere poſſit? aut ſi *ſcribere* quis inhiberi poſſit, quare etiam loqui inhiberi nequeat?

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lieutenant, who is appointed by the ſovereign, when his poſt is not hereditary; they are all elected every three years by the county. The

nequeat? Atque adeo, quum, per Reſolutiones ſuperius provocatas, ſcripta de *Poteſtate Regis* et de *Comitiis Regni* prohibita fuerint: veremur, ne libertas etiam votorum, dum in Comitiis objecta hæc agitata fuerint, eadem ratione impediatur.

Præcipuam vero Regnicolarum attentionem meretur, quod, quum per has Reſolutiones quædam circa libertatem preli ſtatuantur, Concluſa Diætalia præoccupari certum ſit, et per manifeſtationem mentis regiæ libertas votorum in affuturis Comitiis, ſi non penitus impeditur, ad minus in plena libertate non relinquitur.

Poſtquam objectum libertatis preli, per articulum lxvii. 1791, ad futura regni Comitia relegatum eſt; de hujus reſtrictione eo minus potuiſſet quidquam intermedio tempore ſtatui, quod per ſimiles Reſolutiones in obverſum Articuli xii. 1791 Reſolutionibus regeremur: et etiamſi quidpiam ordinari poſſet, non in reſtrictionem ſed in libertatem preli deberet ordinari; quia lex de libertate, non autem reſtrictione, loquitur. Nam etiamſi certum ſit, malitioſos quoſdam libertate preli abuti: ſed prout medicina, ſanitati hominum proficua, ideo quod quis ea abuti poteſt, rejici, uſuſque ejus prohiberi non debet; ita neque libertatem preli, propterea quod quis ea abutatur, in obverſum legis reſtringere oportet; verum malitioſi hi auctores, pernicioſorumque librorum impreſſores, in perſonis debent puniri, et quidem in *via juris*, et per *ordinarios regni judices*. Nam Cenſores librorum legibus regni prorſus incogniti ſunt, activitaſque eorum in legibus radicari nullatenus poteſt. Atque adeo ipſa *Celſitudo Veſtra Regia*, et Conſilium Locumtenentiale, perſpicere dignabuntur, quod Cenſores legalem activitatem non habeant, aliquem civium ex ſcriptis ejuſdem judicandi, et pro pernicioſo cive declarandi. Et certe, etiam ſi Cenſura locum habere deberet, illius tamen activitas non ad *opinionum* cenſuram extendi, ſed unice ad morum et publicæ tranquillitatis conſervationem reſtringi debeat; quia opinionum libertas, cum libertate conſcientiæ, et votorum libertate, indiſſolubili nexu junctæ ſunt, ſalvaque fundamentali noſtra in libero hoc regno prærogativa, nullis limitibus circumſcribi poteſt.

CALUMNIATORES nationis noſtræ nos *barbaros* eſſe publicarunt, et hodiedum clamant. Si arbitraria modernorum Cenſorum activitas ultro quoque admittetur; veremur ne horum culpa merito pro talibus reputemur. Nam annon defectum culturæ redolet librorum etiam philoſophicorum cenſura, librorum qui in ditionibus Suæ Majeſtatis aliis publice et libere venduntur? *Certe dolere debet ſortem ſanæ philoſophiæ eruditus*

 orbis,

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The meeting, I think, only lasted one forenoon, and was succeeded, as such things generally are, by a very good dinner.

The next day I continued my journey northward. Just before I set out, I had received a letter from Dr. F—, to inform me that he had resolved to accompany me in my excursions in the alps, *coute qui*

orbis, quando, versionem operis philosophici MENDELSONII, *sub titulo* PHÆDON, *per Censuram* UNGRICAM *revideri, et censuræ subjici, imo castigari etiam et truncari, audit!* Nostra quidem opinione, relata ad opera philosophica, historica, et religionaria, Censores non sane correctionis et prohibitionis, sed *refutationis*, constituendi forent; et his *injungendum* esse judicamus, ut *falsas scriptorum opiniones* (si tamen pro censura submitti debent) indicare, simul tamen in adjiciendis notis refutare teneantur.

Quod aliam *Regis* de Typographiis *absque privilegio* haud admittendis editam Resolutionem concernit, hæc, ut candide fateamur, non minus præjudiciosa fore videtur. Nam tenore ejus, dispositio circa Typographias *juris regalis* esse prætenditur, et contra eos, qui privatam Typographiam servare, vel in his libros edere præsumserint, arbitraria per solum *Regem*, inconsultis Statibus Regni, pœna statuitur.

Jam vero nobis quidem ignota est lex illa, quæ jus circa admittendas vel non admittendas Typographias potestati regiæ tribueret; et nullatenus pervidere possumus, quo pacto leges, in Intimato hujus Dicasterii citatæ, ad demonstrandum jus regium applicari queant; quum hic non nisi de prohibitione *veteris Calendarii*, communi Legislativæ, id est Statuum et Ordinum Regni, ac Regiæ Potestatis consensu determinata agatur. Et non modo nullum in legibus regni vestigium apparet quod jus de Typographiis aliquid statuendi ad jus regium pertinuerit; quin potius Art. xxivtus 1553 clare ostendit, quod *Rex ad Status Regni recurrerit, et ab iis petierit, promiscuæ librorum impressioni limites poni, et quod Status Regni in exercita preli libertate permanserint.*

Secundum quod attinet ordinationem, nempe illam, ut mandato huic regio contravenientes *actione fiscali* conveniantur, dum per resolutionem hanc pœna arbitraria, inconsultis Statibus Regni, statuatur: per hoc præjudicium legibus inferri evidens est. Certe per hujusmodi resolutiones, earum et hujus Dicasterii auctoritas compromittantur. Nam si res ad casum veniret, nulla lege existente: non possumus perspicere, qua ratione

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qui coute, and to desire me to hasten my setting out. Half way, that is a few hours after, I met the determined doctor coming back, as he had now resolved to give up the tour. I have often in France met with such geniuses, and have often had a good *partie* or excursion spoiled by them. I continued my journey to Kesmark. I saw nothing but sand-stone strata all the way.

posset aliquis Nobilium legitime convinci, seu ideo quod privatam Typographiam habuerit, et illa usus sit; seu ideo quod libros per Censores prohibitos emerit, legerit, vel vendiderit. Ipsa enim natura *regni liberi* exigit, ut ea, quæ diserta lege non prohibentur, libera sint.

Hæ sunt nostræ reflexiones, quas ex studio, quo erga conservationem legum ducimur, depromsimus, et quas eo cum petito *Celsitudini* V. R. et Consilio Locumtenentiali remonstramus, ut eas Regi substernere exoperarique dignetur, ne *usus preli*, lege pro libero declaratus, per Resolutiones Regias quacunque ratione restringatur.

Cæterum Benignitati altisque Gratiis devoti persistimus,

Celsitudinis Vestræ Regiæ,

Et Exc. Consilii Locumtenentialis, &c. &c.

Humillimi servi,

E generali, &c. UNIVERSITAS COMITATUS BIHARIENSIS.

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CHAP. XV.

EXCURSIONS IN THE ALPS.

THE weather for two or three days previous to my arrival at Keſmark had been very rainy and ſtormy, and ſome people in the neighbourhood had been killed by the lightning; and when I arrived at Keſmark I had but ſmall hopes of having weather proper for an Alpine excurſion; but the next morning was the loveliеſt imaginable. The Alps, which I had never yet ſeen, from the clouds in which they had always been enveloped, when I was in other reſpects in a ſituation of ſeeing them, appeared in all their towering majeſty, and juſt above me. Now my hopes of a rich harveſt of Alpine plants began again to revive: I immediately went to Nehre, the ſeat of Mr. Horvath, the deputy lieutenant, only a couple of miles from Keſmark, to plan the expedition; and that very evening I went to Rokus, a village juſt at the foot of the Alps, accompanied by a good proviſion of ham, beef, bread, wine, brandy, &c. &c. the beſt eſcort I could take with me, a preſent from Madame Horvath, with full expectation of aſcending in the morning.

Happineſs, ſay the moraliſts, which depends on our outward circumſtances, is always uncertain; and that, I ſay, the moſt fleeting of

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A View of the Carpathian Alps near Késmark.

London, Published by G.G. & J. Robinson, Pater noster Row, July 1st 1796.

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of all, which depends on conſtant weather in a mountainous country. I was hardly at Rokus before it began to rain: the next morning it did the ſame: I waited however patiently, though I was only in a poor peaſant's cottage, till the evening, when finding the weather not to clear up, I returned to Nehre.

To my great vexation this weather continued near a week: the mornings were often fair, but towards noon the clouds began to gather round the mountains, and in the afternoon a violent ſtorm enſued: but this weather was not peculiar to this alpine ſituation; in diſtant parts of the country the ſame prevailed. The moſt general wind was what is here called an Hungarian wind, that is the ſouth wind, and this is the harbinger of rain: the north wind is called the Poliſh wind, and is conſidered as a harbinger of dry weather. I paſſed my time, whilſt waiting for fair weather, at Mr. Horvath's at Nehre, and at Mrs. Berzevitzy's at Lomnitz; and ſometimes at Keſmark, where I had always a hearty welcome at the Rector Potnakinſky's, and at Mr. Paul Methlin's.

The probability of a fine morning induced Mr. Horvath one day to make a large ſhooting party. We ſet off by moon-light, in three or four carriages, and reached the ground at day-break: we were after roe, but the firſt marks our ſportſmen obſerved were the marks of a bear; and as it had rained laſt night, from the freſhneſs of the impreſſions they knew it muſt have been here only a few hours ago.

As

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As we were near twenty ſtrong, and had ball and ſlugs with us, we were not alarmed.

The morning being fine, I ſoon left my companions, and with a guide I ſet off for the Green Lake (Grüne See) which lies amongſt theſe Alps. This is frequently viſited by the curious, as it is of pretty eaſy acceſs; horſes come and paſture here. We aſcended through ravines and vallies, and pine foreſts, for about two or three hours. The firſt hills we came to were formed of great looſe blocks and fragments of granit; but at the lake, the boldeſt craggy rocks of granit riſe and form an amphitheatre, and ſhut up the valley. The lake has obtained its name from the colour of its water, which has a greeniſh caſt. I had hardly begun to botanize when a thick miſt with rain came on; and though the road is by no means dangerous, or difficult to find, yet on account of theſe peſts of Alpine travellers, it was as much as we could do to find our way back again. My companions had had but poor ſport: they had only killed a fox, and ſeen two or three hares. In coming down the hills I found a party of peaſants, ſome with guns, others with hatchets. They informed me they were in ſearch of the robbers from the other ſide of the Alps. In joke I told them, I thought they would have but a poor chance with ſuch a deſperate gang: John Bull like, they replied, "The weakeſt of our party thinks himſelf able to encounter half a dozen of them." So then it is the ſame in Hungary as it is with *us?*——Yes, juſt the ſame, whether thou art a Chineſe or a Briton——Hence patriotiſm. In the evening we returned to Nehre.

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In two or three days the weather cleared up, and I returned again to Rokus, with the intention of immediately entering the mountains: but no guides were to be had. But the next morning, having arranged every thing for a ſtay of two or three days, I ſet out, accompanied by my ſervant, two guides, and a man and horſe to carry proviſions, &c. taking with me a common barometer, which I had bought at Keſmark, to meaſure ſome of the principal peaks of theſe Alps.

Soon after leaving the village, we entered a large wood chiefly of firs: after traverſing this, we came amongſt rugged rocks, and the firſt was a ſand-ſtone, which I ſhall call for the preſent Alpine Sand-ſtone: it had no regular ſtratification, as in common ſand-ſtone; but it had a tendency to divide into beds, ſomething like ſchiſtus: it was in ſome parts as coarſe as a pudding-ſtone, and in others as fine almoſt as a granulated quartz: the beds were almoſt horizontal: its height I eſtimated at one hundred yards: larch trees were common here.——We then came to lime-ſtone rocks, which extend a great way, forming the external ridge, or outward covering, as it were, of the Granitic Alps: they form the *Iron Door*, and the *Fleiſch Bank*; the latter of which is repreſented in the 7th plate. We then turned off to the left, and got amongſt granits: the path now began to grow very dangerous for our horſe; yet we arrived ſafe at the Green Lake, but not till the afternoon, though the peaſants call the diſtance only three hours. I had not time to botanize *chemin faiſant*, and in the animal world

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world we ſaw nothing, except the *Papilio Apollo*, and the *Leptura 4-maculata*.

I choſe our abode about a hundred yards from the lake; under an immenſe block of granit which had fallen down from the rocks above, and was ſurrounded with other blocks; theſe ſerved to keep off ſome of the roughneſs of the weather. It was fortunate enough for us, that plenty of the *Pinus Pumilio*, here called *Krumholz*, grows in abundance. Whilſt my attendants were occupied in cutting this for fuel, having firſt determined the height of our ſituation, which I found to be about 874 yards above Rokus, and 1684 above the level of the ſea *, I made a botanical excurſion.

The

* In making theſe calculations, I have followed Mr. De Luc's method, as far as it was applicable; but as theſe obſervations were made without a thermometer, neither the expanſion and contraction of the mercury, nor the temperature of the atmoſphere, could be attended to; yet, for reaſons which will ſoon be aſſigned, a temperature of 10 degrees of Reaumur has been ſuppoſed.

From the obſervations of Baron Gordon, as mentioned in page 326, it appears that the medium height of the barometer at Leutchau is $25'' 11\frac{1}{2}'''$ Paris meaſure, that is $311\frac{1}{2}'' = 311{,}5'''$: now eſtimating the height of the barometer at the Mediterranean at $28'' = 336'''$, the calculation ſtands thus, Logarithm $336 = 2{,}5263393$

$311{,}5 = 2{,}4934581$

Difference - 0,0328812. This then multiplied by 10000 gives 328,812 as the uncorrected height of Leutchau above the Mediterranean; that is 328 toiſes and $\frac{8}{10}$ omitting the $\frac{12}{1000}$, this is 328,8 toiſes.

This

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A View of the Alps near the Green Lake ?

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The Alpine plants I found (but not all in this excurſion) were the *Primula minima; Swertia perennis; Soldinella alpina; Campanula alpina; Gentiana punctata; Saxifraga Aizoon, bryoides, autumnalis, rivularis,*

This height, which I call the uncorrected, would be the true height, that is, it would require no correction, if the medium temperature between Leutchau and the Mediterranean were $16\frac{3}{4}$ of Reaumur: but this would be a very improbable ſuppoſition; it is therefore better to conſider it at *temperate heat*, which is 10 degrees of Reaumur. Now Mr. De Luc deducts, for each degree of Reaumur under $16\frac{3}{4}$, $\frac{1}{215}$ of the whole height of the uncorrected, and adds $\frac{1}{215}$ for each degree above $16\frac{3}{4}$; we muſt therefore here deduct the 215th part of 328,8 toiſes taken 6 and $\frac{3}{4}$ times: $\frac{1}{215}$ of this height is $= 1{,}54$ toiſes, and $6\frac{3}{4}$ times this is $= 10{,}39$ or $10\frac{39}{100}$ toiſes.

Uncorrected height $= 328{,}81$

$\frac{6\frac{3}{4}}{215} = 10{,}39$

True height - - - 318,42 therefore $318\frac{4}{10}$ or $318\frac{2}{5}$ toiſes.

In the ſame manner the other heights are calculated; for example, at the greateſt height the mercury ſtood at $5''\,7\frac{3}{4}'''$ lower than at Leutchau, or $67\frac{3}{4}''' = 67''',75$

At Leutchau - - - - - -	$311''',50$
At the greateſt height - - - -	67,75 lower.
Therefore at the greateſt height - - -	243,75

Logarithm	311,50 =	2,4934581
	243,75 =	2,3869446
	Difference	1065,135

The uncorrected height therefore in round numbers, as the $\frac{1}{10}$ is here of no moment, is 1065 toiſes, from which $\frac{6\frac{3}{4}}{215}$ of it muſt be deducted,

$\frac{1}{215}$ is $= 4{,}95$ toiſes $= 4{,}\frac{95}{100}$ toiſes, $6\frac{3}{4}$ times this is $= 33{,}4$ toiſes $33\frac{4}{10}$ or $33\frac{40}{100}$

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rivularis, oppoſitifolia, cæſpitoſa; Silene acaulis; Geum reptans; Aconitum Napellus; Anemone alpina & narciſſiflora; Ranunculus rutæfolius, glacialis & alpeſtris; Bartſia alpina; Pedicularis verticillata; Cardamine petræa; Sonchus alpinus; Cacalia albifrons; Gnaphalium alpinum; Tuſſilago alpina; Cineraria cordifolia; Doronicum auſtriacum; Viola biflora; Veratrum album. At night I returned to my rock, where I found my attendants ſitting by a moſt comfortable fire.

A good fire was very neceſſary; for though this was the fourth of Auguſt, yet within a hundred yards of my rock, a great deal of ſnow was ſtill remaining, and we had no ſtraw, nothing but the bare ground to lie on. I fell aſleep amidſt the relation of ſtrange tales, with which my guides entertained my ſervant. "Here, Mr. Frank," ſaid they, "at the top of yon rock which is called the Carbuncle Rock, was a precious ſtone of this name, of an immenſe value, and which ſhone like a ſtar in the firmament; many aſcended the rock in vain; juſt where it was placed the rock was quite inacceſſible; at laſt it was ſhot down.—Indeed!!—There in that direction lies a treaſure; but a ſpell is laid upon it, ſo that nobody can find it.—Surpriſing!!—And in that there is a remarkable hole, from which, if a ſtone is

Uncorrected height - - - -	1065,13
Deduction - - - - -	33,40
The true height above Leutchau - - -	1031,73
True height of Leutchau above the Mediterranean -	318,42
True height of the greateſt height above the Mediterranean	1350,15

thrown

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thrown in, a vapour ariſes which is ſoon followed by a dreadful ſtorm, which makes the very mountains tremble.—Good God!!—Upon that mountain grows a plant, which now nobody can find, which turns copper into gold.—Impoſſible!!—And there on yon craggy rock I was once caught in a fog, and was obliged to remain ſhivering with cold for many hours, till the wind diſpelled it."

My bed did not induce me to lie longer than nature required; and as the morning promiſed a fair day, I was deſirous to be off, to make the moſt of it. The whiſtling of the Marmot, if it did not wake me, was the firſt ſound I heard. Taking my ſervant, and one guide, and ſome proviſions, I ſet out, leaving the other guide to cut fuel, and watch my proviſions, &c. I aſcended by a ſmall caſcade into a higher valley, where ſtill more ſnow was lying; I then turned off to the left, to ſee if it were practicable to aſcend the great Keſmark Peak. I came to the foot of ſome rocks, which by the aid of a good guide I think might have been climbed: but my guide happened to be an uncommonly bad one; in a ſtorm of hail and rain, accompanied by thunder and lightning, which came on whilſt I was there, he ran off, and I never ſpoke to him, and hardly ſaw him, till I returned to my rock, where I found the ſcoundrel warming his noſe. ——The further and higher I went, the more ſnow I found; one ſteep ſloping valley, which led up to ſome very high rocks, was quite filled up with ſnow. Whilſt I was looking at this, and conſidering whether, by the aid of irons to my feet, I could not get up, I ſaw

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ſomething move briſkly upon the frozen ſnow, and I called to my ſervant to look at it, thinking it was a Marmot: ſoon it ſtopped, and I then knew it was only a ſtone, which had ſlid down from the rocks above. A few minutes after another came down, but with greater velocity: I ſaw it begin to bound, and come towards us; I called to my ſervant to ſtay where he was, as he was ſafe, ſitting under the oppoſite ſide of a great block of Granit. Not underſtanding me, he got up and came towards me: he now ſaw his danger, but not time enough to avoid it: the ſtone, or rather the fragment of rock, made a dreadful bound, and lit upon the very block under which he had been ſitting, and from thence, broken in pieces, it flew in all directions: ſome of the fragments juſt went over his head. Left by my guide, and my botanical boxes full, and my dram bottle empty, I thought it time to come down. The greateſt height I had reached this day was 559 yards above the Green Lake. In this ramble I chiefly met with the ſame plants I did the day before; but the *Ranunculus glacialis* and *rutæfolius* and the *Cardamine petræa* grew here more luxuriouſly.

The next morning I ſent away my timid unfaithful guide, and gave orders for another to come up; and then leaving my ſervant to cut wood, and take care of the *houſe*, I ſet off with the other guide for the calcareous rocks which are above the *Fleiſch-Bank*, and are a continuation of thoſe I found in my road to the Green Lake, and are repreſented in the 7th plate. The fine

ſloping

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A View of the Fleisch Bank from the Green Lake.

London. Published by G.G.& J. Robinson. Pater-noster Row July 1st 1796.

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ſloping bank, covered with verdure, which lies under theſe rocks, is called the Fleiſch-Bank, from the quantity of oxen that are paſtured upon it during three or four of the ſummer months. Here I found ſeveral rare plants, as the *Cnicus pygmæus*, *Hypochæris helvetica*, *Leontodon aureum*, *Hieracium alpinum*, *Andryala lanata*; and at the top the *Hedyſarum obſcurum*, *Phaca frigida*, *Aſtragalus alpinus & veſicarius*; and in a ſhady place, cloſe under the rocks, the *Cortuſa Matthioli*, and *Centauria montana*; and on the rock itſelf, ſome beautiful ſpecimens of Wulfen's *Lichen tartareus*.

I had now a full view of the lime-ſtone rocks: but I could neither ſee any mark of ſtratification, nor any petrifactions; they were formed of one thick bed of compact light-grey lime-ſtone; and according to my barometrical meaſurements, about twenty-ſix yards thick. In one place it was pretty regularly divided into four or five beds; but theſe diviſions, or ſigns of ſtratification, only extended a few yards: between theſe beds were four or five thin beds of black ſilex, running parallel to each other; but theſe likewiſe were only of a few yards extent, and were ſometimes intercepted in their courſe by the lime-ſtone.——Though there was very little danger or difficulty in climbing to the top of theſe rocks, yet my guide would not venture; but as he told me at firſt that he was no Chamois-hunter, I could not find fault with him. It will appear ſomething uncommon, and perhaps improbable, that a *cockney* ſhould be a better climber of Alps than thoſe born juſt at their foot: but ſo it happened; I was obliged to

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to leave my guide here at the bottom of the rocks; and telling him that by ſigns with my hat I would indicate to him which way he ſhould go to meet me, I climbed up by myſelf. I got well paid for my trouble. On the top, beſides enjoying a beautiful view of Galicia, I found ſome more Alpine plants, the *Saxifraga cæſia* in great abundance; *Dianthus alpinus*, *Cherleria ſedoides*, *Dryas octopetala*, *Senecio abrotanifolius*, and a moſt luxuriant ſpecimen of the *Lichen elegans* of Mr. Link*, the *miniatus* of Hoffman. Though towards the Green Lake, that is towards the weſt, the cliffs form a perpendicular wall; yet on the other ſide there is from the very top a moſt pleaſing ſloping bank covered with verdure.

Having ſtaid as long as my time would permit, I made my ſigns to my guide, and then deſcended on the ſame ſide I came up. In a ravine I found ſome ſoft argillaceous ſchiſtus; this ſeemed to me to form the Fleiſch-Bank; but it was not ſlate, the *Ardeſia tegularis*, but rather ſomething of the nature of *Shale*, being ſoft and friable. Now was this depoſited againſt the lime-ſtone rocks,—or were theſe ſuperimpoſed to the ſchiſtus?——This is of importance in *Geognoſy*, and preſently we ſhall be able to decide the queſtion.——I could never ſee any thing of my guide till I was quite at the foot of the bank, and then I eſpied him juſt where I had left him. I conjectured at firſt, when I did not ſee him, that he had done like my other guide, run

* Annal. der Natur-Geſch.

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away; but now I had reaſon to believe he had miſtaken my ſignals. I waited in hopes he might eſpy me, but to no purpoſe, and at laſt I went home. It ſoon grew dark, and I got amongſt the Krumholz; and here I thought I muſt have paſſed the night. No one who has not made a trial, can form an idea of the difficulty of making one's way through this, and the conſequent tardy progreſs. The branches of this tree extend many yards in all directions juſt along the ground: they are ſometimes ſupported by the unevenneſs of the ſoil, ſometimes by blocks of ſtone, and ſometimes by branches of the ſame; ſo that one muſt often get down between them, at other times walk upon them. At laſt, however, overwhelmed with fatigue, I reached my rock; which in this ſituation I valued no leſs than an inn, and which I now began to conſider as my home; but my guide never made his appearance till next morning. He had fortunately his hatchet with him, and without this you never ſee a man here; ſo much ſo, that in another part of theſe mountains, Mr. Haquet ſays, they dance with them in their hands, and in the midſt of the dance throw them up in the air, and catch them again with great dexterity. With this he had cut himſelf ſome of the Krumholz; and with the tinder made from a fungus, which they likewiſe always carry with them to light their pipes, he had kindled a fire, and paſſed the night comfortably; and the only thing he miſſed was——my brandy.

The next day I ſpent in repoſing myſelf, in drying the plants I had collected, and in walking about my *own domains*. At the bottom of

of the great rock, *b*, which is the Kefmark Peak, it is faid there is a vein of Lapis Lazuli: I went there, but found the place quite covered with fnow.——In the evening, Grofs Hans (Great John) the beft guide and Chamois-hunter in the country came to me, and the next morning we fet out upon fcaling one of the moft difficult peaks, the White Lake *(Weiffe See)* Peak. I climbed up with my barometer, though in many places it was hardly acceffible but to *chamois*. The hunters of thefe animals know the paths they take in thefe Alps, and fet traps for them: one of thefe we found; it was like a large fox-fteel-trap: but they only fet them in the clofe of the year, when the fnow prevents any one from viiting thefe mountains except themfelves, otherwife they might find a man in them inftead of a *chamois*, as fometimes Treafure-hunters and Simplers come here. Lakes, though common enough in every alpine country, are what appear moft remarkable to guides. I was firft conducted to the Red Lake; higher up to the New Lake: this was quite frozen up and covered with fnow: we croffed this, and then climbed the high and very narrow ridge of rocks which feparates the valley of the Red Sea from that of the Flock Sea: we then reached the peak. The day was delightful: I had a fine view from hence of the furrounding alps: thefe are fo much higher than the mountains to the eaft and weft, which form part of the Carpathian chain, that they feem to be only one huge cluffer of alps. I had a fine view likewife of Galicia: it is commonly reported, and given as an indication of their great height, that from thefe alps, Cracow may be feen in the north, and Erlau in

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the ſouth. I imagine they ought to have ſaid, that from theſe two diſtant cities theſe mountains may be ſeen; and this would be very probable. From Lyons I have ſeen Mont-Blanc; but no one ever ſaw Lyons from Mont-Blanc. Though my barometer told me I was now 628 yards above the Green Lake, yet the Keſmark Peak ſtill roſe much above me: I could plainly ſee the higheſt part I had reached the firſt day, and this appeared on a level with the middle of the Keſmark Peak; if ſo, the height of this Peak, which is on this ſide a perpendicular rock, will be 1152 yards above the Green Lake, and 2836 above the level of the ſea. At the very top of this White Lake Peak, I found the *Papilio Urticæ*, and ſeveral of the *Stratiomys nigricans* whiſking about with great velocity. We deſcended by the *Schactners Groote*. This is a ſhoulder of the peak, and thus far all is granit; but to the eaſt of this the granit is covered by ſand-ſtone of different degrees of fineneſs, from granulated quartz to almoſt pudding-ſtone. Above this, further to the eaſt, the ſand-ſtone is covered by the primitive lime-ſtone; the *Durlſberg* is a continuation of the ſame, and this is likewiſe lime-ſtone. Neither in the ſand-ſtone nor lime-ſtone, was there any appearance of ſtratification or petrifactions. This ridge, which runs parallel with the *Fleiſch-Bank*, has its perpendicular cliffs, like this, facing the Green Lake. Upon the granit rocks I found little, except ſome luxuriant ſpecimens of the *Lichen tauricus & nivalis*, and ſome of the Alpine *Uſneæ*. I think it was here where I found that rare plant, the *Gentiana frigida*, figured in the 13th plate. On the calcareous rocks I collected the *Androſace villoſa & pauciflora*, with the *Draba aizoides & hirta*.

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From the White Lake Peak I had ſeen ſome very bold cliffs belonging to the chain of calcareous rocks which overhang the Fleiſch-Bank, but much higher than thoſe I viſited the ſecond day. My next day's excurſion was to theſe. I went nearly the ſame road as I did the ſecond day, but more to the left. The Fleiſch-Bank here afforded me ſome rare alpine plants: in one ſpot grew together the *Poa diſticha*, the *Ranunculus Thora*, but out of bloſſom, the *Doronicum bellidiaſtrum*, and the *Erigeron uniflorum*; and higher up the *Aſter alpinus*, and *Chryſanthemum alpinum*, and other plants which I had already found in theſe Alps.

At ſome diſtance I eſpied a deep ravine. Theſe ſmall ſcratches in the ſkin of our globe, often ſhew us a little of its texture; they are therefore eagerly ſought for by Geognoſiſts: I made up to it, and it ſolved the doubts which had ariſen in my mind the ſecond day on my finding the ſchiſtus. I entered it about one-third from the bottom, and, aſcending, the firſt thing I obſerved was an immenſe thick bed or ſtratum of ſoft ſhattery argillaceous ſchiſtus; then a thick ſtratum or two of the primitive ſand-ſtone, and then more ſchiſtus; and when I reached the great clifts, which I expected to find of lime-ſtone, I found again my primitive ſand-ſtone, and forming a bed that I cannot eſtimate at leſs than a hundred yards in thickneſs; and then above this came the great lime-ſtone rocks: theſe beds of ſand-ſtone and lime-ſtone were no ways ſtratified; they were beds or ſtrata themſelves. From hence it is moſt probable that the ſchiſtus,

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which I found the ſecond day, and which I conjectured to form the fleſh bank, really lay under the primitive limeſtone and ſupported it.

I aſcended to the higheſt part of the calcareous rocks with my barometer; but by ſome misfortune the obſervations I made here were loſt: yet I recollect they made theſe rocks about the height of the White Lake Peak, that is, about two thouſand three hundred yards above the level of the ſea; and as the *Weiden-Graben* or brook, which runs at the foot of the *Fleiſch-Bank*, is rather lower than the Green Lake, ſo there is an immenſe bed near 700 yards thick of ſtratified rock.

Before I ſet out in the morning, I had given orders to my ſervant to take my baggage to the Keſmark *Koſchar*, where I intended to paſs the night; and I had bid adieu to *my* rock, adieu for ever:—an adieu for ever, to a priſon, would ſadden the pleaſures of regained liberty, and caſt a gloom over the ſoul reprieved from death. Objects of affection would now crowd upon the mind; and the chains would be thanked that they had not been ſo heavy, and the floor that it had not been ſo hard. In gratitude I had tried to engrave my name upon *my* rock, but it was of granit; or I would moreover, as the only tribute my grateful heart could pay, have recounted in its praiſe the chilling rains it had protected me from, and the bleak winds it had warded off, and I would have declared it to be the kindeſt amongſt rocks. The ſtiff necks, and ſore hips and ſhoulders,

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I now forgot, and I reluctantly left my alpine cave. How fortunate it would be for us, whilſt in this jangling jarring world, could we but view the failings of thoſe friends amongſt whom we live, with the ſame charitable eye we do our parting or abſent ones! Then peace would be oftener within our dwellings.

I deſcended the mountain again, and directed my ſteps towards the *Koſchar*. In my road there, at the foot of the Fleiſch-Bank, my guide ſhewed me the remains of an ox, which had been grazing in ſome of the ſteeper parts, and had fallen down and was killed: and not far from thence were the remains of another which had been killed by a bear about a fortnight ago: this was, I think, the third which had been deſtroyed this ſummer by theſe animals. Yet the herdſmen are never attacked, though they ſtay out with their herds the whole ſummer through: the night they paſs, as my guide did, amongſt the krumholz, or by the ſide of ſome rock, where they make a fire; this is always agreeable in ſuch a high ſituation, and ſometimes indiſpenſably neceſſary. The chronicles of theſe alps record, that even in the midſt of ſummer, ſuch ſevere weather ſometimes happens, as proves fatal both to the cattle and their keepers. Some years ago, about this ſeaſon of the year, one or two people were frozen to death here; and on the fourth and fifth of Auguſt of the year 1724, eight-and-fifty horſes were frozen. My guide pointed out to me two or three places, where the people of the neighbouring towns and villages had been mining; they are all convinced that theſe alps are very rich in mines and precious ſtones.

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In the evening I reached the *Koſchar*, and there I found my retinue. This is a ſmall wooden hut in the midſt of a wood, built in the Swediſh manner; that is, with balks whoſe ends are let into one another, ſomething in the manner of, what carpenters call, dove-tail work: it was only about ſix yards long, and three broad, and divided into two apartments, but by no means weather tight. In the firſt apartment the head ſhepherd, who is only a poor common peaſant, lives, and makes the cheeſe; the other is the magazine where it is kept till it is ſent to Keſmark, which is every week. The buſineſs of the dairy is very ſimple; the ſheep are driven home thrice a-day to be milked, and each milking is immediately made into cheeſe, for no butter is made. The runnet is poured upon the milk whilſt it is warm, which is preſently after beaten together, and ſoon after this the head ſhepherd gropes together with both his hands all the curds. This appeared to be a difficult buſineſs, and laſted near half an hour; the curds then form one great maſs, and are taken out together and put into a cloth, and hung up, but no preſſure is uſed. The whey which remains is boiled, and acquires ſome conſiſtence, and this forms the food of the ſhepherds, and their only food for the whole ſeaſon; they have not even bread. After the ſhepherd and his men had eaten their ſupper, the men, of whom there were four or five, left the hut, and went and ſlept under ſheds round the fold. We likewiſe laid ourſelves upon the floor and ſlept. In the night the head ſhepherd got up two or three times and hollowed to his men, to ſee whether they were upon the watch; who always

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always answered, to shew that they were upon their duty. Great vigilance is requisite against the wolves, and with all these precautions these animals had carried off three sheep this summer. The day had been rather showery, and at night we had a storm of thunder and lightning, accompanied by a heavy rain. In the morning I took one of the horses feeding here, and transported my baggage to Rokus; and there I got another to Kesmark, where I passed a couple of days to dry my plants, and to repose myself; and then on Wednesday the 14th of August I set out again to ascend the Lomnitz Peak, the highest of the whole Carpathian chain.

I left Kesmark about noon, and transported the provisions, &c. to Alt Waldorf, where I engaged two chamois-hunters and a fresh horse. Though this village is quite at the foot of the alps, yet I think we were two or three hours on the march before we entered them, and it was nearly dark before we got to the *Glatstein* (smooth-stone). The path now became too rough and steep for the horse, we therefore took off the baggage and sent the horse home; and we resolved to pass the night here *à la belle étoile*. We had not even a good rock under which we could creep. The barometer gave our present height at 583 yards above the last village. The first thing the guides did was to fell a fir tree; for we had not yet ascended as high as the region of the *Krumholz*, and there was soon a fire big enough to roast an ox. As these were new guides, I had to hear nearly the same strange stories of inaccessible gold-mines, concealed treasures, &c. &c. as from

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from my laſt: but comparing their accounts with thoſe of Mr. Sauſſure, they ſeem to be better rewarded for the dangers they expoſe themſelves to in purſuit of the *chamois* than the hunters of the Switzer Alps. One day's ſucceſsful ſport is more advantageous to them than a fortnight's or three week's labour; this is owing to there being ſome opulent nobility in the neighbourhood of theſe alps. In the morning my attendants took my baggage on their ſhoulders, and proceeded to the end of the *Klein-Kohlbach*, where there is an immenſe block of granit, well known to the chamois and gold hunters, and here we depoſited it; for this was now to be our ſheltering-place. But a dreadful accident here befell us, though no hare had croſſed the road; my ſervant, who had taken charge of two or three large wooden flaſks of liquor, juſt as he was going to take them off his ſhoulders, let one ſlip; it fell on a rock——burſt——and its precious contents, which were to have ſupported us under our fatigues, and to have revived our worn-out ſpirits, were gone——for ever. A dejected look was viſible in the countenances of every one of us. The perpetrator of the horrid deed had ſerved againſt the Turks; and exclaimed, though a catholic, it *was to be ſo, it was decreed it ſhould be ſo.* Gloomy fatality, friend of ſloth and vice, and enemy to every active virtue, afforded me no comfort, but ſtill appeared to me with its uſual odious mien.

After repoſing myſelf a little, and obſerving the height of my barometer, which gave our preſent elevation at 1789 yards above the level

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level of the sea, I made a tour with one of my guides to the Five Lakes. These lie in a valley we came to after we had ascended the rocks which shut up the one I had chosen for my residence: they were thawed, though a good deal of snow lay still unmelted. I found nothing new in botany; I saw once or twice the *Gerthia muraria*, and heard the Marmot: all is granit here. In the evening I returned to my rock, where I found a comfortable *Krumholz* fire to sit by. I had not long been here, and was engaged in looking over, by the light of my fire, the few things I had collected, when I heard myself addressed in German, with HIGH, WELL AND NOBLY BORN!——In such a solitary cell, and so remote from the world, and at night, to receive a visit, and to be addressed with such titles!!! ——Though no fairy tale was floating in my brain, yet I could not conceive the blessed sound to come but from some aërial messenger sent to hail me KING OF PERSIA. On looking up, I saw not one but three——not ambassadors from heaven, but three poor devils with haggard looks and tattered clothes.——Ah! how often do the outward senses, careful guardians over the wanderings of the mind, correct its errors and repress its wanton freaks! These were neither botanists nor chamois-hunters, but gold-hunters, and by trade shoe or *chism* makers, from Kesmark, and all more or less tinctured with Alchymy, who were begging for permission to take shelter under my rock, and to warm themselves by my fire. The intrepidity and constancy of these men are surprising; they are even bolder than the chamois-hunters.——These poor fellows, like those gloomy moralists

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iſts who conceive virtue to exiſt in ſuffering, and in the performance of ſome galling taſk which nature unwillingly performs, and are regardleſs of the little offices of kindneſs dictated by our own hearts, have had the misfortune to believe that mines and treaſures are only found in the moſt inacceſſible parts of the rocks: the higher theſe are, the more they are covered with ſnow, and expoſed to ſtorms, and, what is the moſt dangerous of all, to miſts and fogs, the more eager they are to examine them: they honeſtly confeſſed to me, that they had viſited theſe Alps, and with the ſame views, for the laſt twelve years, and had met with nothing, or next to nothing, and that they were about fifty pounds out of pocket; but, like Alchemiſts, they hoped at laſt to ſucceed. Falſe reaſoning, on final cauſes, has in ſome degree led to this: theſe mighty works of God, they ſay, have not been created for nothing; and then, ignorant of their importance in the œconomy of Nature, attribute to them an office for which they were never deſigned, that of producing gold, ſilver, and precious ſtones.

The wind at night was very violent, and roared tremendouſly amidſt this world of rocks: the fleecy clouds fled rapidly acroſs the moon, the friend of the benighted traveller, and cheerer of this dreary ſolitude: yet, though thus ſecluded from the world, we were not ſad, but free from care and ſorrow; we thought and talked only of the ſufferings of others. And chiefly of the chamois-hunter, who, in the eagerneſs of purſuit, had perhaps been led amongſt the craggy

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precipices of the impending rocks, and now benighted, ſtarved with hunger and cold, and worn out with fatigue, muſt wait there, even deſtitute of his uſual clothing, which he had thrown aſide to facilitate his courſe, if life ſhould ſtill hold out this dreadful trial, till a brighter luminary ſhould ariſe to guide his ſteps acroſs the hideous chaſms, which now ſurround him with all their horrors, when, perhaps, with the riſing ſun, fogs and miſts would come on, and cover him in ſtill greater darkneſs: and of the poor deluded gold-ſeeker, who, in ſearch of unexiſting treaſures, might now be ſinking in a half-thawed lake, or, fallen into ſome great cavern, muſt now bid an eternal farewell to his viſionary projects. Nor did the ſuffering botaniſt, who might be loſt, and now wandering amidſt this world of ruins; or who in reaching at the ſuppoſed nondeſcript, and falling from theſe towering battlements of heaven, might now be groaning out his laſt breath amidſt theſe unpitying rocks, without a ſingle friend to condole with him in his diſtreſs, not ſhare our commiſeration. And thus we made our ſituation enviable by comparing it with that of others harder than our own: nor was my lot ſo hard; I led the life of the hunting ſtate; my toils over, I ſat with my companions in fatigue by the ſide of a cheerful fire, and carouſed over a pot of hot grog. One of my guides having ſhot a Marmot, it was roaſted, and it added to our feaſt.———How ſweet are the ſmalleſt comforts of life when we lead an active hardy life!

In the morning I had purpoſed to ſcale the Lomnitzer Peak, but the

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the violence of the wind would not allow ſuch a dangerous expedition to be attempted. I could therefore ſpare one of my guides: I ſent off the moſt active in the morning to go down for another ſupply of brandy for my attendants, and with a letter to Mrs. Berſevitzy for ſome wine. Brandy, corn brandy, is to be bought every where; but good wine, in ſmall quantities, is hardly to be bought any where: the good lady not only ſent me a proviſion of good wine, but likewiſe of ham, tongue, and cold veal; and I contented myſelf with botanizing on the ridge of rocks which ſeparates the two great vallies, the great and the little Kahl-bach; but I had very little ſucceſs. This ridge of rocks forms precipices on both its ſides, as well towards the great as the little Kahl-bach: it is compoſed of nearly vertical leaves, which lean towards the head or end of the valley, that is to the N. W.; and the rocks on the other ſide of the valley have the leaves likewiſe in the ſame direction. The gold-hunters had courage enough to ſet out in the morning in queſt of treaſure; but they ſoon found the weather too boiſterous, and came back, and I found them on my return ſitting at my fire.

The next morning the weather, though by no means very fine, was much better; and as I could afford to loſe no more time, I determined to attempt to aſcend the Lomnitzer Peak, with which, none in the whole Carpathian chain, except the Krivan, can in regard to height enter into competition. I took my barometer with me and both my guides, and left to my ſervant the care of my *houſehold*

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concerns. We aſcended the rocks on the right of our valley, by ſcrambling up a ravine in ſome places filled with looſe ſtones; we were, from the difficulties we met with, obliged at times to help one another, and the barometer incommoded me greatly. In leſs than two hours we reached the top of the rocks which formed the right ſide of our valley; but when there we ſeemed no nearer. Here we were on a ſlope, which ſeemed to reach almoſt to the top: it was covered with great looſe blocks of granit. The clouds now began to collect about the foot of the mountain, and ſome fleeces aſcended towards us: this made us halt, and conſider whether it was prudent to go further: I inſiſted on aſcending to the top of the ſlope, as we could, I thought, have found our way down again, though enveloped in miſts and clouds. We accordingly continued our journey: when arrived there we halted again; for my guides were very unwilling to go further, for fear of the clouds riſing up to us. After we had baited, and a heart-cheering dram had paſſed round, I inſiſted on aſcending to the top; but it ſeemed to fly from us, or rather to grow up before us. When we had reached the peak, this was ſo ſteep, that, to get up, we were obliged ſometimes to wind round it, and ſometimes to deſcend, and then climb up the moſt craggy precipices, and ſometimes walk upon the moſt dangerous ſhelves of the rock: but at laſt we reached the ſummit, and with my barometer in good order. I believe, I may ſafely ſay, this was the firſt that ever was upon it. I found it 1091 yards above our rock, from whence we ſet out in the morning; 2024 yards above the great valley from whence theſe Alps ariſe; and 2880 yards above the level of the ſea.

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Aſcertaining the height of this mountain, was all I reaped from this laborious and dangerous expedition; for the clouds, which kept increaſing, entirely deprived us of the fine and extenſive view we muſt otherwiſe have had from this elevated ſituation. This peak was compoſed of grey granit, like the rocks at bottom, but with a ſmall admixture of a greeniſh black terreous ſubſtance; except a few Lichens, it afforded me very little. The fineſt ſpecimens of the *Senecio incanus*, and *Arnica Doronicum*, I found here, but not at the top; and the *Krumholz* ceaſed to grow four or five hundred yards (perpendicular height) below the ſummit: I met with no ſnow in all this day's journey. The clouds riſing higher and higher, made my guides more and more clamorous to deſcend; and indeed they had reaſon, for at beſt it was a perilous undertaking, and without good guides impracticable.——The chamois-hunters even, when caught in a miſt amongſt theſe precipices, are often obliged to wait hours together until the weather clears up, or a favourable blaſt diſpels for a while the hovering miſts. We deſcended nearly by the ſame way we had aſcended, and in our way we heard the gold-hunters, in ſome deep chaſm, hammering at the rocks. My guides hollaed to them, and they anſwered; but we could not ſee one another on account of the miſt: we reached our rock in ſafety in good time. Soon after the gold-hunters returned, with hungry ſtomachs and empty bags.

I made many enquiries of theſe guides, as well as of my laſt,

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to know whether there were any Alpine Quadrupeds except the Marmot and the Chamois in theſe Alps, and they ſaid there were none. The latter animal is here commonly called *Stein Bock*; though *Gems* is the proper denomination in German, which is the common language of theſe parts: and as *Stein Bock* is the German appellation for the *Capra Ibex*, Mountain-Goat, ſome have ſuppoſed that this animal was really an inhabitant of theſe Alps. This is the opinion of Mr. Windiſh, the Hungarian geographer; and Mr. Zimmerman, in his very ingenious *Tabula Zoologica*, has fallen into the ſame error; nor is the *Antilope Saiga* ever found in this part of the Carpathian chain, as far as I could learn.

On the *Krumholz*, which grew near our rock, I found a ſmall caterpillar ſtriped with black and green; it was in great abundance, and had in ſome places devoured almoſt all the leaves of theſe trees. Are not theſe the worms pretended to be generated from ſnow, mentioned by ſome Hungarian authors? As Bell, for inſtance, in his *Prodromus Hungariæ*, who, ſpeaking of theſe very Alps, ſays, "Hanc perpetuis obſitam nivibus videas, quas ex ſitu, vermium quoddam genus concipere, aſſerunt, qui viderunt." I brought ſome away with me, with a view to examine them accurately; but, alas! as it often happens in ſuch tours, they were loſt.——The next morning I returned to Keſmark: in deſcending I ſaw a great many of the *Turdus torquatus*, Ring Ouzel, amongſt the *Krumholz*.

CHAP.

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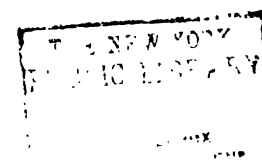
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CHAP. XVI.

KESMARK TO VASETZ—THE KRIVAN MOUNTAIN.

THE evening after my return to Keſmark I walked over to Nehre; here all was joy and merriment. The wedding-day of a near relation of Mr. Horvath was kept here: beſides feaſting there was dancing. In genteel company French dances are in uſe; but we had ſome rough ſchool-boys, who danced in the Hungarian ſtyle, like the recruiting parties at Peſt: and beſides the ſlapping of hands on their breeches and boots, and the jingling of ſpurs, this was further improved by the dancers throwing themſelves on the floor in ſtrange poſtures, and with ſuch violence as though they were *des poſſédés*: theſe dances are ſometimes called gipſy dances. Towards twelve the muſic ſtruck up a march; the bridegroom then took his bride by the hand and conducted her to the temple and altar of Hymen, and the whole company followed; there we took leave of them, wiſhing them every kind wiſh. A very, apparently, ſtrange queſtion had been put to me by a young lady a few days before concerning this wedding. She ſaid to me in German, with a great deal of coolneſs, "Pray, Sir, do you know when the *copulation* is to take place between Mr. —— and Miſs B.?" I ſtared, and bluſhed, I dare ſay, likewiſe:

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upon this ſhe repeated the queſtion, and, thinking I did not rightly underſtand her, laid an emphaſis on the pentaſyllable. As I ſtill pauſed, ſhe ſaid, "Sir, when are Mr. —— and Miſs B. to be married?"—If I had thought at the time either in Latin or in German, there would have been no *double entendre* in it; but I thought in Engliſh and French. Yet we will charitably hope that in both ſenſes it took place whilſt our globe now made its diurnal revolution, and that within this period both the ceremonial and the eſſential part of matrimony were celebrated. The next day I took leave of this kind and hoſpitable family, and returned to Keſmark.

This town and neighbourhood manufactures a good deal of linen, and even figured table linen; and, when Poland was in a flouriſhing ſtate, carried on a conſiderable trade with it in wines, as this is the neareſt Hungarian *entrepôt* for this article; and from hence there are paſſages through the mountains into Galicia: but this trade has now much declined.

Dr. Pfeiffer has for many years been cultivating the *Iſatis tinctoria* upon a pretty extenſive ſcale for indigo: ſome of this, which he aſſured me was of his own fabric, appeared equal to the beſt Spaniſh indigo; but the misfortune is, that the price is as high, or higher than the real indigo: the lower ſorts are only uſed by the dyers of Keſmark. But the climate of this part of Hungary he finds to be too backward; he is obliged to manure the land, and cannot pluck the

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leaves more than, I think, twice a year. He or ſome of his friends are making attempts with it in the more ſouthern parts of Hungary. The inhabitants of this town amount to near 4000.

I finally left Keſmark the next morning, the 20th of Auguſt, and continued my tour weſtward. The corn harveſt had commenced a week or ten days before, and now every body in this part of the valley was in the midſt of it. Barley, oats, and rye are the principal grain cultivated here; wheat is only ſown in ſmall quantities. Flax is a ſtaple commodity; and there is a method in uſe here of breaking and beating it, after it has been ſteeped and dried, which appears to me very convenient: this is by the means of ſtamps, ſuch as are uſed in pounding of ore before it is waſhed on the hearth, only theſe are entirely of wood, as the bottom likewiſe is on which they fall: velocity of motion rather than weight is required. They are in general an appendage to a corn-mill; and to ſuch they are but a very trifling additional expence. The owners of the flax manage it themſelves; and all they have to do is to put it under the ſtamps, turn it about, and take it out again. The *douceur* to the owner of the mill is very trifling.

Groſs Schlagendorf is only a ſtage diſtant from Keſmark. Here I ſtopped, and dined with the Lutheran miniſter; and I intended after dinner to have continued my journey: but I found him a botaniſt, and a ſenſible good kind of man. I therefore was readily prevailed

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on to ſtay the night with him. He had collected a few plants from the neighbourhood, and ſome alpine ones; but none which I had not found. His taſte for botany he acquired at Leipſic, where he had ſtudied. But the deſire of knowledge generally flags when we have none with a ſimilar taſte to communicate with: many years had ſlid away without a ſingle converſation with a botanical friend. I was a good deal ſurpriſed at firſt on entering his room, to ſee in the window the Syſtema Vegetabilium of Linnæus. We planned two or three excurſions, but the next morning was rainy, and prevented us from ſtirring out till after dinner. We then walked up to the rocks at the foot of the alps to a ſpa; it is pretty ſharp with fixed air. All the rocks here are granit.

The next day we took a walk further up in the mountains, to ſee a rock which ſome of the inhabitants of Keſmark were working for the ſake of the garnets which it contains. But theſe *precious* ſtones, which are found in a kind of foliated granit, are the ſame coarſe kind that are generally found in ſimilar rocks. Where the *mica* lies in the greateſt quantities, there are the garnets; ſo that detached ſpecimens belong to the *Gneiſſum glanduloſum* Syſt. Nat. *, though the rock itſelf is the *Gneiſſum alpinum*. This is the only rock of the granit kind which I had hitherto ſeen in theſe mountains, which had

* Gneiſſum glanduloſum,
Ex mica nigra & granatis rubris compoſitum.

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any thing of a foliated texture; and here it was only partial, forming ſhort thick veins and patches amongſt the common granit. The *Ring Ouzel* and the *Corvus Caryocatactes*, Nut-cracker, were very common in the woods, and Marmots amongſt the rocks.

In returning home in the evening we met ſome peaſants on a party of Bear ſhooting. The valley which lies at the foot of this chain of mountains is cultivated to their very foot, and the bears at night leave the woods, and come into the corn-fields, and eat the corn. Theſe peaſants told us, what indeed I had heard before in Dauphiné, that theſe animals draw the ſtanding corn through their fore paws, then rub the detached ears between them, blow away the chaff, and eat the grain. One of the party had nearly loſt his life a few years ago in this diverſion: ſeeing a young one alone, he fired at it and wounded it, when he was immediately attacked by its mother, who had been concealed by ſome buſhes: at one blow of her paw ſhe brought off a great part of the ſcalp. Beſides protecting their corn, the peaſants have another inducement to ſhoot theſe animals: this is the profit ariſing from the ſale of their ſkins, one of which brings them two or three guineas. However ſavage theſe animals may be, they ſeem to be leſs ſo than that ſpecies of animal called man; for children go into the woods and collect the berries of the *Vaccinia*, &c. which is a depredation on the bears, who feed upon them, without there being an inſtance of their having received an injury from them; nor has any perſon, without making the firſt attack.

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The next morning I purſued my journey weſtward, accompanied by my hoſt. We ſtopped at Botſdorf: the *Judex Nobilium*, Maryaſchy, not being at home, for whom I had letters of introduction, we called at the Lutheran miniſter's, and dined with him.

In the afternoon I went and examined the rocks which form the ſouth ſide of the valley; and here theſe, coming down from the Koniſberg, extend ſo much to the north, as almoſt to unite with the great Carpathian chain. They are of compact unſtratified-lime-ſtone, like that of the *Fleiſch-Bank*, and of the rocks and hills of the county of Gomer.——In half an hour's inveſtigation I collected ſeveral rare plants. On one ſmall rock I found the *Campanula carpatica* and *Campanula lilifolia*, *Daphne Cneorum*, and *Centauria montana* growing together; and in croſſing a brook, which lies between theſe rocks and the village, I found the *Epilobium Dodonæi* in great abundance. The Sclavonian language here begins again to be ſpoken; and in this language the miniſter addreſſes his congregation.

In the morning I went to Czirba. I waited upon the Miniſter, who received me in a very friendly manner, and invited me to ſee a lake in the mountains. We took a ride there. Though Mr. Korabinſky in his map has placed it cloſe to the village, probably from its bearing the ſame name, yet it is three hours diſtant, and amongſt the mountains. It is five or ſix times as large as any I had hitherto

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ſeen, and had ſome water-fowl upon it. I returned immediately, and, though preſſed to ſtay the night, I puſhed on to Vaſetz: and there, as uſual, I put the miniſter to contribution; for, as this is not a much frequented road, there are no inns upon it, only *cabarets* where the peaſants drink their brandy. And the Lutheran miniſters or paſtors, though not poſſeſſed of the great incomes of our clergy, are at their eaſe, and can exerciſe the kind offices of hoſpitality towards a ſtranger. They ſeem to be in regard to income about on a level with the Scotch clergy.

Vaſetz is the higheſt ſituation in the whole valley: the harveſt here was only beginning: and the water coming down from the mountains runs now to the weſt: hitherto it had run to the eaſt. I had choſen this village as the place from whence I intended to aſcend the Krivan. This is generally ſaid to be the higheſt of all the Alps in the Carpathian chain; but this opinion is not ſuppoſed to be founded upon any meaſurement.——As I purpoſed to paſs two or three days upon it, it was neceſſary to carry up ſome proviſions; and, as uſual, I ordered a horſe for the next morning; but here was the moſt drunken and idle village judge I had yet met with. He diſappointed me; and as the horſes were all grazing in the mountains at three or four hours diſtance, I was obliged to defer this excurſion till the next day. This was a great mortification; for the weather was very fine, and the Krivan, having got in the night a cap of ſnow, looked ſublime.

The

The next day I was equally unfortunate, and through the ſame cauſe; but my botanical friend of Groſs Schlagendorf, who had promiſed to be of the party, came with a light chaiſe and three horſes, and we ſet off, but much againſt my advice, in the chaiſe. The chaiſe itſelf, from the badneſs of the road, ſoon became a ſufficient load for the horſes, and, as we aſcended, the road became worſe and worſe. It was the road by which timber from the woods, which cover the lower part of theſe mountains, is brought down. Though there is a winding road even as far as the old Gold mine, which is ſituated above three-fourths up the mountain, yet we were glad to leave our chaiſe behind us before we had reached half way up to the mine, and tranſport our proviſions ourſelves. We loſt ſo much time, and the diſtance was ſo great, that it was late in the evening before we reached the mine, where we had agreed to paſs the night, as we knew there was a ſhed here, which ſome years ago had been built as a ſhelter for the miners.

In travelling amongſt alps, there is in general a deficiency of every thing except water; this even failed us here, and we were at a loſs for ſome time to think what we ſhould do. We had plenty of brandy, an excellent thing as a dram, but no ſubſtitute for water. But adverting to the frequency of water in mines, I ſent my ſervant to ſee if there might not be ſome there; he found but little, yet a great deal of ice: this we melted in a tin drinking cup, over the fire which we made with the remains of the old ſhed. There could not have been a worſe place for

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for paſſing the night at, if it had not been for the remains of the ſhed, than this; for no *Krumholz*, or any other kind of wood, grew here, and the roughneſs of the climate may be conceived by the ice we found in the mine and by the height, which by the barometer I found to be 1425 yards above Vaſetz, and 2318 yards above the level of the ſea: and the ſhed was of more uſe to us as fuel than as ſhelter; for the top was off, and the ſides were almoſt down.

At night the wind was very boiſterous, and often threatened to blow theſe crazy remains in pieces. In the middle we made our fire, towards which we turned our feet, and our bolſter was a beam of wood. This gave riſe to ſome ſparring amongſt us; for we could not leave it to get nearer the fire, and we happened to be very diſproportioned in reſpect to the length of our bodies: ſo that, whilſt the miniſter of Vaſetz, who was five feet nothing, was complaining of cold, I, from being five feet ſomething, and in the middle, as the *place d'honneur*, and my brother botaniſt, from his hexapodal length, were, at leaſt ſo far as concerned our feet, too hot. We therefore agreed like a little family compoſed of members with different intereſts. The morning was as windy as the night, and we had ſome miſts. Though from the nature of the rocks I had no expectation of a rich botanical harveſt, yet I was very unwilling, after having had ſo much trouble in coming thus far, not to aſcend to the top of this mountain; for it is generally ſaid to be the higheſt; and this is the opinion of Mr. Fichtel *, who ſuppoſes its height ſomewhat

* Fichtel, Mineral. Bemerk. von den Karpathen, page 10.

to

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to exceed 2000 fathom above the level of the Danube. My ſpiritual friends were not only very unwilling to turn out to ſcale the top, but they abſolutely refuſed to accompany me. My guide was equally unwilling, and aſſured me ſolemnly, that he never was at the top, and knew not the way. My ſervant was not more inclined than the reſt, but made it a point of honour to run the ſame riſk as his maſter; and when the guide ſaw I was reſolved on ſetting out without him, he likewiſe promiſed to accompany me. Whilſt my ſpiritual friends were thinking whether it was prudent or not to run this riſk, and expoſe ſuch conſecrated veſſels to ſo much danger, a violent ſquall came on and carried away the remains of the ſhattered roof of the ſhed which former blaſts had reſpected. Like as the *take care of number one, and charity begins at home*, of an officious unfeeling friend, when generoſity and ſelfiſhneſs are pleading their oppoſed intereſts in the feeling breaſt of an irreſolute man, often determine the equipoiſed balance in favour of the latter, ſo this pitiful blaſt determined my friends to leave me; and when I ſet off to go up the mountain, they ſet off to go down it.

After walking about an hour and an half chiefly over great looſe blocks of granit, I reached the top; and the firſt thing the guide did was to take up a ſtone, under which were two or three trifling copper coins that a former traveller had hid there; and now the fellow acknowledged that he had been on the top ſeveral times. This mountain is by far the moſt eaſy to aſcend of any I had yet met with

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with in this tour, and by keeping on the *lee* ſide we were very little incommoded by the wind. Here I collected nothing: the rocks were covered with the ſame Lichens I had found in much lower ſituations. My barometer was ſtill in good order, and ſhowed the height of this mountain to be 2781 yards above the level of the ſea, and 1888 yards above the village of Vaſetz; the Krivan is therefore ſomething lower than the Lomnitz Peak. Clouds and miſts which prevented the proſpect, with the barrenneſs of the rocks, ſoon made me return to the mine: and here I had no inducement to ſtay; for theſe rocks were no leſs barren of alpine plants, and the mine was ſoon ſeen. It is only remarkable on account of its very elevated ſituation, which is the higheſt perhaps of any one in Europe. Though it is now quite forſaken, yet the excavations ſtill remaining, and the road to it, after the woods ceaſe, which is quite a made road, ſhow that it muſt have been of ſome real or ſuppoſed importance. The road was made by the Emperor Maximilian. The ore is native gold in a ſmall vein of greyiſh white fat *Quartz*, but in ſo ſmall a quantity that a guinea's worth of this gold has always coſt two or three guineas: the vein is in granit. Having no motive to remain here, I haſtened down to Vaſetz.

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CHAP. XVII.

JOURNEY TO WIELICZKA—THE SALT MINES—CRACOW—AND RETURN TO PRIBILINI.

IN a tour, as in the journey through life, ſomething new, as we proceed, is conſtantly occurring, which leads us from our original plans, and engages us in new purſuits. Here at Vaſetz I was informed, that at Pribilini, which was only a ſtage diſtant, there was a paſſage through the mountains into Galicia, and that from thence I might eaſily reach the famous Poliſh Salt Mines in a couple of days.

Though I was very deſirous of being ſoon at the Hungarian mines of Schemnitz and Cremnitz, yet I could not withſtand the temptation of the Poliſh ſalt mines; and indeed, having *only* the Carpathian Alps, and a two days journey over hills between us, it would have been unpardonable not to have ſeen them. Who amongſt men that has heard of Solomon's being the wiſeſt man, and Samſon the ſtrongeſt, has not heard of theſe mines? where, according to ſome accounts, there are ſubterranean towns, and ſubterranean republics, and where the infernal regions and their inhabitants are inimitably repreſented, and likewiſe the regions of the bleſſed.

I was

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I was ſoon at Pribilini, where I took up my quarters with Mr. Jonas Pomgratz, the only nobleman here. Though he lived in a pitiful cottage, and his income was ſo ſmall that he condeſcended to retail brandy, wine, and ſmall beer to his villagers, and that in perſon, yet I found him well behaved, hoſpitable and friendly. I was hardly in the houſe before a flippant young man entered, ſtared at me, and then aſked me for my paſſport. I told him I had none. Upon this he began a converſation in Latin with my hoſt, enquiring who I was, and aſking many abſurd queſtions, and throwing out many ſilly ſurmiſes concerning me. His ſelf-importance was ſo ridiculous, that at laſt I burſt out in laughter; when, finding that I had underſtood what he had ſaid about me, he ſeemed aſhamed, and begged my pardon for having entertained any doubt of the reſpectability of my character. This young man, I learnt afterwards, had lately obtained ſome ſmall provincial office.

The next day, the 29th of Auguſt, I put a ſmall portmanteau on a horſe, and ſet out on foot for the famous ſalt mines. We paſſed firſt through thick pine woods, and then entered the mountains, and kept gradually aſcending, always winding amongſt the vallies. The paſſage was noways dangerous, and very eaſy till we came to the ridge which forms the limits of Hungary and Galicia; here it became more difficult, though not dangerous: the deſcent on the other ſide, towards Galicia, is very rapid.——Granit rocks and gloomy pine foreſts had hitherto ſurrounded us; but here, on the limits, the ſcene

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greatly changed. The rocks now before us were lime-ſtone cliffs, and theſe formed the moſt beautiful ſcenery; which, with but little of Imagination's kind aſſiſtance, who often heightens the beauty of our other proſpects, repreſented amphitheatres, Gothic ſanctuaries, lofty towers and ruined caſtles; which were intermixed with ſtupendous precipices and dreadful chaſms; and as we deſcended and paſſed amongſt them, they aſſumed new reſemblances. The ſun ſhone full upon them, and greatly increaſed the beauty of this noble proſpect. From the bottom of ſeveral of theſe rocks the moſt copious and limpid ſtreams flowed. Nothing but the want of time prevented me from ſpending a day or two amongſt them: they are the fineſt rocks for alpine plants I ever ſaw.

I reached Koſteleſko early in the afternoon, and would have puſhed on further, but my guide pretended his horſe was knocked up and could not proceed. This is ſtill amongſt the mountains; but Koſteleſko is not a village: here are only two or three houſes for the miners, as in the neighbourhood ſome mines are worked, though of ſmall importance. The ore I was ſhown was grey copper; I could not learn in what kind of rock the vein runs. I had here only miner's fare—a bed of ſtraw, eggs and coarſe bread.

Early in the morning I continued my journey: the hills became ſmaller and rounder, yet the firſt were ſtill covered with firs: on the paſtures a conſiderable quantity of cattle were feeding, and we

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paſſed ſeveral *Koſchars;* and then to the woods and paſture lands ſucceeded corn land, and here no want of cultivation or population ſtruck me. Withof was the firſt village I came to: here I changed my mode of travelling; I ſent back my horſe and man, and procured a pair of horſes and a peaſant's cart. Whilſt I was waiting for my horſes, I went and examined ſome rocks in the neighbourhood: I found them compoſed of ſtrata of ſand ſtone and clay. The peaſants were buſy getting in their corn harveſt, which conſiſted of oats, barley and rye. Not only no want of cultivation or population I obſerved on entering Galicia, but the villages did not appear worſe built, nor their inhabitants worſe clad, than on the other ſide of the Alps.——Dunavitz was the next ſtage. I reached this place early in the afternoon; from the judge not being at home, and through other trifling misfortunes, I was detained here all night for want of horſes. I had ſeen that ineſtimable gift of Nature, the potatoe, on the other ſide of the Alps: here I ate ſome; they are not conſidered as a delicacy, but form a conſiderable part of the food of the peaſants.

Early in the morning I left Dunavitz; and after traverſing a few miles of flat paſture land, I aſcended a vaſt chain of ſand-ſtone hills. The road is frightfully and almoſt impaſſably bad: it is generally nothing more than the bed of a ſtream or torrent. I however arrived ſafe at Raaba, and I ſtopped at the town-houſe for freſh horſes. As this was Sunday, the ſtreet was full of people: two of the ſmarteſt of the crowd came up to me with many bows and compliments; and

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as I ſuppoſed they were the Squires of the village, who were coming to invite me to their chateaux, I returned them as many; for, as I had entered, paſſed through, and gone out of Hungary, without a ſingle viſit from a cuſtom-houſe officer, I never once dreamed of being moleſted by any here: however, they ſoon after explicitly informed me what they were. They ranſacked my baggage, and wanted to take away ſome trifling things; but on my inſiſting that they ſhould give me a receipt for them, they returned them. They gave me ſome very broad hints that a trifling *bono mano* would be very acceptable to them, but I gave them none. My next plague was the judge, who made a thouſand objections to my demand for horſes, till I pulled out the great *Imperial paſs* loaded with ſeals, which I had obtained ſince my Leutſchau misfortune. As this was in Latin, I made him believe it ordered him to provide me with horſes; and as ſoon as I knew that the cuſtom-houſe officers did not underſtand Latin, I gave it them to read; and they agreed that the judge muſt immediately procure me them: and he now ſet about it; but I had to wait two or three hours before they came.

Some heavy rain fell, and the town-houſe, which ſerved as a kind of public houſe, was filled with company as ſoon as the divine worſhip was over. Beſide the church, there is ſomething elſe which ſerves to bring many of the country people to the principal village or town, on a Sunday. In ſome parts of our iſland, remote from the capital, it is not uncommon for the clerk, to give notice publicly after

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after the ſervice is over, that on ſuch and ſuch a day ſo many fat hogs, &c. are to be ſold. The Sunday here is the market day, not only for fleſh meat and other eatables, but for all the wants of the country people: the wall of the church-yard was hung out with knives, and ribbands, and ſhoes, and gingerbread, &c. &c.——The buſineſs of the day, that is hearing maſs and trafficking, being over, recreation ſucceeded, and this began about noon. It conſiſted of dancing, and drinking of brandy. The dancing was a good deal after the Hungarian manner, mixed with *Walzes*. As the men were moſtly in *Botchars*, or ſandals, and not in boots, the muſic of the ſpurs was faint; but the ladies wore yellow leather boots. One or two of them invited me to be their partner; but beſides the want of ſpace and air, two of the firſt requiſites in dancing, I obſerved that the ladies, after blowing their noſes with their fingers, wiped them on the ſhoulders and ſkirts of the coats of their *chapeaux*. Goitres and ſickly looks were apparently not uncommon in this diſtrict.

My horſes at laſt came; and though it rained, I was very willing to ſet off, to get out of this ſtinking hole and on my journey. The road was the ſame as before, over ſand-ſtone hills, and in the beds of brooks and rivers. I was ſo deſirous to get on, that though the road was really dangerous, and very much ſo in the dark, I continued travelling till near ten at night, when I deſcended at a kind of public houſe. This was nothing more than a very large ſhed or barn; at one end of which there was a hearth, and a few embers

on

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on it; neither eggs, butter, cheeſe, nor milk was to be had; nothing but coarſe bread and brandy. As uſual, I lay upon ſtraw.

I was off again in the morning before ſun-riſe; the ſame vile road ſtill continued. Michlinitz, which was the firſt place I reached in the morning, although a pretty good town, has not a ſingle inn; but an old German ſoldier whom I conſulted on the important, and here difficult buſineſs of obtaining a good breakfaſt, conducted me to a houſe which was made uſe of as an inn. I was ſhewn into a tolerably good room, with three or four ſquare tables in it, like a coffee-room; and as ſuch I believe it occaſionally ſerved, though it ſerved likewiſe as a laboratory for taylors. I now got good white bread and butter; and as I had taken the precaution of having a ſmall ſupply of chocolate with me, I fared pretty well; and from the number of headleſs ducks and unfeathered fowls that were lying about the kitchen, I believe a good dinner, on giving notice, might be had likewiſe. If we ſhould conſider diviſion of labour as any ſign of the ſtate of civilization of a country, we ſhould be induced to form a very unfavourable opinion of Michlinitz, and of Galicia in general; where it ſeems the buſineſs of an innkeeper is not yet known as a diſtinct and ſeparate calling.

My breakfaſt over, and my horſes fed, I continued my journey, and over the ſame ſand-ſtone-hills. I have often lamented, that from the want of a proper education, peaſants too often juſtify the remark contained in theſe old verſes:

Quando

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Quando mulcetur, villanus pejor habetur;
Pungas villanum, polluit ille manum.
Ungentem pungit, pungentem ruſticus ungit.

My driver was a ſtriking example of this: when we ſet out from Raaba, he reſpected me ſo highly, that he was afraid of getting upon his own cart, in which I travelled, and ran by the ſide. Out of good-nature I made him get up. His reſpect for me from this moment gradually diminiſhed, till before the evening was over he became almoſt inſolent. This increaſed ſo far to-day, that I was obliged often to threaten to knock him down; and, had the journey laſted half a day longer, I do not doubt but I ſhould have been compelled to put my menaces in execution. But I ſoon reached the long-looked for Wieliczka, though not before my cart was overturned, and ſo completely, that myſelf and baggage were turned out into the road; yet no damage was done, my barometer was not even broken.

Wieliczka, a place ſo much frequented by travellers, to be without an inn, it will hardly be credited; yet it is true, it has no inn. I ſent my ſervant in one direction, whilſt I went myſelf in another; but we were both equally unſucceſsful: we found one or two houſes which had a ſpare room to let; and one or two places where ſomething to eat might be had; but ſuch a thing as an inn was not to be found. To one of the latter, a kind of eating-houſe, though upon a very ſmall ſcale, I was compelled to go; and in a ſhort time I had

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three or four excellent diſhes with their requiſites, good bread, good cheeſe, and good wine, ſet before me. After dinner I conſulted with my hoſteſs about a lodging; ſhe candidly acknowledged ſhe had no accommodations for me; but would for a day or two give me a ſpare room. Though this was ſo far from having a bed in it, that it was even without a bed-ſtead or a chair, yet I was obliged to accept the offer; for I had no time to loſe in looking after better accommodations, and there were but little hopes of ſucceeding if I had. Baron Verner, the director of the mines, being out of town, I waited immediately after dinner upon the next in authority, the *Ober Bergs-Verwalter* Seling. He received me in a very friendly manner, conducted me about the ſalt magazines, and ſhewed me the machinery and every thing which lay aboveground, for it was too late to ſee the mines; and he invited me to breakfaſt with him next morning, and promiſed then to give me a good guide.

The next morning, after breakfaſting with this gentleman, I viſited the mines. I was let down in the moſt convenient manner, being ſeated on a belt, with another behind my back. Some workmen deſcending at the ſame time, and the belts being faſtened to the cable one above another, there were two or three tiers of us. I could, as it is generally the caſe, by my own obſervations learn nothing of the ſtrata through which I paſſed: but the following account of the ſtrata covering the ſalt, I received from a moſt intelligent man:

Vegetable

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Vegetable ſoil - - - -	2	fathoms.
A ſandy kind of clay, called by the Germans *Leim*	5	
A very fine ſand like Tripoly, effervеſcing with acids. It is here called *Triebſand*; in Poliſh, *Süs*	3½	
Marl with ſand, and mixed with looſe ſtones -	9	
Sand-ſtone - - - -	1	
Marl mixed with ſalt in ſmall particles and cubes	20	

Such luxuriant accounts have been given of theſe invaluable mines, that every modeſt account of them muſt now be found dull and inſipid. I ſhall therefore confine myſelf to thoſe things which intereſted me as a naturaliſt. The commodiouſneſs of the galleries, and the fine broad flights of ſteps, muſt not be paſſed over in total ſilence, as being in perfect contraſt to what is met with in other mines; and the dryneſs is not leſs remarkable. Inſtead of mud and dirt, I was rather troubled with duſt. This probably is cauſed by the attraction of moiſture by the ſalt; neighbouring bodies are by this means deprived of their humidity, and the ſalt which has attracted the humidity is taken out; and then freſh ſurfaces are expoſed, and the little communication the mines have with the open air prevents a quick ſupply of humid air. It is to this dryneſs that we muſt attribute the durability of the wood employed in ſupporting ſome part of the mines. It remains here for generations without rotting, though in ordinary mines ten or twenty years are often ſufficient to bring it to total deſtruction.

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The ſcientific traveller is often much incommoded by common travellers through their numbers ſetting the taſte, and deciding what are the things moſt worthy of notice; he is by this means hurried about by his guides, from one trifling thing to another, and is perhaps never ſhown objects of real curioſity. Great excavations famed for their echoes, and a chapel cut out in the ſalt, were the firſt things I was carried to ſee. Some of the former are ſo vaſt, that a houſe of many ſtories high might be built within them. The chapel, in which formerly maſs was celebrated two or three times a week, is entirely of ſalt, even to its altar, and its ornaments of columns, pillars, arches, ſtatues, &c. &c.

The firſt thing that drew my attention, was the appearance of immenſe blocks of ſalt being embodied in the ſalt-marl. As I walked through the galleries, ſometimes I ſaw the upper, ſometimes the lower end of a block; and often, though the galleries were three or four yards high, both were ſtill concealed, and I could only obſerve its breadth. In ſome parts theſe blocks formed the ſides of the gallery for fifteen or twenty yards, as the galleries had been cut through them; but now and then, when the fragments were ſmall, all their dimenſions (on one ſide) were expoſed.

Theſe blocks muſt not be conſidered as rarities; they form the upper bed, from whence the whole of the ſalt called Green Salt is dug. In one of theſe, I believe, the chapel is dug, and the great

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great excavations I lately mentioned, which are called Kammers (chambers), of which there are forty or fifty of different ſizes, have been made by digging out the ſalt lying in ſuch huge blocks. Their angular ſhape is ſufficient to ſhow that they were not originally ſo formed, but that they are fragments of an immenſe thick bed of ſalt, which by ſome cataſtrophe (many of which our globe, I mean its ſurface, has certainly undergone) has been broken in pieces.——Blocks likewiſe of ſand-ſtone are found ſometimes imbedded in the ſame ſalt-marl. This marl itſelf is ſtrongly impregnated with ſalt, which univerſally pervades it in the ſhape of irregular cryſtals. From the abundance of pure ſalt, this is thrown away; but in many countries of Europe it would be of immenſe value. After wandering a good while amongſt the *Green Salt*, I was conducted lower to ſee the *Szybicker Salt*. This forms a bed; and, where I ſaw it, two or three yards thick. This is the pureſt ſort, and is only exported to Poland, or other foreign countries; for the emperor, like a provident maſter of a family, ſuffers only the worſt to be conſumed by his own ſubjects. This is politic, but hardly juſt: it is hard that the Galicians ſhould not be allowed to enjoy what Nature has given them in ſuch abundance. This regulation took place under Joſeph II.; and the reaſon was, that by none but the beſt ſort being ſent into foreign countries, a greater demand for it might be induced; and then the *Green Salt* could not be thrown away.

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The green ſalt, which is reſerved for Galicia, derives its name from a greeniſh or rather blackiſh caſt it has. The cauſe of this colour is eaſily found out if the ſalt is examined with a lens; it is then ſeen that it is throughout ſcattered with remarkably ſmall roundiſh black grains, like fine gunpowder *. Theſe grains, I think, are of the nature of argillaceous ſchiſtus: they are eaſily ſcratched with a pin. In other reſpects the *Green Salt* is like the *Szybicker*, which is ſparry †.——All the ſalt here is uſed as produced by nature: no art of any kind is made uſe of, except in taking it out of the mines; and this is very ſimple. Where I ſaw the miners at work, they ſeparated large ſquares of ſalt from the ſalt rock on both ſides by deep fiſſures: they then further detached it by cutting away the ſalt above and below; and when only connected behind, wedges were driven in here, and the whole cube was thrown down at once. But other methods are taken, and gunpowder is even uſed. Theſe great blocks are afterwards hewn into the *batwans*, which are ſhaped like barrels, ſome of which, according to Mr. Guettard, are ſo large as to weigh four or five *milliers*; that is, about two ton and a half. Thoſe that I ſaw certainly could not be half this weight. They are

* In Poliſh it is called Makowka, from Mak, ſignifying Poppy Seed.

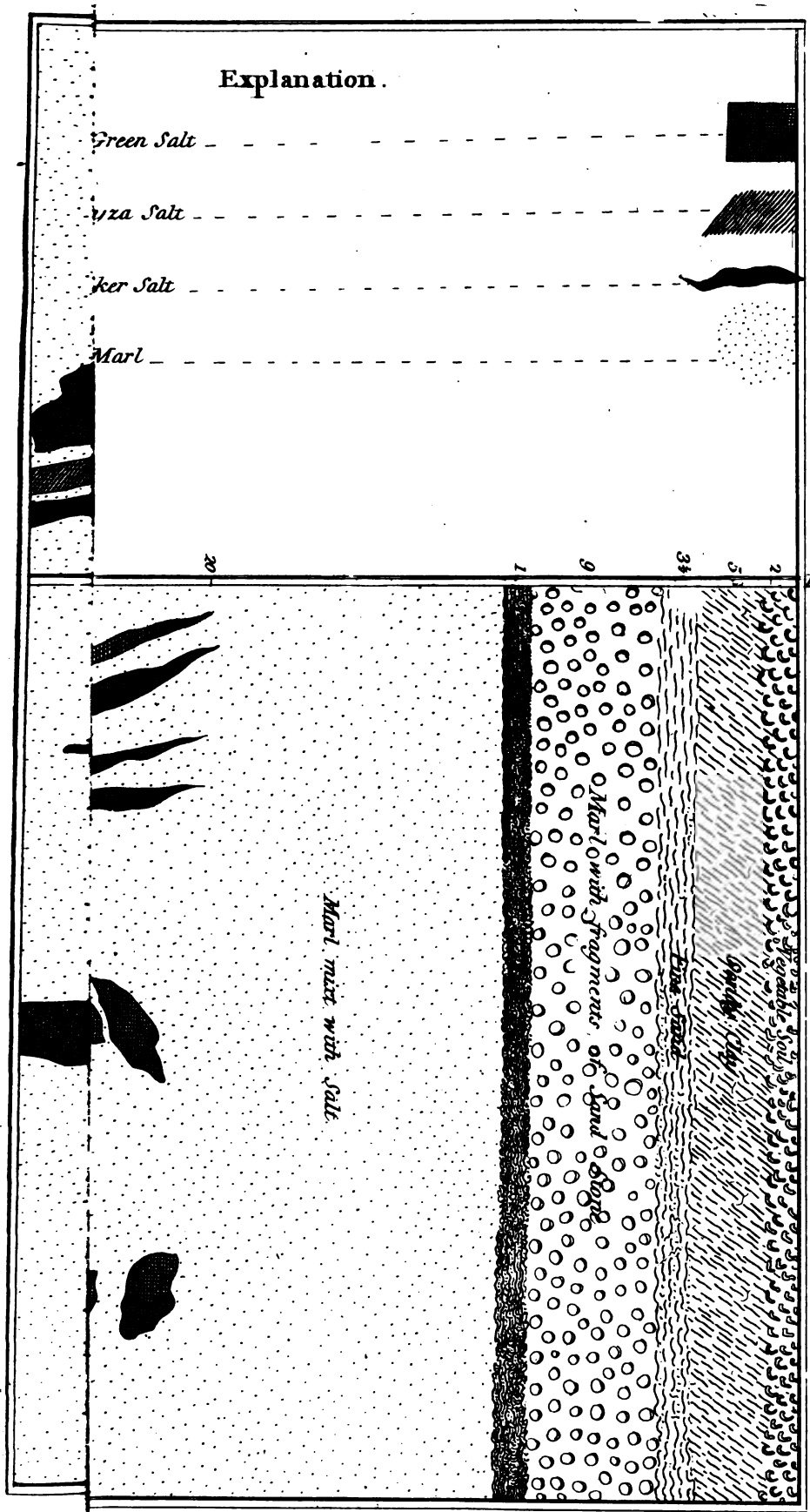
† Muria ſpatoſa. Szybick Salt.

Spatoſa diaphana, lamellis minoribus.

Muria ſpatoſa. Green Salt.

Spatoſa dilute nigricans ſubdiaphana lamellis parvis, granulis rotundatis nigris mollibus minimis inſperſis.

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Transverse Vertical Section.

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likewiſe cut into oblong ſquares of about a hundred weight and a half; the ſmall fragments are put into barrels.

How far the bed of *Szybicker* ſalt extends is not known; but after mining ſix hundred fathoms from eaſt to weſt, and two hundred fathoms from ſouth to north, ſalt is ſtill found.——For fear of water, the miners are careful not to dig deeper to aſcertain the nature of the ſtratum beneath the Szybicker ſalt. A hundred and twenty fathoms is the greateſt depth of theſe mines.——Theſe two kinds of ſalt form the riches of the Wieliczka mines, from which about ſix or ſeven thouſand hundred weight is annually dug. The green ſalt is ſold to the Galicians at two guldens and ſeven and a half creutzers (about four ſhillings and three-pence) the hundred weight. Five hundred men are employed in them; but theſe do not live here as ſome have pretended, but come out when their hours of work are over, as in other mines.

Both ſalt and freſh water are in theſe mines. From the firſt, ſalt formerly was made by boiling it; but on account, I believe, of the dearneſs of fuel, this practice was given over in 1724: it is now drawn up in leather ſacks to keep the mines dry, and is thrown away. The freſh water is in ſmall quantities, and ſerves for the horſes: there are twenty-four, and they conſtantly live here.

It often happens that the richeſt mines are the pooreſt in mineralogical

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logical curioſities; theſe afforded me none but the *Kroeſtein*, or *Pierre de trippes*, and a ſparry parallel-radiated ſalt. Some Mineralogiſts have conſidered the former as *Gypſum*, others as *Barytes*. Its ſpecific gravity, which is 2,903, has probably led to this latter ſuppoſition; it appears from Mr. Born's *Catalogue Raiſonné*, that this was his opinion. Its great weight induced me to ſend it to the celebrated Mr. Klaproth to be chemically inveſtigated, who informed me that it was nothing but *Gypſum*. Its form is very remarkable. Under the Szybicker ſalt I detached pieces quite flat, about an inch thick: in other places I ſaw it forming ſmall veins, ſometimes running in ſtraight lines, ſometimes very ſerpentine: Plate the 9th repreſents it in this ſhape. At other times the undulations are very deep and cloſe together, as repreſented by the 8th plate. Theſe two ſpecimens I have in my collection; they were given me by Baron Verner, and came, I believe, from the Bochnia mines, where the fineſt ſpecimens of this foſſil are found. But the ſpecimen from which the 10th plate was drawn, which was given me by Mr. Lebznlterners? the engineer, a moſt intelligent and obliging man, and a very good mineralogiſt, is from Wieliczka. I have ſmall ſpecimens of it likewiſe in a botryoidal form. When it is taken from the mine, it has a blueiſh caſt, and is ſomewhat diaphanous; but after it has remained in water a ſhort time, it becomes of a pure white, and perfectly opake; and ſomething of a confuſed very fine fibrous texture may then be obſerved. It is often mixed with another kind of gypſum, which does not loſe its tranſparency by remaining in water, but is ſomewhat ſoluble in it.

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Kroestein.

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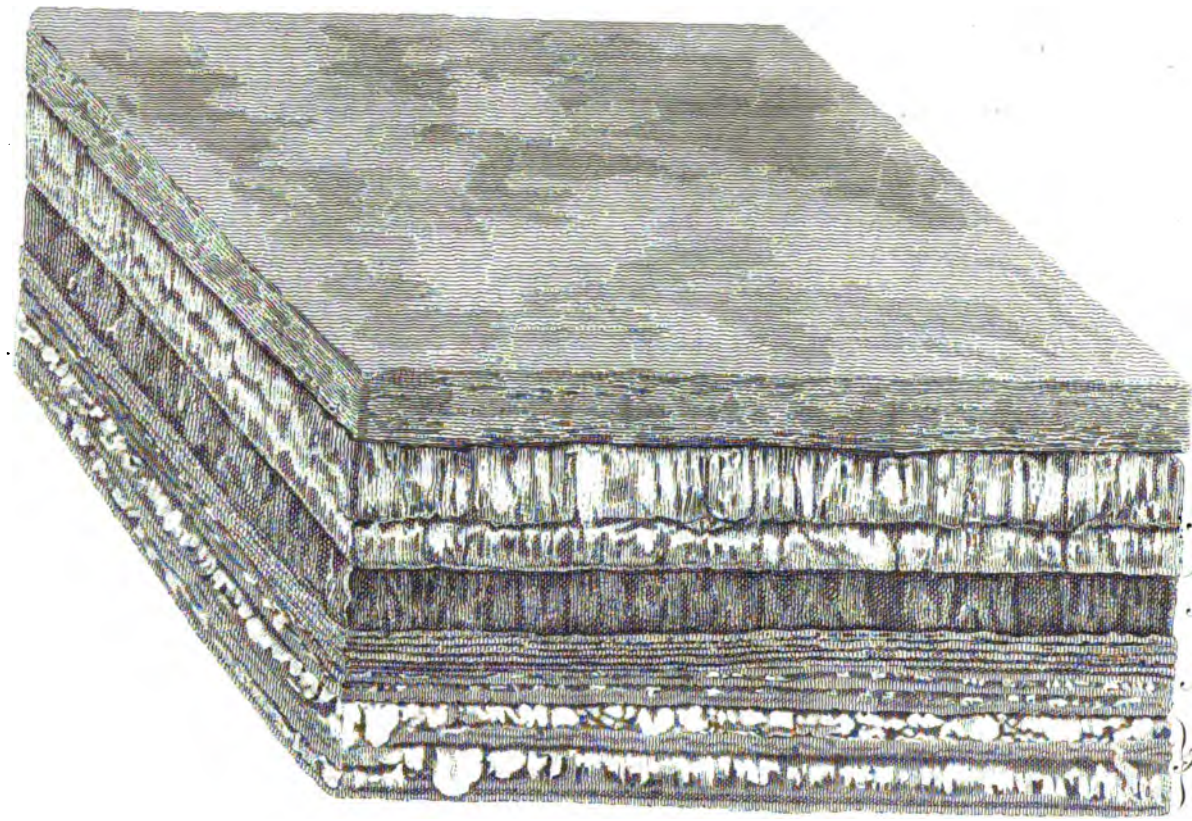


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Kroastein with thin strata of Marl & Salt?

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This is repreſented at 4 in the 10th plate, where it in a manner ſurrounds the other gypſum, and it forms the ſtreaks in the ſpecimen repreſented plate the 8th: one of theſe I have marked with an *.

The parallel-radiated ſalt † is a very beautiful foſſil, and is found here in great plenty: it forms in ſome parts pretty thick veins, and is evidently, compared with the other ſalt, a thing of modern formation; the fibres or rays run acroſs the vein like the *Inolithus* or *Stirium*.——Where water percolates through the roof, ſuperb botryoidal ſtalactites of ſalt as white as ſnow are formed.

Mr. Fichtel having given it as his opinion that the ſalt mines of Tranſylvania belong to the primitive materials of our globe, I was anxious to ſee if here, as in other ſalt mines, there were not ſome medals of the reign of Neptune to be found. In the heart of the *Szybicker* ſalt I could not learn of any having been ſeen, but many in the marl inveloping the blocks of green ſalt. I am indebted to the Engineer for a ſpecimen of marl containing two bivalve ſhells, found thirty-ſix fathoms deep; for a crab's claw in the ſame, found at 40 fathoms; and a piece of charred coal mixed with ſalt and the lately mentioned gypſum, found at a hundred fathoms.

I wandered about in theſe vaſt ſubterranean excavations for four or

† Muria radiata.

Hyalina, radiata radiis parallelis parvis.

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five hours, yet I ſaw only a ſmall part of theſe mines; but as I was informed I could ſee only a repetition of the ſame things, I was ſatisfied, and came out.——Baron Verner being returned, I waited upon him in the afternoon; he received me in the kindeſt manner, and invited me to breakfaſt and dine with him the next day, which I accordingly did, and he gave me leave to pick out from his own ſmall collection, a few choice ſpecimens of the lately mentioned gypſum. What grounds Mr. Caroſi had for being ſo diſpleaſed with the directors of theſe mines I don't know; I had every reaſon to be contented. He ſays he was obliged to diſguiſe himſelf, or they would probably have refuſed him permiſſion to ſee the mines, and obliged to conceal the ſpecimens he wiſhed to bring away with him: this muſt have been a particular caſe; I was allowed to carry off every thing I could find.

A day's journey from hence is Bocknia, another ſalt mine, but not ſo rich.———On both ſides of the Carpathian chain, the country is ſtored with ſalt; and that from the Marmoruſs on the ſouth, and that from theſe mines on the north, are perfectly alike.——On the ſouth ſide it begins at Eperies, and extends eaſtward through the county of Marmoruſs and Tranſylvania, which are immenſely rich in ſalt, as far as Cronſtadt; and Mr. Fichtel enumerates a hundred and fifty-nine different places where either rock ſalt or ſalt ſprings are found. Here, on the north ſide of this chain, it exiſts in great profuſion; firſt at Wieliczka, then at Bocknia, again at Sambor, and in

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the Buckovine and Moldavia, as far as Okna by Rimnik; and in this run Mr. Fichtel enumerates fifty-eight different places.

It is worth remarking, that the preſent rude inhabitants of Moldavia and Tranſylvania, who live in the neighbourhood of ſalt ſprings, have the ſame method of procuring ſalt which was common amongſt the ancient Gauls and Germans; this was to pour gradually the ſalt water upon a wood fire. Pliny ſays *, "Galliæ Germaniæque ardentibus lignis aquam ſalſam infundunt. Hiſpaniæ quadam ſui parte e puteis hauriunt, muriam appellant: & illi quidem etiam lignum referre arbitrantur. Quercus optima, utque per ſe cinere ſincero vim ſalis reddat: alibi Corylus laudatur, et a infuſo liquore ſalſo carbo etiam in Salem vertetur. Quicumque ligno confit ſal, niger eſt."— And Tacitus ſays †, "Inde indulgentia numinum illo in amne illiſque ſilvis ſalem provenire, non ut alias apud gentes eluvie maris areſcente, ſed unda ſuper ardentem arborum ſtruem fuſa, ex contrariis inter ſe elementis, igne atque aquis concretum."

Immediately after dining with the Baron, who is married to an Iriſh lady, I left Wieliczka for Cracow. To be within a ride of two or three hours of ſo celebrated a city, and not to give oneſelf the trouble of going to ſee it, would ſhew very little curioſity; but I only ſtaid there a day and a half, to ſee the palaces and the beauti-

* Lib. 31. c. 7.

† De Moribus Germanorum, lib. 13. c. 57.

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ful churches, the botanic garden which has been but lately made, and the obſervatory which is in it, the collection of natural hiſtory, and the library of the univerſity. Some idea may be given of this laſt, by informing my readers, that in the medical faculty there are no books ſo *modern* as Boerhaave, and that the writings of this great man are not *yet* here!!!

The walls of the palace, and of the houſes oppoſite to it, have ſtill the marks of balls from the muſquets of former contending factions; and when I was here freſh troubles were again ready to break out, and now Poland is annihilated. The Ruſſian troops, which for ſome time had been quartered here, and had mounted guard with the Poliſh, or rather oppoſite to them (for there were two guards everywhere, one of Ruſſians and another of Poles), left this town the day before my arrival; and the rumour then was, that they were to be replaced by Pruſſians, againſt whoſe entrance ſome trifling fortifications were conſtructing. The Auſtrian troops, from what I heard, would have been more welcome. I hardly ever ſaw finer troops than the few Poliſh I ſaw here; but a diſorganized ſtate with internal feuds, and ſurrounded by the moſt powerful ſovereigns coaleſced to deſtroy it, what can it do? But not a word more on politics, for

——"My ear is pain'd;
My ſoul is ſick with ev'ry day's report
Of wrong and outrage with which earth is fill'd."

Cracow

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Cracow ſwarms with Jews: many of them have little of the Jewiſh features: the breed probably through *accidents* has been *croſſed*. Beſides carrying on their uſual buſineſſes of uſury, receiving ſtolen goods, ſelling old clothes, &c. &c. they act as *porters*, *ciceronis*, and *laquais*, and offer their ſervices to travellers, dreſſed in their long black robes, as they enter the city. In mine I was fortunate. Regular eſtabliſhed inns are not even common, I believe, at Cracow. I was conducted by him to a Mrs. Le Bon, where I was remarkably well off in a family way: ſhe dealt in chocolate, &c. and her huſband, Mr. Batch, who was one of the town-council, was a very well informed man, and ſpoke three or four languages: he was really kind, and conducted me about to ſhow me every thing that was worthy of notice.

Friday afternoon, the 6th of September, I ſet out to return to Pribilini, where I had left my baggage: I ſoon overtook near a ſcore of empty carts; the drivers, though they knew they prevented me from paſſing them, would not give themſelves the trouble to make way for me: my ſervant got down, and by giving each of them a hard thump on the ſhoulder, made them turn to one ſide. An old drunken ſoldier obſerving their ill-natured obſtinacy, probably in hopes of getting a dram, drew his ſabre and ran after them as well as an old drunken man could do. The drivers were now all alarmed, each endeavoured to get firſt out of the ſuppoſed danger, and the greateſt confuſion was the conſequence, and two poor men with earthen ware-

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ware were thrown down into a deep dry ditch. I got through them unhurt, but mortified, as I have often been, to ſee that there are men ſo debaſed, that ill treatment is the only means to induce them to act with propriety.

I reached Michlinitz at night, and put up at the Taylors, and the next evening I got to Raaba; but the town or village-houſe was locked up, nobody was to be found; the village ſeemed quite deſerted, even the cuſtom-houſe officers did not make their appearance. In this difficulty I addreſſed myſelf to the lord of the village, and I was received in a truly hoſpitable manner: but my worthy hoſt knew neither French nor German; Latin was therefore our only means of communication; and with my good landlady, who took as much care of me as though I had been her ſon, I could not exchange one word, as ſhe only ſpoke Poliſh.—I had already ſeen enough of the inconveniences of compelled labour, and had felt ſome of them: here I muſt feel more. Though lodged in the houſe of the lord of the village, I was obliged in the morning to wait two hours for horſes, and neither my promiſes nor his threats could make his peaſants move a bit the faſter. This was Sunday; and as I paſſed through Dunavitz, which is the largeſt town in this part of the country, it was quite like a fair: articles of every kind were expoſed in the ſtreet for ſale, as they are with us in fair time. I reached Withof in the evening, and took ſhelter under the judge's roof; and the next morning I put my portmanteau on a horſe, and ſet out to croſs the Alps.

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The Carpathian chain appears from hence beautiful, and very different from what it does on the other ſide. At Keſmark theſe mountains appeared to be in a cluſter rather than in a chain; for the mighty Krivan and its *ſatellites* lie back, and are not ſeen from thence. On this ſide the chain runs in a ſtraight line, and the high peaks, from lying at the back, are not ſo pre-eminent. I ordered my ſervant to go to Koſteleſko with my baggage, and wait for me there, whilſt I took a ramble amongſt the moſt outward rocks of this great wall, for ſuch theſe mountains appear from hence. An hour after leaving Withof, in the neighbourhood of which I had obſerved ſand-ſtone ſtrata, I came to a lime-ſtone rock full of petrifactions. It was the *Lapis frumentarius* *; it ſeemed to form a bed which roſe towards the Alps, under an angle of about forty. I obſerved it in a hill of about a hundred or a hundred and fifty yards high; but whether it entirely formed this hill or not I could not ſee. To the left of this is ſome coarſe ſand-ſtone, which I rather think belongs to the primitive kind. After this I entered the hills on my left, to aſcend to ſome very bold perpendicular rocks which I had noticed on ſetting out. The rocks here were primitive lime-ſtone, but they had in ſome places a pretty regular perpendicular ſtratification; but this could not be traced far. After aſcending for two or three hours, I found my guide had brought me into a wrong valley; but it was now too late to return, and I continued my courſe; and when

* Oryctographia helvetica Scheutzer. fig. 158.

near

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near the top I met again with the *Krumholz*. The lime-ſtone at laſt diſappeared, and I ſaw then nothing but granit. The lime-ſtone evidently lent upon the granit; and on one ſide, and I think it was on the ſide facing the great granit Alps, I found a little, in ſome places lying immediately upon it, in ſmall detached patches like ſnow before it has melted all away, and not in looſe blocks. At the top the granit became ſchiſtic, and paſſed into the *Micaceous Schiſtus (Glimmer ſchiefer)*. But to the eaſt of this mountain, which is called in Poliſh Czervonnivirch, or the Red Mountain, the lime-ſtone out-tops the granit: I mean it is higher than the granit, but it is not immediately incumbent upon it. This latter kind of lime-ſtone, though perfectly of the texture of the former, that is compact, is probably of a different formation. It is apparently ſtratified, and the ſtrata are nearly horizontal, though rather riſing towards Galicia, that is in a contrary direction to the great chain. Had I not ſeen in other places primitive lime-ſtone perfectly ſimilar to this, now and then for a few yards aſſume a ſtratified appearance, which ſoon after entirely ceaſed, ſo that for miles and ſcores of miles, not the ſmalleſt indication of it could be obſerved, as I have ſeen in the lime-ſtone mountains of Stiria, I ſhould not have heſitated to place this amongſt the ſtratified mountains. A thick miſt, the greateſt enemy to alpine travellers, ſoon put an end to my enquiries. The mercury roſe in deſcending from the Red Mountain to Koſteleſko, three Engliſh inches and five lines; that is, very near three inches and a half.

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Though from Koſteleſko the fineſt botanical excurſions might be made amongſt the very high and beautiful lime-ſtone mountains which here prevail, which, from the variety of their heights and expoſures, muſt certainly be very rich in alpine plants, I was obliged to leave them and preſs forward. It was now the 10th of September, and I had ſeen none of the famous mines of Hungary except Schmölnitz; I haſtened back therefore to Pribilini. After leaving Koſteleſko I walked about three miles, always amongſt the lime-ſtone mountains: this is their thickneſs in this part of the chain, and they, as before, afforded me the moſt beautiful ſcenery. How far they extend in length to the eaſt and weſt, that is, how far they accompany the chain of granit, I do not exactly know. I could obſerve as I came from Galicia, that they ſeemed to extend a great way to my right and left, conſtituting the external coating of this ſide of the Carpathian chain. One of the miners at Koſteleſko informed me, that they extended about ſeven or eight German miles, that is about thirty or forty Engliſh. Without going out of my way, I collected on theſe rocks ſome beautiful ſpecimens of the *Filago Leontopodium.* Sometimes I ſaw the primitive ſand-ſtone, but I can ſay nothing of its ſituation. After leaving the lime-ſtone all is granit, or granit approaching to micaceous ſchiſtus, *Glimmer ſchiefer.* This latter I only obſerved about the top of the mountain which forms the limits between Hungary and Galicia. — It will be remembered, that on the ſouth ſide of this chain I had hitherto found no lime-ſtone mountains immediately connected with the granit; for the

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lime-ſtone rocks of the *Fleiſch-Bank* form rather the beginning of thoſe which run on the north.——I have heard it ſaid, that the country on the north ſide lies higher than that on the ſouth: I have no grounds for forming ſuch a ſuppoſition: it neither appeared to me ſo, nor did my barometer indicate it.

CHAP.

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CHAP. XVIII.

CAVERN OF DEMANOVO—NEUSOHLN AND THE MINES OF HERREN GRUND—BIOGRAPHICAL SKETCH OF BARON BORN—SCHEMNITZ, KREMNITZ, AND KONIGSBERG, AND THEIR MINES.

THE day after my return to Pribilini I paid a viſit to Mr. Emerich Pomgratz at Andraſalva. In a neighbouring limeſtone rock there is a great cavern called Demanovo, which I intended to have ſeen, but ſome trifling travelling mortifications prevented it: and as I was only informed of its being a great cavern, enough of which I had already ſeen, I was very indifferent about it: but had I then known that this was the cave which Bruchman ſays is ſo full of bones, and out of which the ſkeleton of the *dragon*, which was ſent to the Elector of Saxony, was taken, I ſhould certainly ſoon have levelled all theſe trifling difficulties, and I ſhould probably have been rewarded with a fine ſpecimen of the ſkull, not of a dragon, but of the *Urſus maritimus*, or *Urſus ſpelæus* according to Roſenmuller, for my trouble; for thoſe which are found in the cavern of the Hartze, to which theſe are likened, are of this kind.

Bruchman in his 77th epiſtle* ſays: "Cum iter ulterius in iſto

* Epiſtola itineraria.

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ſubterraneum proſequeremur, magnos acervos ſic dictorum oſſium draconis, ex quibus & ſingula antra nomen antrorum Draconum acceperunt, offendamus, quæ vero nihil recedebant ab iſtis oſſibus, in ſpecubus Sylvæ Hercynicæ colligendis, & Unicornu foſſile vulgo ſalutatis. In patriam maxillam, dentes, ungulam & dorſi vertebram, paulo tamen duriorem, nec tam molliter calcinatam, ac oſſa antrorum Sylvæ Hercynicæ, ſed firmiorem & compactiorem, mecum attuli; hæc oſſa in tanta hic proſtant copia, ut integra plauſtra colligenda. Dominus Georgius Bucholz, olim Scholæ Nagy-Pallugyenſis Rect. pronunc verbi divini Evangelic. ad eccleſiam Windicam Miniſter ac Rector Scholæ Keſmarkienſis, vir ſane curioſus, qui multam operam naturæ miracula in regionibus Hungaricis perſcrutandi impedit, aliquando integrum Sceleton Draconis, ut vocant, in hoc antro repertum, in Technophylacium Regium Dreſdam miſit, pro quo glorioſiſſimus Rex nummum aureum, thaleri magnitudinis, in uno latere Regis auguſtiſſimi imaginem, in altero urbem Dreſdam exhibentem, laudato Rectori gratioſiſſime dono dedit."

At a ſmall diſtance from Demanovo is St. Ivany, where there is an air proceeding from a ſpring, which is famed for poſſeſſing the ſame properties as that of the *Grotto del Cani*. Oppoſite to Andraſalva the Carpathian granit mountains, which gradually diminiſh in height from the Krivan, begin to get a coating of limeſtone on this ſide as they had on the other, and the rocks and hills on the ſouth ſide of the valley ſtill continue of limeſtone.

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The next day I made another ſtage weſtward, to Tepla, to pay a viſit to Mr. Dvonocovith, to whom this place belongs, whoſe acquaintance I had made at Peſt. Tepla has a very good warm ſpring, ſo loaded with calcareous earth, that the very cray-fiſh found in the rivulets formed by it, are, whilſt alive, incruſted; and we had, uſing common language, boiled *petrified* cray-fiſh for dinner: they were very good. All the low rocks here have been formed by the overflowings of this, or ſimilar water. Higher up towards the mountains, ſome petrifactions, partly changed into pyrites, are found in clay. Sand-ſtone ſtrata are likewiſe found here. At Tepla I left the Carpathian chain, and the valley in which I had been travelling all the way from Keſmark: indeed this ſeems here to terminate by the calcareous mountains from the great chain and thoſe of the ſouth ſide of the valley uniting.

But before I travel further, before I leave my pleaſant alpine views, let me pauſe and anſwer ſome queſtions which I fancy I hear ſome philanthropiſt in a country far remote from this, propoſe to me; and ſuch as I have often aſked of others returning from amongſt ſome ſuppoſed rude uncultivated people, and which even I have often put to myſelf, when from an elevated ſituation I have enjoyed a very diſtant view; queſtions ſuch as theſe: How do men live there? In ſuch a climate, in ſuch a frightful country, and under ſuch laws; do men really live, and is it poſſible that they are happy?—Fortunately for mankind, they do not feel half the evils for which they are pitied,

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and each nation in its turn looks with pity or contempt on the other. Though this valley is high, and grows little wheat, and wine and tobacco, the riches of other parts of Hungary, fail; yet it is as well cultivated and as well peopled as any part of Hungary. From the high ſituations I was often in, I had always the pleaſing ſight of a well-peopled country below me, and frequently could count at one glance near a ſcore of villages. From a gentleman engaged in drawing up the *conſcription* liſts, and meaſuring the county, by order of the Emperor Joſeph, I received this account. "In the county of Liptau it was found that there were 57,000 acres of 1300 ſquare fathoms each, and likewiſe 57,000 ſouls; and in this eſtimate the land lying in fallow, which is one-third of the whole, is reckoned." And public inſtruction, how is that?—Not worſe than in other countries: moſt of the villages have their miniſters and their ſchool-maſters, and this is more than can be ſaid of ſome other countries which boaſt much of their advantages. But education, on which every thing in ſociety depends, how it is neglected every where! What are our principles for conduct but an heterogeneous maſs of falſe religion, falſe philoſophy, and erroneous knowledge of the world, ſupported by abſurd dogmas, and ſilly maxims and proverbs? MAN, it grieves me to ſee thee thus neglected, whilſt premiums are given for an exuberant growth in gooſe-berries.

After leaving this valley I travelled ſouthward towards the mines of Lower Hungary. Limeſtone hills and rocks ſtill accompanied me,

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and often formed beautiful ſcenery; but the road, though a poſt road, was moſt abominable; great ſtones and fragments of rock which had fallen down from the neighbouring heights, had never been removed; and though I travelled with four horſes I was obliged to go *à pas* almoſt the whole way. This country grows a good deal of hemp, and the ſtately Beech, which I had not ſeen ſince I left Schmölnitz, made here again its appearance. Impeded by the badneſs of the roads, and delayed by the difficulty of procuring horſes, I was compelled to travel by night to make up for the loſt time, and I ſet out from Rivulſam after it was dark: after going through a *paſs*, I aſcended a very ſteep and high limeſtone hill, the deſcending of which was really dangerous. I ſtopped and paſſed the remainder of the night at Altgebirge, where the furnaces of the *Herren-Grund* mines are; and early in the morning I continued my journey to Neuſohln, which is only an hour or two diſtant. In this morning's ride I ſaw more limeſtone, and in ſome places the primitive ſand-ſtone.

Neuſohln is well built, and prettily ſituated by the ſide of a river, and amongſt high hills covered with wood. It was Sunday when I arrived here, and in the evening the market people began to collect together for the next day's market. A finer ſhow of fruit, I think, I never ſaw. Having paid my reſpects to the principal men in the mining department, I went the next morning to the mines at Herren-Grund, which are two or three hours diſtant. They lie in an elevated

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elevated ſituation amongſt hills: all the way there I found limeſtone, but nearer the mine the ſand-ſtone is often ſeen, and ſtill nearer a kind of *micaceous ſchiſtus (Glimmer ſchiefer)*, and it is in this, or a variety of it, that the mines are. On enquiring at Neuſohln, of thoſe who ought beſt to have been able to have told me, of what nature the rock here was, I was informed it was granit, and the vein quartz. Granit it certainly is not. Ferber, I think, ſomewhere calls it *Glimmer ſchiefer*, but it is very different from a true *Glimmer ſchiefer*, micaceous ſchiſtus; and Born's *Gneiſſum vireſcens Ind. Foſſilium* is from hence; yet this is not a true Gneiſs. It is diſtinct from any well characteriſed foſſil, yet in ſome places it approaches pretty near to both of theſe, and likewiſe to Schiſtus *. It is probably allied to the Arenarius griſeus, *Graue Wache;* but I can by no means agree with Mr. Haidinger, of whom I have the higheſt opinion, that it is a *Saxum metalliferum* †.

The mines, which are copper, are now worked with loſs. Copper

* Gneiſum?

Ex granis parvis & minoribus Quartzi pinguis angulis integris, pauxillo Feldſpati carnei & Micæ argentiæ, ope Steatitæ dilute vireſcentis conglutinatis.

Gneiſum?

Ex granis parvis & minoribus Quartzi pinguis & Steatitæ dilute vireſcentis, ope Steatitæ rubro-hepaticæ conglutinati, textura ſubſchiſtoſa.

Ardeſia.

Hepatica lamelloſo-ſchiſtoſa, unctuoſo-nitens, fragilis, ſcriptura rubeſcente, lamellis Micæ argentiæ inſperſis.

† Syſtem. Eintheil. der Gebirgsarten, p. 44.

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is made here likewiſe by cementation, and a kind of verdegriſe or copper ore *(Cuprum æris)*. Though this latter is gained by a very ſimple means, and which has been long uſed here, I do not know of any thing of the kind exiſting elſewhere. Water out of the mines, and from the hills, is made to paſs through the rubbiſh brought out of the mines, which, in the very long ſucceſſion of time that theſe have been worked, now forms hills, and is received into wooden ciſterns which communicate with each other; and in paſſing from one to the other, depoſits a blueiſh green kind of ſediment, which is taken out once a year: the quantity is about thirty hundred weight.

In theſe mines beautiful roſe-coloured ſtalactites of cobalt vitriol are found. I collected ſome a foot long with a moveable drop of water within them; ſome are part roſe and part blue colour. Mr. Born in his *Lithophylacium* ſays, *an Vitriolum Zinci?* Mr. Gmelin calls it *Vitriolum Magneſii*, but adds a point of interrogation. Mr. Born in his late *Catalogue Raiſonné* conſiders it as a vitriol of cobalt, and ſays that it has been lately analyſed by an *eleve* of the Academy of Mines of Schemnitz, who extracted cobalt from it. I ſent ſome of it to Mr. Klaproth, who was ſo kind as to examine it and give me this analyſis. "Sixty grains of it diſſolved in water, and precipitated with vegetable alkali, gave four grains of a pale light blue precipitate, which turned black on being heated red hot. A part of it melted with microcoſmic ſalt, and likewiſe with borax, gave with both fluxes a bead of pure ſapphire blue. The remainder diſſolved in

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diluted muriatic acid, gave a ſympathetic ink, the traces of which on paper appeared of a yellowiſh green. It is therefore a real cobalt vitriol, only containing a little iron."

The amalgamation, notwithſtanding the oppoſition of the enemies, not of amalgamation, but of Mr. Born, ſtill goes on with vigour; but it is difficult to learn, what are the real advantages of it—for the friends of Mr. Born cry it up as much as his enemies run it down. I have converſed with ſome of the latter, who, I am ſure, though in other reſpects valuable men, would not ceaſe to decry it though it ſhould convert copper into gold. As the proceſs and the machinery have been ſo elaborately deſcribed, I ſhall ſay nothing on it, except that now, tubs ſomething like our barrel churns, but without the internal ribs, &c. and which are moved in the ſame manner, are ſubſtituted to the cylinders, for mixing the prepared ore with the mercury. But I cannot avoid ſaying a few words *en paſſant* upon the founder of theſe works: yet it is not Born's improvements in amalgamation, nor his other diſcoveries, nor yet his writings, which make him a great public character; it is rather his ſucceſsful endeavours to introduce a love of ſcience and uſeful knowledge where he had an opportunity.

The Baron was born at Carliburg in Tranſylvania, of a noble family, and came early in life to Vienna, and ſtudied under the Jeſuits; who, no doubt, perceiving in him more than common abilities,

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ties, and that he would one day be an honour to their order, prevailed on him to enter into it; but of this ſociety he was a member only for about a year and a half. He then left Vienna and went to Prague, where, as it is the cuſtom in Germany, he ſtudied the law. As ſoon as he had completed his ſtudies, he made a tour through a part of Germany, Holland, the Netherlands, and France; and returning to Prague, he engaged in the ſtudies of natural hiſtory, mining, and their connected branches; and in 1770 he was received into the department of the mines and mint at Prague. As we learn from his letters, this year he made a tour, and viſited the principal mines of Hungary and Tranſylvania, and during it kept up a correſpondence with the celebrated Ferber, who in 1774 publiſhed his letters.——It was in this tour that he ſo nearly loſt his life, and where he was ſtruck with that diſeaſe which embittered the reſt of his days, and which was only rendered ſupportable by a ſtrong philoſophic mind and active diſpoſition.

It was at Felſo-Banya where he met with this misfortune, as appears from his eighteenth letter to Mr. Ferber. He deſcended here into a mine, where fire was uſed to detach the ore, to obſerve the efficacy of this means, too ſoon after the fire had been extinguiſhed, and whilſt the mine was full of arſenical vapours raiſed by the heat. "My long ſilence," ſays he to his friend Ferber, "is the conſequence of an unlucky accident, which had almoſt coſt me my life. I deſcended the Great Mine to ſee the manner of applying the fire, and its

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effects on the mine, when the fire was hardly extinct, and the mine was ſtill full of ſmoke." How greatly he ſuffered in his health by this accident appears from his letter which we mentioned when we ſpoke of Tokay; where it will be remembered he complained that he could hardly bear the motion of his carriage: upon this misfortune he haſtened to Vienna. After this he was appointed at Prague counſellor of the mines. In 1771 he publiſhed a ſmall work of the Jeſuit Poda, on the machinery uſed about mines; and the next year his *Lithophylacium Borneanum.* This is the catalogue of his collection of foſſils which he afterwards diſpoſed of to the Hon. Mr. Greville. This work drew on him the attention of Mineralogiſts, and brought him into correſpondence with the firſt men in this line. He was now made a member of the Royal Societies of Stockholm, Sienna and Padua; and in 1774, the ſame honour was conferred on him by the Royal Society of London.

During his reſidence in Bohemia, he did not apply himſelf to the buſineſs of his charge alone; but his active diſpoſition induced him to ſeek for opportunities of extending knowledge, and of being uſeful to the world.——He took a part in the work entitled *Portraits of the Learned Men and Artiſts of Bohemia and Moravia* *. He was likewiſe concerned in the *Acta Literaria Bohemiæ & Moraviæ*; and the editor of the latter publicly acknowledges in the preface to it,

* Abbildungen Böhmiſcher und Mähriſcher Gelehrten und Künſtler.

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how much Bohemian literature is indebted to him. Prague and Vienna were both without a public cabinet for the uſe of the ſtudents: it was at his inſtigation that government was induced to form one, and he himſelf aſſiſted by his contributions and his labours. In 1775 he laid the foundation of a literary ſociety, which publiſhed ſeveral volumes under the title of *Memoirs of a private Society in Bohemia* *.

His fame reaching the Empreſs Mary Thereſa, in 1776 ſhe called him to Vienna to arrange and deſcribe the Imperial collection: and about two years after, he publiſhed the ſplendid work containing the Conchology: in the execution of this, I believe, he had ſome aſſiſtance. The Empreſs defrayed the expences for a certain number of copies. On the death of this patron the work was diſcontinued, her ſucceſſor, the Emperor Joſeph, not favouring the undertaking. He had likewiſe the honour of inſtructing the Arch-ducheſs Maria Anna in natural hiſtory, who was partial to this entertaining ſtudy; and he formed and arranged for her a neat muſeum. In 1779 he was raiſed to the office of *Actual Counſellor* of the Court-Chamber *(Hof-Kammer)* in the department of the mines and mint. This office detained him conſtantly in Vienna, and engaged the chief part of his time.

The conſequences of his misfortune at Felſo-Banya began now to

* Abhandlungen einer Privatgeſellſchaft in Böhmen.

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be felt in the ſevereſt manner; he was attacked with the moſt excruciating colics, which roſe to ſuch a degree as to threaten a ſpeedy termination of his life and miſeries. In this depth of torment he had recourſe to the uſual calmer of bodily pain, opium; and a large portion of this being placed by the ſide of him, which he was ordered only to take in ſmall doſes; once brought to deſperation through the intenſity of his pain, he ſwallowed it at one draught. This brought on a lethargy, which laſted four-and-twenty hours; but when he awoke he was free of his pains. The diſorder now attacked his legs and feet, particularly his right leg, and in this he was lame for the reſt of his life; ſometimes the lameneſs was accompanied by pain, ſometimes not. But his feet by degrees withered, and he was obliged to ſit, or lie, or lean upon a ſopha; though ſometimes he was ſo well as to be able to ſit upon a ſtool, but not to move from one room to the other without aſſiſtance.

His free and active genius led him to intereſt himſelf in all the occurrences of the times, and to take an active part in all the inſtitutions and plans for enlightening and reforming mankind. With theſe benevolent intentions he formed connections with the Free-Maſons, whoſe views in this part of the world were ſomething more than eating and drinking, as may be conjectured by the laws and regulations made againſt maſonry by the Emperor Joſeph. Under Thereſa, this order was obliged to keep itſelf very ſecret in Auſtria; but Joſeph, on his coming to the throne, tolerated it, and the Baron founded

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founded in the Auſtrian metropolis a lodge called the *True Concord.* This was no card club, or aſſociation for eating and drinking, where the leading members were choſen by their capacity for taking in ſolids and liquids, and where a good ſong was conſidered as a firſt rate qualification; but a ſociety of learned men, whoſe lodge was a place of *rendezvous* for the literati of the capital.

No doubt the obſtacles theſe gentlemen would find, to the progreſs of ſcience and uſeful knowledge, in the church hierarchy, and in the cabals of courtiers, would draw their attention to political ſubjects; and ſubjects were really diſcuſſed here which the church had forbid to be ſpoken of, and which the government muſt have wiſhed not to be thought of. At their meetings, diſſertations on ſome ſubject of Hiſtory, Ethics, or Moral Philoſophy, were read by the members; and commonly ſomething on the hiſtory of ancient and modern myſteries, and ſecret ſocieties. Theſe were afterwards publiſhed in the Diary for Free-maſons *, for the uſe of the initiated, and not for public ſale.——In the winter they met occaſionally, and held more public diſcourſes, to which the members of the other lodges were allowed acceſs. As moſt of the learned of Vienna belonged to this lodge, it was very natural to ſuppoſe, that many of the diſſertations read here were not quite within the limits of the original plan of the ſociety. It was theſe diſſertations, I believe,

* Journal für Freymaurer.

which

which gave rise to another periodical work, entitled, *Physicalische Arbeiten der einträchtigen Freunde in Wien*, which was continued for some time by the Baron and his brother Masons. He was likewise active in extirpating superstitions of various kinds which had crept into the other lodges, and equally zealous in giving to these societies such an organization as might render them useful to the public.

The Baron, and many others of his lodge, belonged to the society of the *Illuminated*. This was no dishonour to him: the views of this order, at least at first, seem to have been commendable; they were the improvement of mankind, not the destruction of society. Such institutions are only useful or dangerous, and to be approved of or condemned, according to the state of society; and this was before the French revolution, and in a country less enlightened than almost any other part of Germany. So zealous a friend was he to them, that when the Elector of Bavaria ordered all those in his service to quit this order, he was so displeased that he returned the academy of Munich the diploma they had sent him on their receiving him amongst them, publicly avowed his attachment to the order, and thought it proper to break off all further connection with Bavaria as a member of its literary society. The Free Masons did not long retain the patronage of their sovereign: the Emperor Joseph soon became jealous of their influence, and put them under such restrictions, and clogged them with such incumbrances, as to amount

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almoſt to a prohibition; and as ſuch they acted, for the ſociety found it neceſſary to diſſolve.

What raiſed the Baron ſo high in the public opinion, was his knowledge of mineralogy, and his ſucceſsful experiments in metallurgy, and principally in the proceſs of amalgamation. The uſe of quick-ſilver in extracting the noble metals from their ores, was not a diſcovery of the Baron's, nor of the century in which he lived; yet he extended ſo far its application in metallurgy as to form a brilliant epoch in this moſt important art. After he had at great expence made many private experiments, and was convinced of the utility of his method, he laid before the Emperor an account of his diſcovery, who gave orders that a deciſive experiment on a large quantity of ore ſhould be made at Schemnitz in Hungary. To ſee this he invited many of the moſt celebrated chymiſts and metallurgiſts of Europe; and Ferber, Elhujer, Charpentier, Trebra, Poda, and many more were preſent, and approved of his invention. On this general approbation he publiſhed, by order of the Emperor, his Treatiſe on the Proceſs of Amalgamation, with a great many engravings of the requiſite inſtruments and machinery. To ſuppoſe that his ſucceſs, whilſt it brought him fame and emolument, did not draw upon him the envy and ill will of many of his brother metallurgiſts and aſſociates in office, would ſhow a great ignorance of what is daily paſſing in common life. Envy has its ſhare even in maintaining order in ſociety: it is this which tends to keep the great from riſing higher, whilſt a contrary paſſion lifts up the little, or prevents them from falling lower.

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Though great cabals were raiſed againſt him, and againſt the introduction of his method, yet the advantages of it in many caſes were ſo very evident, that the Emperor ordered it to be uſed in his Hungarian mines; and, as a recompenſe for his diſcovery, gave him for ten years the third part of the ſavings ariſing from its application, and four per cent. of this third part for the next twenty years. Even this did not defend him from being ſtill haraſſed by his enemies; obſtacles were ſtill thrown in the way to prevent the introduction and ſucceſs of his diſcovery, and to defraud him of his well-earned recompenſe.

Though he ſuffered very much in the latter part of his life, yet this did not prevent him from continuing his literary purſuits. In 1790 he publiſhed his *Catalogue methodique raiſonné* of the collection of foſſils of Miſs Raab, which had been chiefly formed by his donations. This work, elegantly printed in two volumes, was well received by the public; and he was writing the *Faſti Leopoldini*, and a mineralogical work, when death put an end to his uſeful life and to his ſufferings.

Notwithſtanding the varied advice of his phyſicians his diſeaſe continued: in ſuch a ſtate quacks find eaſy acceſs to the ſick; who is not then ready to ſeize the noſtrum of the bold pretender? One of theſe gave him a decoction which ſoon calmed his ſufferings, and which he was aſſured would cure him in a few weeks. He continued the uſe of this for the laſt five months of his life: it really diminiſhed

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diminiſhed his pains; but his friends obſerved that his cheerfulneſs, which hitherto had not left him, diminiſhed likewiſe, and that ſpaſms often attacked his upper limbs. On the 21ſt of July, 1791, he was ſeized with ſpaſms and cold; the former ſoon ſubſided on friction, but he loſt his ſpeech. On the ſubſequent days he had different attacks till the 28th, when he found himſelf better, but he was ſoon attacked again with ſpaſms, and in theſe he expired.

Born was of a middle ſize and delicate conſtitution, dark complection, black hair, and large black eyebrows. Wit and ſatire, and a quick comprehenſion, were marked in his eyes, and his lively and penetrating genius appeared in his countenance. Beſides being a good Latin claſſic, he was maſter of moſt European languages of note, and poſſeſſed a deal of general information no ways connected with thoſe branches of ſcience required in his profeſſion. He was a great wit and ſatiriſt, and a good companion even under the ſufferings of bodily pain. His too liberal and unguarded uſe of ſatire made him many enemies. In his youthful days he wrote the *Staats Perücke* for the amuſement of his friends: this was afterwards publiſhed without his knowledge. But nothing ſhows more his talent for ſatire than his *Monachologia*, which he publiſhed in 1783, juſt when the Emperor Joſeph was making his reforms in the church: indeed, at any other time ſuch a ſevere ſatire on the monks would not have been permitted. They are characteriſed thus:

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Monachus.

Deſcriptio.—Animal avarum, fœtidum, immundum, ſiticuloſum, iners, inediam potius tolerans quam laborem;——vivunt e rapina & queſtu; mundum ſui tantum cauſa creatum eſſe prædicant; coeunt clandeſtine, nuptias non celebrant, fœtus exponunt; in propriam ſpeciem ſæviunt, & hoſtem ex inſidiis aggrediuntur. *Uſus.* Terræ pondus inutile. Fruges conſumere nati. And upon the order of Dominicans he ſays—Eximio olfactu pollet, vinum & hæreſin* e longinquo odorat. Eſurit ſemper polyphagus. Juniores fame probantur. Veterani, relegata omni cura & occupatione, gulæ indulgent, cibis ſucculentis nutriuntur, molliter cubant, tepide quieſcunt, ſomnum protrahunt, & ex Suis diæta curant, ut eſca omnis in adipem tranſeat, lardumque adipiſcantur: hinc abdomen prolixum paſſim præſeferunt; ſenes ventricoſi maxime æſtimantur. Virginitatis ſacræ oſores in venerem volgivagam proni ruunt. Generi humano & ſanæ rationi infeſtiſſima ſpecies, in cujus creatione non ſe jactavit auctor naturæ.

The Archbiſhop of Vienna complained to the Emperor againſt this work; who replied, that it was only the idle and uſeleſs part of the ſpiritualorder which was attacked. This was ſeconded by his *Defenſio Phyſiophili;* and to this ſucceeded his *Anatomia Monachi.* He wrote likewiſe a Satire on Father Hell the aſtronomer, by publiſhing

* As being inquiſitors.

a long

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a long Latin advertiſement, full of irony, announcing a book written againſt the Free-maſons, in the name of this learned Jeſuit.

It muſt not be forgotten, that his houſe was always open to the travelling literati who viſited Vienna; and that unprotected genius was always ſure to find in him a friend and patron. He carried this perhaps too far, ſo far as to ruin his eſtate: probably the expectations of receiving a large income from the amalgamation, made him leſs attentive to œconomy in his domeſtic concerns; though I believe his inſolvency was chiefly owing to uſurers and money-lenders, to whom he was obliged to have recourſe to carry on his expenſive projects. Through theſe, though his patrimony was very conſiderable, he died greatly in debt: this is the more to be lamented, as he left a wife and two daughters.

An hour's walk from Neuſohln are the ſmelting works, where the copper ores, containing ſilver reduced to the ſtate of *ſwartz copper*, which is brought from all parts of the kingdom, from the Banat, and even from Tranſylvania, have the ſilver extracted by liquation. The lead uſed for this purpoſe is chiefly brought from Bleyberg in Carinthia.

I was lodged at Neuſohln at the Crayfiſh inn, where I was much impoſed on; but I conſoled myſelf that I had always dined out, and therefore had no great bill; that Prince Bethlin lived in this houſe

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houſe when he was called to the crown of Hungary; and that the bill was written in Latin. The word *cornua* plagued me exceedingly to find out what it meant, and I was obliged to have recourſe at laſt to the author the inn-keeper. It meant, what in Vienna-German is called *kipfle*; a ſmall kind of roll ſhaped ſomewhat like a horn.—— Great licences are taken with the Latin language in Hungary; nothing is more common than to hear words uſed in ſpeaking Latin which are only known to thoſe who ſpeak the Hungarian, Sclavonian, or German languages. *Schmutzidum tempus*, for inſtance, is the common term uſed to expreſs bad rainy weather; *Schmutzig* is a German word, and ſignifies dirty; it is therefore as if an Engliſhman in ſpeaking Latin ſhould ſay, *dirtydum tempus*.

From the Crayfiſh, where I ſtaid about two days, I went to Schemnitz, which is only two ſtages diſtant: about half way I met again with the Breccia rocks like thoſe about Gran, and nearer to Schemnitz with the Saxum metalliferum.——Schemnitz is the principal mining town of Lower Hungary; it is ill built, and ſtands upon very uneven ground: its inhabitants amount to about eight thouſand, half of which are engaged in the mines. The Mining Academy is very reſpectable, and many foreigners come here for inſtruction in this department. The ſtudents enjoy great advantages: they go into the mines whenever they pleaſe, and there are proper perſons to attend them; and in the chymical laboratory they are allowed to make what experiments they wiſh; and the crucibles, retorts, and the chymical

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agents are given them on asking for; and all this is at the royal expence. There are, besides, proper teachers for all the different branches of a mining education; as geometry, trigonometry, mechanics, hydraulics and hydrostatics, mineralogy, metallurgy, mining, subterranean geometry, mine-law, mine-œconomy, and forestry.

The mines which have been worked for near four hundred years are in the *Saxum metalliferum*. This varies greatly, from a grey indurated clay with whitish spots, to a porphyritic basaltes; though in general the base is more of the nature of *Wache*; and the rock on which a chapel and a mount Calvary have been made, which is but a small distance from Schemnitz, is of true Basaltes with small particles of Olivine. The Saxum metalliferum does not always contain mica; and this is the case with the balls, and the rock which contains them, mentioned by Mr. Born in his 20th letter. But I have other specimens, in which the hexangular leaves of mica are placed one upon another till they form hexangular columns one-fourth of an inch long. The balls I have just mentioned are certainly very curious; they are only found in one place, I believe, or rather in one gallery: when I was there, the miners had just come to a rock which contained them; and here they were very abundant, so that half a dozen would sometimes be contained in a specimen of the size of one's fist: they are in general about an inch in diameter. Though the balls and the rock are perfectly the same; yet they are often so little connected with it as to fall out; yet sometimes so connected with

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with it, as to form only hæmiſpherical protuberances, the other half being quite united and loſt in the rock. They are ſimilar to thoſe in the Imperial Muſeum at Vienna, only the one is of *Porphyre ſchiefer*, the other of *Saxum metalliferum.*

In the *Amelia* gallery I obſerved a very fine white clay. I took ſome of it out with me: when it appeared pretty dry on the ſurface, and could be handled without ſoiling the fingers, it contained ſo much water that I could almoſt ſqueeze it out in drops, and when rubbed between the fingers became quite wet. After I had kept it near a month, though much expoſed to the open air, internally it ſtill retained a deal of humidity: when it was perfectly dry it had not half its bulk, cracked of itſelf into angular fragments, and looked very much like ſtarch, and was ſo light as almoſt to ſwim in water. As it was not known at Schemnitz, I tried it in a wind furnace there, and found it perfectly infuſible in the greateſt heat we could produce.———As I paſſed through Vienna I gave ſome of it to Mr. Fichtel, and in his laſt work * he has given an account of it; where he ſays, that with the blow-pipe it gives a very bright light, unites itſelf with borax glaſs, which no clays do, and diſſolves without effervescence in aqua-fortis; and ſays it is a very pure and true earth of alum. The Blow-pipe is of very great uſe in mineralogy; and when Mr. Kirwan's *Tables of the Fuſibility of the Simple Earths mixed in*

* Mineral. Aufs. page 170.

various

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various Proportions ſhall be perfectioned, it will be of ſtill much greater uſe, but it will never equal an accurate analyſis in the wet way. I ſent this clay to the celebrated Mr. Klaproth, and he did me the honour to inform me that it contains 14 per cent. of ſiliceous earth, but which is ſo intimately united with the aluminous, that when this latter is diſſolved in vitriolic acid, it mixes with it, and only becomes viſible when the ſolution is evaporated for cryſtallization, by its giving it then the appearance of a clear jelly.

Every thing in the mining departments is conducted upon a great ſcale; and the reſervoirs of water, and the galleries for carrying off the water from the mines, are to be reckoned amongſt them.———Mrs. Sharpe has a very fine collection of foſſils. Mr. Martin has ſome good ſpecimens. The Counteſs Mitrovſky, a beautiful young woman, the lady of the governor, a reſpectable old gentleman, only admits choice ſpecimens into her cabinet.———One Smith, a hair-dreſſer, ſells foſſils, but he aſks a ducat for any good ſpecimen. I found here amongſt the ſtudents not only good mineralogiſts, but likewiſe a good botaniſt and an entomologiſt.——Near Schemnitz is Eiſenbach, where there is a warm bath, with lime-ſtone rocks in its neighbourhood.

From Schemnitz I went to Kremnitz; but ſtopped and ſpent a day at Glaſhütte, where there is another very good warm bath.

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Whilſt I was in it, three or four females walked in; but they were not like the fair one of Groſs Wardein, but far gone in the wane; they had the humanity to keep on their clothes, and ſo did I.—— There are ſeveral baths, ſome for the common people, and one for cupping and ſcarifying. As the ſurgeon who has rented them, either from the town of Schemnitz, or elſe from the King, is obliged to perform this buſineſs for the *Plebs* at about three-pence the dozen, he pays a mere trifle for them. To theſe baths thirteen good lodging-rooms belong. Here again are lime-ſtone rocks; ſo that all the warm baths I have yet ſeen in Hungary are found in the neighbourhood of lime-ſtone. The water of theſe baths, where it comes out of the rock, which is formed of the ſediment depoſed by the water, is 128 degrees of Fahrenheit.

As I proceeded towards Kremnitz, I met with ſome remarkable foſſils; firſt by the road-ſide, with a black *Pitch-ſtone* with particles of Adularia and black hexangular mica*. I aſcended the rocks from whence it certainly muſt have come down, but I found no more of it. Theſe rocks were a kind of porphyry with a yellowiſh white

* Porphyrius

Ex piceo nigro nitenti cultro vix raſili ſcintillante, granis albidis adulariæ? cum mica nigra hexangulari inſperſis.

Baſis tubi ferruminatorii ope bis auget volumen, & ſcoriam albam ſine phoſphorescentia præbet.

baſe

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baſe of indurated clay, with ſmall ſpangles of black hexangular mica *. A little further I came to a genuine volcanic *Tufa*, containing a great quantity of ſmall fragments of Pumice and fragments of the glaſſy *Pitch-ſtone* charged with grains of *Adularia*: in this were imbedded ſome fragments of an aggregate, much like grey granit in appearance, but a quite different thing when accurately examined. The principal part is a white ſomewhat contorted fibrous maſs, in which are grains of *adularia*, black hexangular mica, and a few grains of pellucid quartz tinged of a reddiſh colour. This is Mr. Fichtel's granitic or Pumex-Zeolite; which, he ſays, conſtitutes the greateſt part of the Shator Hill. It is Mr. Born's *Granite alteré par le feu volcanique*. What it was originally, I do not know, nor do they.——In the ſpecimen I gave Mr. Fichtel from Erlau, he found that the quartz had changed its granulated ſhape into an amorphous melted maſs; the black glimmer had in part become hexangular, and part had aſſumed a melted amorphous appearance, whilſt the feldſpar remained untouched!!! Of this he ſays, it was granit and is burnt to zeolite. If one aſks how is all this——whether it is poſſible that the more fuſible ſhould remain untouched, whilſt the infuſible is melted——whether by chemical analyſis the primitive earths are found in thoſe proportions they ſhould be were they only this or

* Porphyrius

Ex Argilla indurata (Germanorum) albo-flaveſcente cultro raſili vix ſcintillante, lamellis micæ nigræ hexangularis inſperſis.

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that foſſil burnt or melted by volcanic fire? the anſwer is, "*Das Vulcaniſche Feuer gehet nicht immer einen Weg, ſondern ſchreitet bald gerade und unmittelbar, bald durch Umwege und mittelbar zu ihrem Ziele* *— *Volcanic fire does not always act in the ſame manner, but ſometimes attains its purpoſe by direct means, ſometimes by indirect.*"

After paſſing the Heiligen-Creutz I obſerved, on my left, rocks formed of a congeries of water-worn pebbles, chiefly of the nature of baſaltes and porphyry, with a few pebbles of milky quartz, united by ſomething of the ſame nature, but much finer. This latter, when free from the coarſe pebbles, where it formed beds of itſelf, was in ſome places ſtratified. Still further I found baſaltes with grains of *olivine*, and a few indiſtinct parallelopipeds of *feldſpar* or *adularia*; it was in ſome places divided into indeterminate columns. Further on there is a ravine; here I found ſome petrified wood; the loweſt bed I could obſerve was a kind of volcanic tufa, or ſomething very ſimilar to it; then above this lay ſome imperfect coal †, and then further up in the ravine a great maſs of ſemi-petrified wood a yard in diameter. And after this I obſerved nothing but volcanic tufa all the way to Kremnitzka.

Whilſt my horſes were feeding here, I examined the hills that lie at

* Mineral. Aufſätze, p. 331.

† Turfa foliata. Syſ. Nat.

Fragilis terrea inguinans fuliginoſa, texturæ lamelloſæ. Inter lamellas hic & illic inhæret Lithantrax.

the

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the back of the village; they are compoſed of a very cellular porphyry, of reddiſh petroſilex or jaſper mixed with indurated whitiſh clay *. On account of the hardneſs of this ſtone and its cellular texture, it is much uſed for mill-ſtones. In a brook that runs through the village I found abundance of ſilex of different colours in large looſe fragments. Towards Kremnitz on the left hand there is a bank almoſt covered with blocks of whitiſh petroſilex full of vegetable petrifactions. In ſome places theſe blocks are ſo diſpoſed as to induce one to think that once they had formed a ſtratum which has been broken in pieces. Hungary is very rich in petrified wood, and particularly in that very beautiful kind which I believe is peculiar to this kingdom, the *Holz-Opal* of the Germans, and *Opalus ligneus* of the Syſt. Nat. Of this there are pieces of trunks of trees in the Imperial muſeum. Mr. Haquet of Lemberg in Galicia ſays, that about forty or fifty years ago a whole tree, ninety-five feet in length, of this kind I think, was found near Moldokö, which is I believe in the diſtrict of Pecklin. He ſays it is related in the manuſcript journal of the Abbé Lieſganig, who travelled by the order of the Emperor Francis the Firſt, thus:

Buchholz ante noſtrum adventum effodit pedes - -	13
Fruſtum primum petrificatum a nobis foſſum - -	6
	19

* Porphyrius rubro alboque variegatus celluloſus, ex petroſilice dilute carneo & argilla indurata cana undulatim diſpoſitis; argilla etiam inveſtit cellularum parietes: vix adſunt adularia & mica.

Fruſtum.

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	Pedes -	19
Fruſtum ſecundum - - - -		25
Reliquum arboris - - - - -		51
Longitudo effoſſae arboris petrificatæ - - -		95

This tree was lying in a bed of *pumice*.

Kremnitz, where I arrived in the evening, is a ſmall walled town not half ſo big as Schemnitz. The governor Baron Mitrovſky, with ſeveral of his counſellors, were here on a viſitation. By invitation of his Excellency, I ſupped with them. An Engliſhman, unacquainted with the œconomy of mines on the continent, would be ſurpriſed to know with what form and regularity the mining buſineſs is here conducted; every thing is put down on paper with the formality of law proceedings, and then conſidered in councils, &c. The mines of Kremnitz are not noted for the quantity of ore, but rather for the quality; all the ores contain gold and ſilver: but notwithſtanding this, theſe mines are worked with loſs. The richneſs of the ore makes them very careful in waſhing it after it is pounded, and the waſh-hearths are the moſt remarkable things here. Water they have in abundance: this, after paſſing over the hearths, is conducted to reſervoirs where it depoſits its mud; this is not taken out and waſhed again, but a ſtream of water is made to paſs through it, which waſhes it away, and this is then uſed to waſh other hearths. Some think nothing is gained by this over-ſcrupulous care.

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The rich ores from other mines are brought here to have their gold and ſilver ſeparated from them. I was preſent at a coppelation proceſs conducted upon a very large ſcale: the *button* of ſilver I think muſt have weighed ſix or eight hundred weight. After the lead was reduced to litharge, or evaporated, the fire was continued about half an hour: during this the ſilver boiled up like water; in this ſtate, and the fire not damped, ſome pale-fulls of warm water by means of a trough were poured upon it: the fire was now damped, and then three men preſſed iron bars, ſomething like knives, upon it: this is done, that afterwards it may be more eaſily cut in pieces. Other chemical proceſſes are likewiſe carried on *en grand*, as the fabrication of nitrous acid, and the ſeparation of the gold from the ſilver. The mint is here likewiſe. I was informed by a friend who viſited Kremnitz a few years ago, that in 1788, 110,000 marks of ſilver, containing about one fortieth or fiftieth part of gold, were here ſeparated from the ore; and in the firſt half year of 1789, the produce was proportionally greater, 70,000 marks having been ſeparated in this half-year.—Goitres I obſerved to be very common here.

From Kremnitz I went to Konigſberg: the road as far as Heiligen Kreutz is the ſame by which I came. A difficulty of getting horſes obliged me to travel in the night. Till it was very late, as I travelled through the villages, I was amuſed by large groups of women, who were employed in breaking of flax by the light of fires. As it is generally the caſe, where people, particularly females, work together,

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gether, there was plenty of ſinging and noiſe, and the poor benighted traveller afforded them ſome ſport, and an object to exerciſe their wit upon. When in the morning I reached Konigſberg, I was greatly ſurpriſed to find there was no inn here, only dram-ſhops. I went to the town-houſe to ſee whether I could get a room there: this cauſed a droll miſtake. The magiſtrates were ſitting when I was turned in amongſt them: on my aſking them to lend me a room, they ſuppoſed I muſt be a ſtrolling player begging leave to act in the town-houſe, and I believe I ſhould have ſucceeded if I had had ſuch a favour to requeſt: but on hearing I was only a traveller, they told me they could not accommodate me; and ſome attacked me for a paſſport, and they were not content with that of the Engliſh miniſter. I promiſed to ſhow them half a dozen, as ſoon as I could find a ſhelter for myſelf and baggage. The Burgomaſter took pity upon me, and received me into his houſe as a friend: now I was no more plagued about paſſports, and I found in my hoſt a worthy and hoſpitable man.

The mines here were formerly very productive; after that, till within a few years, they were worked with loſs. I ſhould have ſtaid here only a few hours, but I wiſhed to aſcertain the fact mentioned by Mr. Born, of the *Saxum metalliferum* lying immediately upon granit, which he ſays runs down from the Carpathian mountains. This celebrated man in his 20th letter ſays, "The valley in which Konigſberg lies, is on one ſide, towards Schemnitz, ſurrounded with hills

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hills of *ſaxum metalliferum*, and on the other ſide, towards the north and eaſt, with granit mountains, which extend from the Carpathians alps hither. In the *Royal Zeche*, which is now worked again, the vein has the granit for the bottom and the *ſaxum metalliferum* for the top." And in his 21ſt letter he ſays, "The Althandler vein (kluft) at Konigſberg runs between granit and the *ſaxum metalliferum*." And a little further he ſays, "We have at Konigſberg found the *ſaxum metalliferum* lying immediately upon granit." And Mr. Haidinger, in his Claſſification of Mountain-Rocks, quotes Mr. Born. What has led to this opinion is a run of rock of a kind of porphyry or *ſaxum metalliferum* being found here, very different from the other rock, and of a redder colour. What made me doubt of Mr. Born's accuracy, were ſome mill-ſtones that were lying in the ſtreet, which I at firſt look took for granit. This is no doubt the ſame ſtone; for the Baron ſays, "This granit is here called mill-ſtone, becauſe the feldſpar by decompoſition is changed into a white powder, which falling out of the cells, forms a good mill-ſtone, which is tranſported to diſtant parts of Hungary." And in his *Lithophylacium* he ſays, "*Granites ruber ad Uibanyam (Konigsberg) Hung. inf. ad lapides molares utuntur.*"—I went into the mine. I found the *ſaxum metalliferum* forming both the top and the bottom: but I could not get to that part of the mine where this rock is found, the timbers having fallen down; but the miner who accompanied me aſſured me it was the ſame as that where the mill-ſtones are quarried. I then viſited the quarry; it lies juſt above the town; the rock is much the

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ſame as that at Kremnitzka. It is compoſed of reddiſh white indurated clay and red jaſper as a baſe, with grains of pellucid, though more often of rediſh quartz cryſtal, decompoſed feldſpar, parallelopipeds of adularia, and a little black hexangular mica.—Mill-ſtones are a conſiderable branch of commerce of this city. Hlinik, which is a town or village in this neighbourhood, is ſtill more famous for mill-ſtones.

CHAP.

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CHAP. XIX.

MONASTERY OF ST. BENEDICT—NEITRA—TYRNAU—PRESBURG —COACHES AN HUNGARIAN INVENTION.

SUNDAY October the 6th, I left the wall-leſs inn-leſs city of Konigſberg, and took leave at once of my honeſt burgo-maſter, and of the mining country, and began to look towards Preſburg. As I did not ſet out till the afternoon, I only made one ſtage, to Saint Benedict. The road was ſo bad, that, though I had four horſes, I walked all the way; but as the weather was fine, and the country through which I paſſed pleaſant, time did not appear long.

The monaſtery, ſituated on a rock, preſents itſelf like a caſtle, and commands an extenſive view of the country below—*Colles Benedictus amabat.* The rocks which I had an opportunity of ſeeing in this afternoon's journey, were compoſed of the breccia ſo often ſpoken of; and this I have now found in every country where porphyrous hills have prevailed. From my inn I walked up to the convent. I found the neſt, and a very comfortable one, but the birds were flown, or rather kicked out. In ſome unfortunate public calamity the monks were driven out, and when peace returned, the chapter of Gran ſeized

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upon it and ſtill keeps it; ſo I only found a canon, who acts as ſteward, and the requiſite inferior officers. The canon invited me to ſup with him, which I did; and the pariſh prieſt was of the party: but neither of them ſpoke either French or German; Latin therefore was the only medium of diſcourſe. After ſupper a droll ceremony took place, the origin and meaning of which I could not learn: a kind of club or large *ſpatula* was brought, with which I was to receive three thumps on the back. But as the cannon was a *homo quadratus*, I declined the honour; yet ſubmitted on his promiſing to beſtow this mark of attention and kindneſs with moderation: after this I was handed the *album*.

Since leaving Uihelly and its neighbourhood, I had not once ſeen the vine: here again the vineyards begin; but this is too elevated a ſituation for them, and they do not give a generous wine.

Next morning I ſet off for Neitra. I now left the narrow valleys and the hills, and entered an extenſive plain. What lies near St. Benedict belongs to the convent, this ſeems therefore to be ſituated like an *aërie*.——At Maroth, where the Cardinal Migazzi has a ſeat, I was detained a good while for horſes; and then in the evening my driver loſt his way; and it was ten at night before I arrived at Neitra. And now my troubles were not at an end; a great, a very great, man had juſt arrived before me, and had occupied all the ſpare rooms, which, in a large building in Hungary like a manſion houſe, are often only

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only two or three. Though I can bear to ſee the favourites of fortune figure away in a high ſtyle of life without repining, which is more than moſt democrates can do; yet I muſt ſay, that often when they have occupied too much room in an inn, I have wiſhed them at York. Though I will not meddle with ſo intricate a ſubject as the *Jus Naturæ*, or natural law, which has led ſo many of late into dangerous errors; yet I will ſay, that this great traveller had an undoubted *natural* right to occupy more ſpace than his *brother citizens*. As ſuch, without repining at my own inſignificance, I left him in poſſeſſion of his natural rights, and was obliged to take up with a bed of ſtraw.———This great traveller was a giant between ſeven and eight feet high, who travelled about to make the moſt of his greatneſs.

Neitra is a very conſiderable town, and agreeably ſituated upon a riſing ground in a fine plain, and half ſurrounded by a river of the ſame name. Within the fortreſs is the epiſcopal palace. The market was well ſupplied, and had a fine ſhow of fruit. The riſing grounds in the neighbourhood are planted with vines, which yield pretty good wine. The rock on which the town is built is primitive lime-ſtone. I only remained here till noon, and then travelled through a flat well-cultivated corn country to Freyſtadtl, a trifling market town. The inn was pretty good, and not occupied by a giant; and as the evening was coming on apace, and there was no probability of obtaining horſes immediately, I determined to paſs the

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night here, and I ordered my horſes for break of day. But no driver came to rouſe me in the morning; and when I got up to enquire the cauſe of this neglect, I learned that my horſes had come at the appointed time, but that a great man, yet not a giant, ſome deputy magiſtrate's deputy, had inſiſted on having them, and had ſet off with them, and that I muſt be pleaſed to wait a *few hours* till the judge could procure me another ſet. As they were gone, there was no remedy; but hearing that one of the accomplices was left behind, I boldly walked into his room, and reaſoned with him in forcible language upon the injuſtice of the proceeding; but he addreſſed me in Latin with a *Domine clariſſime generoſiſſime illuſtriſſime ſpectabilis*, &c. &c. &c. telling me that he was very ſorry for it, but that he had nothing to do in the affair, and that I ought to addreſs myſelf to the gentleman who was juſt gone.

Having been now plagued twice in four-and-twenty hours with great men; great either in perſon or in office, I thought it beſt, to prevent any further annoyance, to put myſelf under the protection of ſome other great man: therefore, as ſoon as I had got my breakfaſt, I walked up to the *chateau* of Count Erdödy, one of the greateſt magnates of the kingdom. This nobleman received me in the moſt friendly manner, and greatly diſapproved of the illiberal treatment I had received; but the count, though lord lieutenant of one of the counties, had nothing to do with the police here, and only could interfere as a private man of great rank and fortune. He invited me to ſpend the day

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day with him, and conducted me about his grounds, which he is only beginning to put in order, and they are to be *à l'Anglaise*: there is great *capability*. His green-house is a very fine one, and the view from his *chateau* is delightful. The dinner, though there was only the count, his mistress and myself, was very elegant; and every thing was served up in silver by a great retinue of servants.

After dinner I set off for Tyrnau. A little to the right lies the fortress of Leopold-stadt in a plain: it was built by Leopold the Great. The road was so good (and indeed ever since I left St. Benedict, I had no reason to complain), that in three hours I found myself at Tyrnau. This afternoon's ride was likewise through a corn country.

The number of churches, and the towers upon the walls, announce, at a distance, Tyrnau to advantage, but they do not deceive you. Tyrnau may be ranked amongst the first towns of the kingdom; it is regular, well built; the streets are broad; and, on account of the number of its churches and convents, it has often been called the Little Rome. The inhabitants amount to about 7000. Till the reign of Theresa, or her son Joseph, it was the seat of the university which is now at Peste, as the centre of the kingdom. The buildings belonging to it, with others of suppressed institutions of a similar nature, have been converted into a hospital for invalids. The men and officers, which amount to about a thousand, are well lodged.

In

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The next afternoon I continued my journey to Preſburg, which is two ſtages diſtant, on a very good road, through a flat corn country. Though it was night, yet being moon-light, I could ſee two or three gentlemen's ſeats, or noblemen's chateaux, as I paſſed along. As moſt of the inns were ſhut when I arrived, I was afraid my driver had carried me to a bad one; but in the morning when I walked out, I obſerved over the door of the inn an inſcription, which announced, that on ſuch a day Joſeph the Second had honoured it with his preſence.

Preſburg may be conſidered as the metropolis of the kingdom; for Bude has been ſo often, and for ſo long a time, in the power of the Turks, that this city has generally been the ſeat of government, and the place where the diets have been held, and the coronation ceremonies performed.——It is well built, and in a fine ſituation on the banks of the rapid Danube, which is here 250 yards broad. The inhabitants amount to about eight-and-twenty thouſand, one fourth of which are Lutherans. Theſe are the moſt opulent part of the community, and pay nearly one-half of the *contribution*. They have two chapels, one for the German language; and this is very large, well built, and commodious; and another for the Hungarian and Sclavonian languages. One half of the city magiſtrates are choſen from this ſect. The Calviniſts are too few in number to have a public place of worſhip. The theatre is good. The caſino and other coffee-houſes would be admired at Paris or London, and the hapleſs being called a lounger may here kill a forenoon or a day, as well as in

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in any other great metropolis; he has all the newſpapers, billiards, draughts, and other time-killing apparatus found at Vienna.——Dr. Lumnitzer, author of the Flora Poſonienſis, lives here, but he ſeems to have bid adieu to botany.

Jews are very numerous. Whether they are under a particular police, or whether their frequent delinquencies make a particular mode of trial neceſſary, I don't know; but at the town-houſe, when I went to order horſes for my departure, I ſaw one with fetters on his legs, and tears in his eyes. I was informed he had been accuſed of buying ſtolen goods from gipſies, knowing them to be ſtolen; and, not acknowledging his crime, he had received a copious baſtonading, ſo copious that when he was permitted to ſit down, he found it more convenient to ſtand up: this indicates that it was not a mere tickling he had received, and ſhews where the puniſhment had been applied: he now confeſſed. This ſeems to be not much unlike being put to the queſtion; but I hope the fact was firſt well proved, and that this was only to make the rogue diſcover his accomplices. Jews are not ſuffered in any of the mining towns.

I ſtaid here only three or four days, and made but few acquaintance; yet enough to ſee that Vienna libertiniſm had reached Preſburg. I wiſh I could ſay it had not reached Buda likewiſe. But how ſhould it be otherwiſe? The youth of faſhion of both ſexes are generally ſent to Vienna for their education; poſts of honour and public charges keep many of the nobility here the greateſt part of the year,

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and its amuſements induce moſt of the opulent to make it their reſidence for a time. A gentleman to whom I had a letter of introduction, on a very ſlight acquaintance, invited me to come and drink coffee with him, and promiſed to treat me with the ſight of a beautiful young lady whom he had ſeduced the day before. As libertines often boaſt of crimes they have not committed, I hoped it would have been ſo here, and at the appointed hour I went. Soon after a reſpectable old gentleman and lady entered the room, and a charming girl, their daughter, accompanied them. Her juvenile appearance, had not her full boſom indicated the reverſe, would have led me to think that Love had not yet told her of the charms of his voluptuous banquet; that Nature had not yet invited her; and that Pleaſure, awed by her youth, had not yet dared to offer her bewitching hand to lead her to it; I ſhould have thought ſhe was yet free from temptation, and incapable of falling; but alas! it was otherwiſe. As I looked at her, her cheeks ſaid, we have cheriſhed unhallowed kiſſes and are aſhamed; her eyes, that they had ſuffered themſelves to be cloſed in the ſweet tranſports of their lovely miſtreſs; and the fair boſom heaved, and told it had ſcorned the bounds modeſty has preſcribed, and had invited the amorous embrace: all beſpoke her fall, all declared that ſhe had yielded to the alluring voice of ſeduction, and to the perſuaſive language of her own deſires.

As afterwards we walked through a room, ſhe caſt an expreſſive look at the ſopha on which the firſt familiarities had taken place; where deſire, almoſt unfelt, had been raiſed into an ardent paſſion; and from

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from whence, now welcoming Pleaſure's enchanting invitation, ſhe had been conducted to the altar of Love, there, in exchange for a few ſhort-lived tranſports, to offer up her innocence, her peace, perhaps her life. But how her lovely boſom heaved as we paſſed this ſo late couch of pleaſure! How buſy were then her thoughts! In the courſe of the afternoon, ſighs and ſmiles, compoſed and wandering looks rapidly ſucceeded each other; and her troubled ſoul ſeemed to paſs quickly from the recollection of paſt pleaſures, to the anticipation of future ſufferings; and from thoughts of repentance to the deſire of repetition.——Ah! what miſery may not this—this one ſlip, the tribute of ſenſibility and youthful nature to Love, have cauſed! I ſhudder when I think of it.

What, if from this ſingle embrace prolific Nature, always delighting in the warmth of paſſion, ſhould have deſtined my lovely girl to be a —— mother? How, on the enlargement of her ſlender waiſt, phariſees will have ſcorned her, and prudes have ſneered at her! Will ſhe not have been ſlighted by our ſex, and ſhunned by her own; and thus have been excluded from ſociety as a diſgrace to human nature? Whither will ſhe fly for a protector, when the mother who bore her will not own her, and when the father who begot her ſhuts the door againſt her, and thoſe whom ſhe has called by the ſacred name of friend, for virtue's ſake, will not ſee her? The cruel ſpoiler of her innocence and peace triumphs in her ruin, or has forgotten her; to beg ſhe is aſhamed, and the hand of charity to ſuch is doubly cold.

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Unfortunate, but not debaſed, ſhe ſcorns life on the term of proſtitution, the laſt reſource of fallen beauty! And what is now exiſtence? a burthen only to thoſe of a generous mind. LIFE, light airy ſpirit, thou reluctantly quitteſt the happy breaſt—through innumerable long revolving periods, thou art willing to be its gueſt, but readily quitteſt that where miſery dwells. Priſons cannot detain thee, nor can chains bind thee. Driven away againſt thy will thou mayeſt be, but never held without thy conſent; conſolation indeed ſweet, but to miſery alone. Life will no longer bear the inſulting reproaches of a malicious world, it's already on the wing, it longs to be gone, and careleſsly flutters over the dreary dominions of the appalling king of terrors, which now have loſt their terrific look, and are become the tranquil land of oblivion to misfortune. Now all the ties to mortality are broken, the love of life is gone, the fear of death is over; and as the clouds of adverſity blacken, it ſpreads its light wings, and takes the wondrous flight, and quits this hard-hearted grovelling world. At the ſad news we ſtartle. Some few drop a tear; whilſt the righteous exclaim, Behold the end of the wicked, and the juſt judgment of an offended Deity!—A DEITY!!—One then that I abhor——Ah! profane not the ſacred name of nature's Lord by ſuch ſuggeſtions, nor render odious this pleaſing ſound. Now, light flippant libertine, what haſt thou to boaſt of but—MURDER? and ye, ſpotleſs prudes, who could not be tainted by the company of ſuch a *wretch*, ye are his accomplices.

I ſtaid to ſee my fallen fair out of the houſe of ſeduction. At every look

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look I took at her, and at every word I ſpoke to her, ſhe ſeemed to ſay, And do YOU know what I have been at? Are the prints of my ſeducer's lips, then, ſtill on my cheeks and boſom? and is the ſoft languor of love ſtill in my eyes, and all the ſigns of tumultuous joy now glowing in my countenance?——Yes, ſweet girl! I knew of thy weakneſs, deſpiſed thee not, but pitied and forgave thee; and mayeſt thou never more expoſe thyſelf to the ſport of fortune, and an ill-natured world; but now, having given thy hand to a lover warm and youthful as thyſelf, be enjoying in his arms tranſports unfelt even in thy maiden loves!

Kittſee, a ſmall town, which is ſuppoſed by ſome good antiquarians to have given its name to that vehicle called a coach, as being the place where it was firſt fabricated, is only two or three miles from hence. Johnſon in his great Dictionary ſays, that the coach is an Hungarian invention; and the words Kittſee and Coach to an antiquarian may be ſtrikingly alike, though to no one elſe. I think it is Fiſher who, in proving the common origin of the Hungarians and the Finlanders, exclaims, "Quantula eſt ea differentia nominum *Ugur* et *Vogul*."

To get rid of this piece of archaiology, I will give the reader a tranſlation of a ſhort paper printed in the Hungarian Magazine, and written by D. Cornides. "That vehicle," ſays he, "which in German is called a Kutſche (coach), and which, on account of its great

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great convenience, is introduced into all the countries of Europe, has, as it is well known, in other European languages nearly the ſame name. This would lead one to conjecture with probability, that the vehicle, and likewiſe its name, originated, and was in uſe with one people only, from whence the other nations took the invention and the name.——An infinity of examples of this kind ſupport the juſtneſs of my conjecture: thus for example, the French word *minuet* is retained in all other languages, as this dance was invented in France, from whence by degrees it paſſed into other countries. Such a generally received word is the word Kutſche; thoſe, therefore, who have attempted to give the origin of this word, ought, I think, to have examined firſt in what country coaches were firſt made. As long as this queſtion remains undetermined, all etymological derivations of the word Kutſche reſt upon very uncertain conjectures, as it has been obſerved by the celebrated Swediſh Profeſſor, John Ihre, in his Gloſſario Suiogothico, tom. I. Col. 1178, printed at Upſal in 1760. Theſe are his words: 'KUSK, auriga. Proprie ipſum carpentum videtur denotare. Gall. Cocher. Hiſp. id. Ital. Cocchio, Angl. Coach, Hung. Cotczy. Belg. Goetſe, Germ. Kutſche: qui vero ejuſmodi vehicula dirigit, Anglis Coachman dicitur, quod brevius aliæ linguæ reddidere, ut Galli Cocher, nos Kuſk, dicentes. Cujus vero originis ſit, dictu difficile eſt, quum ignoremus, cujus populi inventum ſint camerata hæc vehicula. Latinum facit Menagius, & quidem longo circuitu a *vehiculum* formatum; Junius paulo minus operoſe Græcum, ab ὀχέω, veho; Wachterus Germanicum

 a *kutten*,

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a *kutten*, tegere; Lye, Belgicum a *kocſſin* cubere, ut proprie lecticam ſignificet. Prætereo alias aliorum conjecturas.'

"I venture to prove by evident teſtimonies, that this carriage originated in Hungary, and that it has received the name Kutſche from the place of its invention, or nativity, if I may ſo expreſs myſelf, and that it has been propagated to other nations. I will bring forward my ſureties. The firſt is John Liſthius, Biſhop of Weſprim, and Chancellor to the Court, one of the moſt able men of his time; he had written with his own hand ſeveral ſhort but very uſeful remarks on the margin of the Decades of Bonfinius, which he had received from the celebrated John Sambucus, as a preſent, on the tenth of June 1568, which P. Pray, ſo juſtly famed on account of his hiſtorical knowledge of his country, to whom it now belongs, was ſo kind as to communicate to me. Among the remarks of Liſthius upon ſome of the paſſages of Bonfinius, the following appear to me particularly remarkable. Bonfin. decad. 4. lib. 1. relates that the King, Matthias Corvinus, often uſed to have for his amuſement combats on horſeback and in carriages, and makes uſe of the expreſſion: 'Aurigatione aſſidua uſus eſt, &c.' This expreſſion of Bonfinius gave Liſthius the occaſion to ſubjoin this marginal interpretation: 'Bizony Kochis nem v'olt. Romanus enim ille mos jam olim tum deſierat, niſi forte dicere velit, curru Kochy (it is pronounced Kotſi) vectum, cujus Rex primus inventor fuit.' The ſecond witneſs I have to produce in ſupport of my aſſertion, is Stephan Broderethus, who, in the deſcription of the battle

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battle loſt at Mohatſch in 1526, relates the following of Paul Tomory, arch-biſhop of Kolotſcha. 'Ubi exploratum habuit Turcæ in Hungariam adventum, non contentus id per literas et nuncios ſæpe antea regi ſignificâſſe, conſcenſis raptim levibus curribus, quos nos a loco Kokze appellamus, vigeſima Martii, ad regem, tunc Viſſegradi agentem, repente advolat, &c.' The third that I ought not to fail producing as ſurety for me, is Sigiſmund, Baron of Herberſtein, the Imperial Ambaſſador at the Court of the King of Hungary Louis the II. in his much eſteemed Commentario de Rebus Moſcoviticis, Baſil 1571, fol. page 145, where accidentally mentioning ſome poſt ſtations in Hungary, we find a paſſage which merits our attention. It is this: 'Quarta (reſpiratio equorum et permutatio) ſex infra Jaurinum milliaribus, in pago Cotzi, a quo et vectores currus nomen acceperunt, Cotzique adhuc promiſcue appellantur.'— Further, Frederick Noſtleder, a writer of the ſixteenth century, ſeems to acknowledge likewiſe the Hungarian origin of coaches, when, in his work upon the German war, page 612, he expreſſes himſelf thus: 'The Emperor Charles the V. laid himſelf to ſleep in an Hungarian coach *(Gutſchwagen)*, as he had the gout.' All theſe teſtimonies hitherto produced, ſhew the juſtneſs of my aſſertion beyond all doubt; I ſhall not therefore extend my proofs further, only add a few words on the immoderate uſe our countrymen made of this national invention at firſt.

"As the coach, even in Hungary, in the middle of the ſixteenth century,

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century was somewhat scarce, it is no wonder if every Hungarian wished to travel in them, and even to use them in the field; and that it was necessary to put a stop to this abuse by a law of the land. For this purpose we find, in the decree of 1523, art. 20. a law which runs thus; 'Et quod nobiles unius sessionis per singula capita pariter insurgere et advenire teneantur, et non in Kotsi, prout *plerique solent*, sed exercituantium more, vel equites vel pedites, ut pugnare possint, venire sint obligati.' It is likewise worth while, on quoting this act, to add this circumstance as a further support of the opinion of the coach being an Hungarian invention; that at first we knew not how to name this carriage in Latin, which was unknown to the Greeks and Romans, but by simply calling it, as in the Hungarian, Kotsi, or sometimes Currum Kotsi. I refer, besides to the lately mentioned act, to several other original papers of this country of those times. Here, for example, belong some passages of the manuscript list of the royal expenditure for the year 1526, of which the ineftimable Father Pray, in the Annal. Reg. Hung. P. V. p. 201. has communicated to us a valuable fragment, where it is said in the note *q*, 'Pro solutione Kotsy dati sunt in cupreis flor. 50;' and in the note *r*, 'Pro expensis et solutione Kotsy ad Viennam, et ex quo Viennæ tandem equum emere debebit, dati sunt in cupreis floreni 75;' and again in the note *t*, 'Pro solutione trium Curruum Kotsy, &c.' This is enough. Only a short remark on the word Kotsi.

"Since from all the fore-mentioned clear testimonies it is sufficiently

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evident, that the honour of the invention is due to our country, Hungary, and that even the word Kutſche owes its origin to a place of this ſame name in Hungary, we may take it amiſs from ſo patriotic a man as Joſeph Benkö, that he ſhould aſſert in his Tranſylvania, P. I. p. 384, that the Hungarian word Kotſi is derived from the German word Kutſche; ſince, as we have already ſeen, the thing is quite the reverſe. Even a learned German, a contemporary of King Mathias Corvinus, John Cuſpinianus, properly called Spieſshammer, phyſician and counſellor to the Emperor Maximilian the Firſt; and who was, as he ſays himſelf, within the ſpace of five years ſent twenty-four times to Hungary as ambaſſador, plainly ſays, in his Diarium de Congreſſu Maximiliani I. Caeſ. cum Vladiſlao, Ludovico, & Sigiſmundo, Hungariæ, Bohemiæ, ac Poloniæ Regibus, in Matt. Bel's Adparatus ad Hiſt. Hung. dec. i. Monum. vi. p. 292, that Kottſchi is a native Hungarian word. For when he gives us a deſcription of the ſolemn entry of the Emperor Maximilian the Firſt, and the three before-mentioned kings, into Vienna, of which ceremony he himſelf was an eye-witneſs, and even concerned in, he ſays, as ſomething characteriſtic of the Hungarian pomp: 'Vehebantur multi [Hungarorum] in curribus illis velocibus, quibus nomen eſt patria lingua Kottſchi." I muſt ſtill clear one difficulty out of the way. It is concerning the place where they were firſt invented, and which is called by Broderith, Kotcze; but by the Baron of Herberſtein, Cotzi.

Where

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Where is this place? it may be aſked. In what country are we to look for it? Broderith, it may be ſaid, does not give us his opinion about it, and now nobody knows of a village which, according to the account of the Baron of Herberſtein, lay about ſix miles from Raab and was called Cotzi. However plauſible this objection may be, it is very eaſy to anſwer it; for, to judge according to the ſituation of Cotzi as determined by the Baron, Cotzi can be no other than the market-town Kitſee, in the county of Wieſelburg: and the ſmall difference of the two names Kotzi and Kitſee ought not to diſturb us; for it is highly probable that formerly it was not written and pronounced as it is now, Kitſee, but Kotſee. At leaſt in 1515 Cuſpinianus in his Diarium called this place Kotſee, as may be ſeen in Bel, p. 288. where it is ſaid, 'Qui [Maximiliani I. Caeſ. Oratores, in quibus et ipſe Cuſpinianus erat] xiv. die Julii invenerunt Regem Hungariæ Uladiſlaum, cum liberis ſuis, in quodam caſtro Kottſee cui adjacet villa prope Danubium.' And Mat. Bel adds the following note (*g*) on the word Kottſee, 'Vetus & genuina apud Germanos Köptſinii, Moſonienſium oppidi, adpellatio, a cœnoſo ſitu, quem Danubii olim deluvia talem faciebant, deducta: jam Kittzee vocant. Vide operis noſtri tom. 5. in Hiſt. Comitatus Moſonienſis, parte Spe. memb. 1. ſect. 1. num. 4.' Likewiſe Gerhardus de Roo, Librarian in Inſpruck to the Arch-Duke, a writer of the 16th century, mentions this market-town under the name Coche, which, according to the French, and at that time the Hungarian, manner of reading, muſt be pronounced like Kotſchee. I will likewiſe give the

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words of this historian: 'Statuit deinde [Comes Cilleiensis] secundo experiri fortunam, & in oppido Coche, quod in Hungariæ finibus situm est, cum suis profectus, &c.' And that this market town must have been called Kotsche in the time of Math. Corvinus, appears from his contemporary Bonfinius, who in dec. iii. lib. 7. writes it likewise Coche: 'Qui,' he says, 'in Ungariæ finibus, ad Coche oppidum, cum gubernatore conveniant, &c.' and with this I conclude my proof.

M. DAN. CORNIDES."

Time had moved rapidly on, and had reached the middle of October. I had yet other countries to see; I must therefore leave Presburg, and Hungary likewise. I crossed the Danube, on leaving this city, on a *pont volant* like that at Komorn, and, after travelling a few miles on a very magnificent road, I reached Wolfsthal, the confines of Austria. Here I bid farewell to my favourite Hungary; and though the country before me, on the banks of the Danube, was remarkably pleasant, and afforded the most beautiful prospects, I could not leave that behind without regret; and I frequently looked back to thank its generous inhabitants for the friendly reception they had given me, and to wish them every kind of public prosperity. The Hungarians are a noble race of men; and, of the variety of nations amongst which I have travelled, the one I esteem the most. This small tribute of praise I owe them, and I pay it with pleasure.

APPEN-

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APPENDIX.

ENTOMOLOGIA.

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ENTOMOLOGIA.

1 LUCANUS Cervus.

2 Parva varietas. In copula inveni.

2* caraboides. Var. violaceus.

3 LETHRUS cephalotes.

5 SCARABÆUS quadridens. "Habitat in India orientali," etiam in Europa.

6* ſcybalarius.

4* ſimetarius.

5* ſordidus.

7* luridus.

7 Pecari ? Scutellatus muticus ater, thorace lævisſimo nitidiſſimo. Elytris punctato-ſtriatis rufis, *macula communi dorſali nigra*, pedibus rufis. Sutura in exemplaribus propriis minime nigra eſt.

12 lunaris.

10 Lemur.

9 Taurus.

13 ſacer.

8 Schæfferi.

11 pilularius.

4 Schreberi.

6 flavipes. Exſcutellatus muticus fuſcus, thoracis marginibus punctis duobus impreſſis, elytris pedibuſque flaveſcentibus.

8* ovatus.

14 HISTER lævus Faunæ Etruſcæ Roſſi.

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15	HISTER bimaculatus.	Elytris macula media rubra, nec macula postica rubra.
16	4-maculatus.	In exemplaribus meis, maculæ duæ confluentes maculam semilunarem formant.
20	SPHÆRIDIUM scaraboides.	
21	fimetarium.	
23	BYRRHUS pilula.	
24	fasciatus.	Herbst's Archiv.
25	varius.	
26	OPATRUM sabulosum.	
27	crenatum.	
29½	HELOPS lanipes.	Æneo-ater, elytris striatis acuminatis.
30	CARABUS coriaceus.	
32	purpurescens.	
31	cyaneus.	
33	granulatus.	
40	leucophthalmus.	
34	sabulosus.	
35	picicornis.	
36	cephalotes.	
41	metallicus.	
42	holosericeus.	
38	aterrimus.	
44	6-punctatus.	
39	vestitus.	
37	cyanocephalus.	
43	prasinus.	Et plurimi alii, huc usque non investigati.
48	CICINDELA campestris.	
49	hybrida.	
50	littoralis.	
51	sinuata.	Schneideri, in Fauna Insectorum Germaniæ.
52	germanica.	

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53	Clerus mutillarius.	In exemplaribus meis, fascia alba apicibus elytrorum deest.
53*	formicarius.	
55	Notoxus monoceros.	
56	Cantharis lividus.	
57	Malachius ruficollis.	Nigro-cæruleſcens, thorace elytrorumque apicibus ſanguineis.
58	pulicarius.	Æneus, thoracis margine: elytrorum truncatorum apicibus: antenniſque rubris. Si differentia ſpecifica inter marginellum et pulicarium, a colore viride æneo, aut nigró pendeat. Marginello referendus eſt.
59	Malachius equeſtris.	
60	Dermestes murinus.	
61	teſſellatus.	
62	pellio.	
64	Ptinus fur.	
65	Scotias.	
67	Sylpha groſſa.	
67*	rugoſa.	
68	lunata.	
68*	opaca.	Livida Herbſtii. Teſta nigra eſt, ſed pubeſcentia ſericea ferruginea tecta.
80	Coccinella bipunctata.	
81	3-punctata.	
82	7-notata.	
83	11-maculata.	
84	13-punctata.	Variat. coleoptris rubris & luteis.
89	14-maculata.	
89*	ocellata.	
87	20-punctata.	In exemplaribus meis caput non nigrum ut in Entomol. Syſtem. ſed flavum, oculis nigris.

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85 COCCINELLA 24-punctata ?

75 impustulata. In Jablonsky & Herbst. Insect. Tab. lviii. No. 15. Coleoptris nigris, capite thorace pedibusque anterioribus nigro alboque variegatis.

73 humeralis. Nova Species, Pl. II. fig. 1.
Coleoptris nigris immaculatis, thorace nigro maculis duabus marginalibus flavis.
Caput nigrum.
Thorax niger, maculis duabus marginalibus flavis vel flavo-rubris.
Elytra nigra, immaculata, convexa.
Abdomen nigrum, ano flavo.
Pedes flavi.
Animal subrotundum convexum longitudine lineæ sequentis —

74 An Nov. Spec ? Coleoptris nigris, maculis duabus rubris, thorace nigro utrinque macula marginali rubra.
Caput nigrum, antennæ & palpi rufi.
Thorax niger nitidus macula utrinque marginali rubra.
Elytra nigra nitida, macula postica rubra.
Abdomen nigrum.
Pedes, femora nigra; tibiæ & tarsi intus flavescentes.
Animal parvum, longitudine —
Affinis C. campestri Fuesly Archiv. Insect. Gesch. at duplo fere minor; & tibiæ & tarsi pedum omnium, non tantum pedum anteriorum, flavescunt.

76 6-pustulata.

77 Var. prec. Macula rubra humeralis ad suturam fere accedit, & punctum nigrum includit.

78 pustulata.

79 Cocci-

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79 COCCINELLA 14-puſtulata. Puncta in exemplaribus meis non alba ſed lutea ſunt.

90 CASSIDA affinis ?

91 ferruginea.

93 murræa.

94 viridis.

95 margaritacea.

96 CHRYSOMELA tenebricoſa.

110 nigrita. Nonnullorum: Gottingenſis aliorum. Statura Chryſomelæ limbatæ, & longitudine ——

Tota violacea eſt; ſubtus nitidiſſima, ſupra obſcurior & parum ruſeſcens. Tarſi & palpi ferruginei. Antennæ violaceæ pilis ferrugineis, cum baſi ferruginea. Alatus eſt.

97 Adonidis.

102 10-punctata. Var. punctis tribus poſticis confluentibus, pedibus nigris.

103 Var. Thorace nigro, femoribus nigris, tibiis pallidis.

104 Var. pedibus omnino rufis.

101 6-punctata ?

112 pallida.

113 An precedentis varietas ? Minor eſt, & ferruginea, abdomine nigro.

109 cerealis.

100 faſtuoſa.

99 glorioſa.

106 limbata.

105 ſanguinolenta.

107 marginata.

108 aucta ? Abdomine pedibuſque nigro-violaceis, antennis baſi ferrugineis.

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98 CHRYSOMELA ſacra. Ovata, ſupra rufa, capite poſtice puncto, thorace macula magna centrali punctiſque duobus lateralibus, elytriſque ſuturis, nigris. Abdomine cum pedibus, antennis, oculis & ore nigris.

114 Sophiæ. Var. viridis.

162 CRIOCERIS merdigera.

160 12-punctata.

159 14-punctata. In nonnullis exemplaribus puncta nigra in tænias tranſverſas confluunt.

158 melanopa.

161 Aſparagi.

117 GALERUCA Alni.

116 coccinea.

118 Boviſtæ.

119 Var. nigro-cærulea.

115 20-punctata. Nec thoracis margines, nec elytra alba ſunt, lutea potius.

121 Nemorum.

130 CISTELA cinerea. Unicolor eſt & griſea.

127 lepturoides.

128 ſulphurea.

129 rufa. Nova Species? Pl. II. fig. 3.

Caput parvum ferrugineum. Oculi nigri. Antennæ ferrugineæ longitudine dimidii corporis.

Thorax ferrugineus, antice rotundatus, poſtice truncatus.

Elytra ferruginea lævia (non ſtriata) vix pubeſcentia.

Abdomen ferrugineum, anum verſus fuſcoſcens, longitudine —.

131 CRYPTO-

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131 CRYPTOCEPHALUS longipes.

132 Precedentis forſan varietas. Minor eſt, thorace glabro, elytrorum punctis poſticis nigris confluentibus.

135 6-maculatis?

133 4-punctatus.

134 3-dentatus.

134* ——— ? Dimidia precedentis magnitudine.

134° ——— ? Precedentis magnitudine, puncta nigra humeralia deſunt, baſis antennarum et os flaveſcunt.

136 bipunctatus.

137 cordiger.

153 bothnicus? Caput flavum, margine poſtico, oculisque nigris, antennæ flavæ apicem verſus fuſceſcentes.

Thorax flavus, maculis duabus magnis oblongis nigris.

Elytra nigra ſubpunctato ſtriata, marginibus baſin verſus flavis & ſutura ad ſcutellum puncto flavo notata.

Abdomen nigrum.

Pedes lutei, femoribus duorum poſteriorum parium macula nigra notatis.

156 Coryli.

139 cyaneus.

140 bucephalus. Cyaneus, ore, baſi antennarum, thoracis marginibus, pedibuſque rubris.

130 fericeus.

151* flavipes.

152 Varietas forſan precedentis. Margines thoracis anterior & laterales luteæ ſunt.

150 Hubneri.

141 Moræi. Pedes albo variegati, antennarum baſis pallida, caput albo punctatum.

141* CRYPTO-

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141* CRYPTOCEPHALUS Moræi. Precedentis varietas? Exceptis maculis elytrorum totus niger.

146 8-guttatus.

146* Precedentis varietas. Capite & thorace nigris.

151 flavicollis. Nov. Spec. Pl. XI. fig. 5 & 6.

Caput nigrum, antennæ nigræ baſi luteæ.

Thorax fulvus maculis duabus dorſalibus, puncto unico vel punctis duobus lateralibus, interdumque punctis duobus minoribus poſticis nigris.

Elytra punctata luteo-teſtacea; macula oblonga humerali, puncto prope ſcutellum, puncto unico vel punctis duobus verſus apicem, (quorum interius majus eſt) ſcutellum ſuturaque nigra.

Abdomen & pedes nigri.

Statura & magnitudine Crypt. bipuſtulati.

147 bipuſtulatus.

148 bifaſciatus. Muſei Dom. Helwig. Brunſwigi, Pl. XI. fig. 4.

Char. Spec. Niger elytris punctato-ſtriatis luteo bimaculatus.

Caput nigrum, macula cruciformi lutea. Oculi nigri.

Antennæ fere longitudine corporis, ad baſin luteæ, verſus apicem fuſceſcentes.

Thorax niger nitidus, margine antico & lateralibus luteis.

Elytra punctato-ſtriata nigra, maculis duabus luteis, anteriore majore ſubquadrata, poſteriore ad apicem ſubrotunda.

Abdomen nigrum.

Pedes albi & nigri variegati.

Statura Crypt. 8-guttati cui affinis. Longitudine — etiam —

149 CRYPTO-

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149 CRYPTOCEPHALUS Scopolinus. In exemplare meo, pedes non nigri ſunt potius rufi, accuratius tamen primum par rufum, femora reliquorum nigro maculata.

154 Minuti varietas forſan. Thorace fulvo, elytris luteis puncto fuſco humerali.

155 Precedenti affinis. Caput, thorax, elytra ſtriata, & pedes lutei; oculi & abdomen nigri.

163 HISPA atra.

167 LYTTA veſicatoria.

168 ſyriaca. Color elytrorum variat, violaceus viridecæruleus & viridis.

169 erythrocephala. Caput rufum, linea occipitali nigra. Oculi nigri.

Antennæ nigræ dimidii corporis longitudine baſi rufeſcente, os & palpi nigri.

Thorax niger cylindricus canaliculatus.

Elytra atra opaca apicibus rotundatis marginibus pubeſcentia albis.

Abdomen nigrum.

Pedes nigri, anteriores pilis caneſcentibus.

170 MORDELLA perlata. Sulzeri in Tabula vii. fig. 14. et 12-punctata. Faunæ Etruſcæ Tab. iv. fig. 4.

Elytra nigra ſunt, maculis punctiſque e pilis albis.

164 PYROCHROA coccinea.

165 LYCUS ſanguineus. In exemplare meo, elytra non glabra ut in Entom. Syſtem. nec "coſtis 6-longitudinaliter elevatis, inter ſingulas quaſi rete e maculis duplici ordine, rugis minus elevatis," ut in Fauna Suecica, ſed ſubtiliſſime & indiſtincte ſtriata, longitudine ———

166 LYCUS

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166 LYCUS. Nov. Spec.? — Niger elytris reticulato-ſtriatis ſanguineis.
Caput & antennæ nigræ.
Thorax totus niger rugoſus.
Elytra ſanguinea coſtis 6-longitudinaliter elevatis inter ſingulas quaſi rete e rugis minus elevatis, apicibus rotundatis, longitudine ——.
A L. ſanguineo & minuto quos ante oculos habeo diverſus.

171 TRICHIUS Eremita.
172 nobilis.
173 faſciata.
174 hemipterus.
175 CETONIA faſtuoſa.
176 marmorata.
177 viridis.
178 hirta.
179 ſtictica.
180 MELOLONTHA Fullo — Var. atra.
181 — Var. caſtanea.
182 piloſa.
183 ſolſtitialis.
184 æquinoctialis.
186 brunnea.
196 Friſhii. — Caput viride-æneum, antennarum pedunculi ferruginei. Capitula nigra.
Thorax viride-æneus, margines laterales pallidi.
Elytra teſtacea viride-nitentia.
Abdomen & pedes nigro-æneci.
198 vitis.
187 horticola. — In exemplare meo caput & thorax virides non cærulei ſunt.
189 agricola? — Elytra teſtacea limbo & macula prope ſcutellum nigris.

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190 MELOLONTHA. An precedentis varietas? Eſt Cruciſer Jablonſky.
Elytra dilute teſtacea, macula magna nigra communi cruciformi.

189 fruticolæ varietas?
Statura & magnitudine precedentis, ſed elytra omnino caſtanea.

191 fruticolæ varietas?
Statura et magnitudine precedentis, ſed elytra nigro-ſpadicea.

193 ruricola.

194 farinoſa.

195 Scarabæus argenteus Scopoli.

200 BUPRESTIS berolinienſis. Non elytris viridi nigroque variis, potius viridi æneoque variis.

201 rutilans. Elytris præmorſis, ſtriatis viridi auratis nigro punctatis, limbo aureo.

202 mariana.

203 9-maculata.

204 chryſoſtigma. Elytra in exemplaribus meis ſtricte non maculis duabus aureis impreſſis, rectius punctis tribus, &c. Eſt enim tertium adhuc punctum prope ſcutellum, at minus conſpicuum.

205 decaſtigma. Numerus punctorum in exemplaribus meis variat: puncta autem circulum formantia ſemper 8 ſunt.

206 lugubris.

207 tenebrionis.

208 Rubi.

209 4-punctata.

209 manca.

211 pygmæa. Pl. XI. fig. 7.

218 minuta. Ovata, nigro-ænea, thoracis baſi ſinuata, elytris integris, vittis canis undulatis tranſverſis.

212 viridis.

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213 BUPRESTIS læta.

214 Salicis.

215 formoſa. Nov. Spec. Pl. XI. fig. 8.
Caput viride, foveola frontali impreſſa. Oculi teſtacei. Antennæ æneæ.
Thorax linea mediana cæruleo-viridi, linea utrinque lata nigra foveola impreſſa, marginibus viridibus.
Elytra integra marginata viridia, ſtriga communi ſuturali cæruleo-viridi, apicibus punctatis.
Abdomen viridi-æneum.
Pedes æneo-virides.
Tota nitens; ſtatura & magnitudine Bupreſtis lætæ; longitudine —
In alio exemplare oculi fuſci ſunt, & corpus ſubtus æneum.

217 megacephala. Nov. Spec. Pl. XI. fig. 9.
Caput nigrum, magnum, thorace latius, rotundatum, foveola frontali impreſſa. Oculi & antennæ nigri.
Thorax niger, marginatus, antice gibboſus.
Elytra nigra, integra, ſubtiliſſime & confertim punctata, apicibus rotundatis.
Abdomen æneo-nigrum.
Pedes nigri.
Tota nitens, cylindrica, longitudine —
latitudine —

221 ELATER niger.

222 An precedentis var. ?
Subtus pedibuſque piceus.

223 murinus ?

225 teſſellatus.

224 undulatus. Herbſtii.

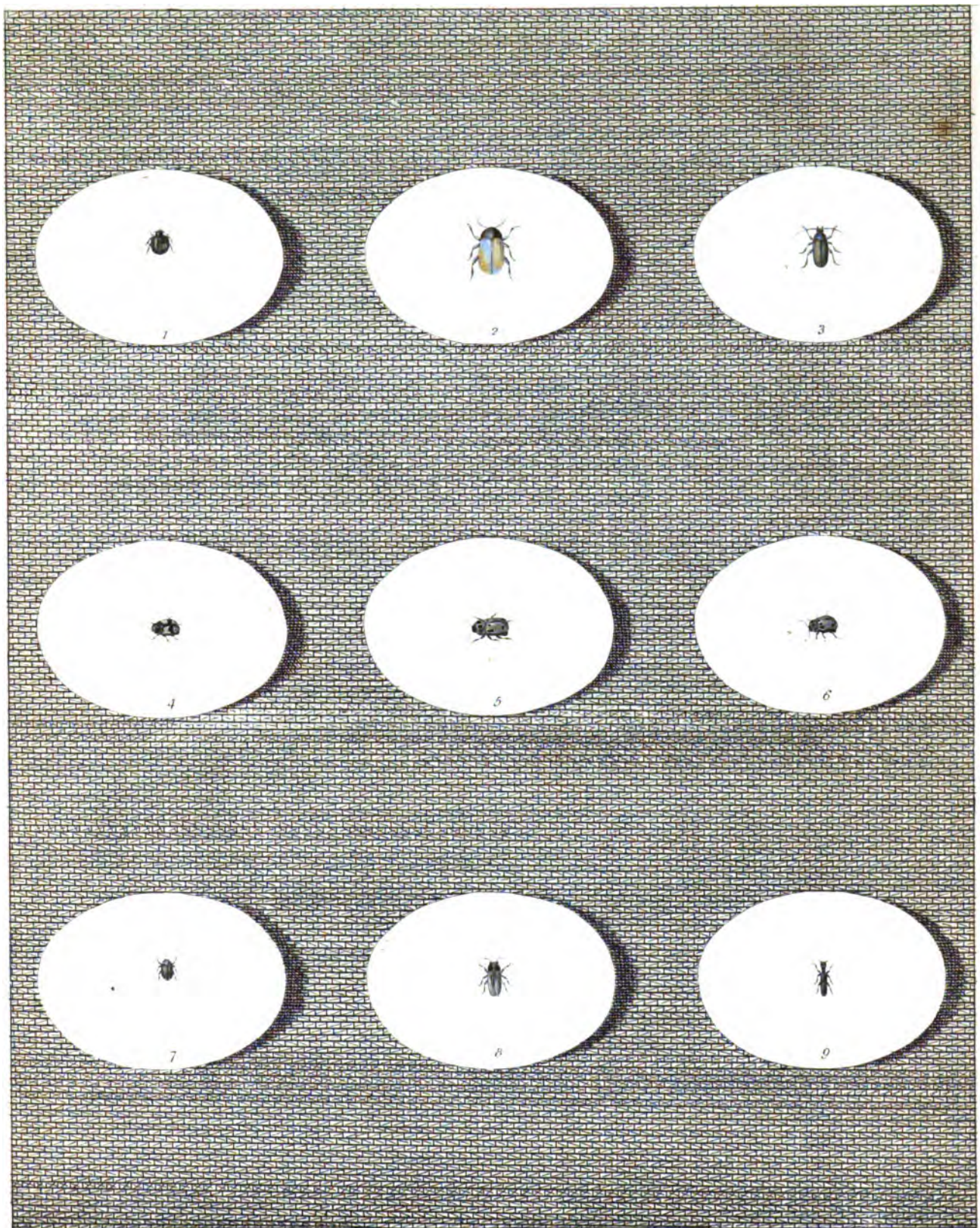
226 pectinicornis.

227 cruciatus.

228 caſtaneus.

230 ELATER

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229 ELATER thoracicus.
229* hæmatodes.
230 ſanguineus.
232 ephippium.
233 balteatus.
234 bimaculatus.
240 bicolor. Faunæ Inſect. Germanicæ, Panzeri.
244 PRIONUS ſcabricornis.
245 coriarius.
247 CERAMBYX Cerdo.
246 Heros.
248 alpinus.
249 Kaekleri. Var. Hungaricus.
251 nebuloſus.
252 hiſpidus.
253 An Nov. Spec.? Pl. XII. fig. 1.
Ferrugineus, oculi nigri, elytra albo-ſubnebuloſa, apicibus integerrimis obtuſis.
Spina thoracis acuta retroſpiciens.
Antennæ 1½ corporis longitudine.
Caput, antennæ, thorax & elytra hiſpida. Longitudine —
254 LAMIA atomaria.
256 textor.
263 ſutor. In exemplaribus meis thorax & elytra nigro-ænea, & maculæ elytrorum, & ſcutellum alba ſunt; nec "elytris atris ferrugineo maculatis," ut in Entom. Syſtem. Maculæ pilis formantur; in duobus exemplaribus plane deſunt.
264 curculionoides.
257 triſtis. Scaber, totus niger, pilis albidis caneſcens. Elytra maculis duabus velutinis aterrimis.
pedeſtris.

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258	LAMIA rufipes.	Cel. Fabricius in deſcriptione dixit, caput & thorax rufa; quæ in propriis exemplaribus nigra ſunt.
259	Morio.	Var. Æthiops Scopoli. Omnino nigra, nunquam pedibus, vel primo articulo antennarum teſtaceo aut caſtaneo.
260		Var. fulvus Scopoli. Articulus primus antennarum, pedes & elytra caſtanea, ſemperque concolores. De fulvo, Scopoli dicit, "Elytris abdomine brevioribus:" hoc interdum verum eſt etiam in æthiope, non tamen ſemper. Abdomen verſus apicem ſolummodo rufeſcit.
261	lineata.	
270	SAPERDA ſcalaris.	
271	oculata.	
272	linearis.	
273	erytrocephala.	
273*		Prec. varietas. Thorace toto nigro.
274	nigricornis.	In hoc exemplare, thorax & elytra nigra ſunt: lineæ thoracis & atomi elytrorum flavæ a pubeſcentia flava tantum pendent.
275	populnea.	In exemplaribus meis, elytra punctis flavis utplurimum 5 notantur, in nonnullis duobus tantum, in aliis omnino deſunt. Color flavus a pubeſcentia pendet.
277	tremula.	Color ut in Melolontha farinoſa variat, nunc vireſcens, nunc cœleſtis.
278	ferruginea.	
279	violacea.	Elytra ſubtiliſſime & confertim punctata, apicibus acutis. Scutellum album.

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280 SAPERDA cœleſtis — Nov. Spec. Pl. XII. fig. 2.
Caput viridi-cœleſte. Oculi fuſci.
Antennæ fuſcæ corporis longitudine, articulo primo vireſcente.
Thorax cylindricus, capite concolor.
Elytra viridi-cœleſtia, ſubtiliſſime & confertim punctata, plana, ſubattenuata, apicibus truncatis.
Abdomen cœleſti-viride.
Pedes anteriores flavi, reliqui corpore concolores.
Animal pulcherrimum, pubeſcens, longitudine ——. A Saperda violacea diſtinctiſſimum, non tantum colore ſed etiam ſtatura.

281 præuſta.

282 An Nov. Spec. ? — Tota nigra, pubeſcentia alba cinereſcens, ſubtus magis pubeſcens, ſcutellum albidum. Antennæ piloſæ corporis longitudine. Elytra ſubtiliſſime & confertim punctata.
Longitudine ——

283 lineola.

285 An cylindrica ? — Tota nigra, pubeſcentia albida cinereſcens, antennæ corporis longitudine, thorax linea obliterata albida.
Elytra plana, apicibus truncatis.
Femoris apex & tibiæ pedum anteriorum flavæ. Longitudine ——

287 — Pubeſcentia viridi-cinereſcente tota veſtita.
Antennæ corporis longitudine.
Elytra plana, apicibus truncatis.
Longitudine ——

288 An Nov. Spec. ? — Caput & oculi nigri, antennæ corporis longitudine luteæ, apicibus articulorum fuſcis.
Thorax niger.

Elytra

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Elytra nigra, punctata, plana, coſtis duabus elevatis, apicibus truncatis, marginibus verſus baſin flaveſcentibus.
Abdomen ſordide luteum.
Pedes anteriores lutei, reliqui abdomine concolores. Longitudine ——

290 SAPERDA

Caput nigrum, fronte pubeſcentia flava tecta.
Oculi nigri. Antennæ nigræ, corporis longitudine.
Thorax niger, pubeſcentia cinereſcens, linea centrali flava. Pectus flaveſcit pilis.
Elytra nigra, pubeſcentia cinereſcentia, plana, apicibus truncatis; ſcutellum flavum.
Pedes anteriores flavi, reliqui femoribus flavis, tibiis nigris.
Longitudine ——.

291 atomaria.

Nov. Spec. Pl. XII. fig. 3.
Atomis luteis & nigris variegata.
Antennæ corporis longitudine.
Elytra plana, apicibus truncatis.
Teſta nigra eſt, ſed ita pubeſcentia lutea tecta, ut color illius minutiſſimis ſolummodo punctis perluceat.

294 CALIDIUM Bajulus.

295 atomarium.

296 fennicum.

297

Prec. var. Thorace nigro.

298 clavipes.

Antennæ mediocres, nec longiores ut in Entomol. Syſtem.

299 violaceum.

299* cognatum.

Laicharting in Tyrol. Inſect. Pl. XII. fig. 5.
Char. Specif. Nigrum, thorace angulato, elytris vireſcentibus rugoſis, antennis mediocribus.

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Caput nigrum nitens. Oculi lunati rufi. Antennæ nigræ, fere corporis longitudine.

Thorax niger, disco lævissimo nitidissimo, lateribus depressis punctatis, anguloso acuminatis. Pectus subrugosum.

Elytra æneo-viridia nitentia plana, rugosa præsertim ad basin, lineis duabus elevatis, a medio ad apicem dilatata expansa.

Abdomen nigrum.

Pedes nigri, femoribus clavatis.

Longitudine ———

300 CALIDIUM sanguineum.

309 luridum.

310 an precedentis var.? Elytris fusco-nigris & thorace minus gibbo.

311 striatum. Laichartingi Tyrol. Insect.

308 florale. Fasciæ in exemplaribus meis sulphureæ sunt, non albæ ut in Entom. Systema.

302 Arietis.

303 plebeium.

304 detritum.

305 ornatum.

306 mysticum. An elytrorum basis in semina rufa? Marem & feminam, si semina mystici fuit, in coitu inveni, et basis elytrorum non rufa sed nigra fuit. Antennæ et tarsi maris rufi, antennæ tamen feminæ nigro & albo variegatæ & tarsi nigri.

307 Alni.

315 LEPTURA livida.

316 melanura.

335 strigilata.

317 sanguinolenta.

338 meridiana.

332 villica.

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319 LEPTURA rubra. Purpureus ! ! mire varietas coloris purpurei potius lateritius.

320 teſtacea.

324 virens. Sericeo-olivacea, antennis ſuſco luteoque annulatis. Teſta nigra eſt; color olivaceus ſolummodo a pubeſcentia pendet.

325 atra.

326 humeralis.

334 lurida.

327 nigra.

335* 4-maculata.

337 8-maculata.

330 attenuata.

328 calcarata.

328½ An tibiæ poſticæ in utroque ſexu calcaratæ ? Hæc et precedens ſimillimæ; dentes tamen tibiarum poſticarum hic deſunt, pauloque major eſt. Antennæ utriuſque nigro et flavo annulatæ. Color flavus hic prædominatur, illic niger: forſan diverſitas a ſexu tantummodo pendet.

329 4-faſciata.

333 collaris.

341 NECYDALIS ſcladonia.

342 uſtulata.

343 Podagrariæ.

344 teſtacea.

347 SYNODENDRON cylindricum.

348 SPONDYLIS bupreſtoides.

349 APATE capucinus.

350 BOSTRICUS typographus.

351 pygmæus.

352 BRUCHUS piſi.

353 granarius.

354 AN-

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354 ANTHRIBUS albinus.
355 latiroſtris.
359 ATTELABUS Coryli.
356 curculionoides.
357 Bacchus.
358 Betuleti. Viridi-auratus.
358* Var. violaceus.
358† Var. viridi-auratus, ſubtus pedibuſque violaceus.
360 hungaricus.
361 æquatus.
362 efferans. Nov. Spec. Pl. XII. fig. 4.
Char. Specificus: Roſtro brevi, capite thoraceque rufis, elytris fuſcis.
Caput ruſum, roſtrum brevi (longitudine capitis), oculi prominentes, antennæque nigri.
Thorax rufus ſubcylindricus.
Elytra fuſca punctato-ſtriata.
Abdomen nigrum nitidum.
Pedes, femoribus flavis, tibiis & tarſis fuſcis. Totus pubeſcit.
Longitudine —
364 calibatus. Nov. Spec. Pl. XII. fig. 6.
Caput nigrum, roſtro breviſſimo. Oculi antennæque nigri.
Thorax niger, opacus, ſuborbiculatus, punctatus, canaliculatus.
Elytra nigro-cærulea nitentia punctato-ſtriata, apicibus rotundatis a ſe invicem ſejunctis.
Abdomen & pedes elytris concolores. Longitudine —
367 CURCULIO Pini.
371 Iacea.
366 Cynarae.
368 Colon.
370 abbreviatus.

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370* CURCULIO nitens? Thorax ad lentem punctatus, elytris punctato-ſtriatis, ſtatura precedentis. Longitudine ——.

370† Thorax punctatus, elytris ſtriatis ordine punctorum inter ſtrias, ſtatura fere precedentis, minore tamen thoracis, latitudine. Longitudine eadem.

370‡ Thorax punctatus, elytris ſtriatis.
Æneus nitidus.
Statura precedentis, paulo tamen anguſtior; longitudine —
An hæ duæ novæ ſpecies ſunt nec ne, non liquet.

384 pericarpius.

386 Quercus.

407 Bardanæ? var. torquatus. Pl. XII. fig. 7.
Charact. Specificus: Longiroſtris cylindricus ater, pubeſcentia luteſcens, thorace antice annulato.
Caput nigrum, roſtro longo cylindrico lævi ſubarcuato. Oculi vix conſpicui. Antennæ capitulo pubeſcentia cano.
Thorax ſubcylindricus, niger, ſubtiliſſime punctatus; antice annulo inciſo cinctus.
Elytra nigra, punctato-ſtriata, apicibus obtuſis.
Abdomen nigrum.
Pedes nigri, femoribus ſimplicibus.
Longitudine ——

390 Aſcanii. Caput fuſcum. Oculi nigri. Antennæ capitulis pubeſcentia canis.
Thorax fuſcus, opacus, impunctatus, ſubcylindricus; lateribus pubeſcentia albis.
Elytra fuſca, pubeſcentia parum cinereſcens, vix punctato-ſtriata, lateribus pubeſcentia albis.
Abdomen

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Abdomen & pectus pubescentia cana.

Pedes, femoribus simplicibus, pubescentia cani.

391 CURCULIO cylindricus ? Pl. XII. fig. 8.

Char. Spec. Longirostris cylindricus, fusco alboque variegatus, elytris acuminatis.

Caput, oculi, & antennæ fuscæ capitulis canis; rostro lævi cylindrico subarcuato, vix thoracis longitudine.

Thorax cylindricus, punctatus, punctis confluentibus; supra fuscus, subtus cum lateribus albus.

Elytra punctato-striata, punctis tribus oblongis depressis ad basin magis conspicuis, acuminata, fusca, macula magna oblonga suturali cum macula postica coalita, & punctis sparsis albis.

Abdomen fusco alboque variegatum, fasciculis pilorum albidorum exasperatum.

Pedes fusci albo variegati.

Longitudine ———

Obs. Color albus non in testa hæret; est pubescentiæ species.

372 Abietis.

373 Lapathi.

374 germanus. Totus niger, est C. dyrus Musei D. Helwig.

374* Punctis flavis pilosis sparsis. Fig. Sulzeri, tab. IV. fig. 8. optima.

375 Scrophulariæ.

376 5-punctatus.

377 guttula.

378 Echii.

379 varians ? Totus niger pubescens, elytris striatis discis badiis. Longitudine —

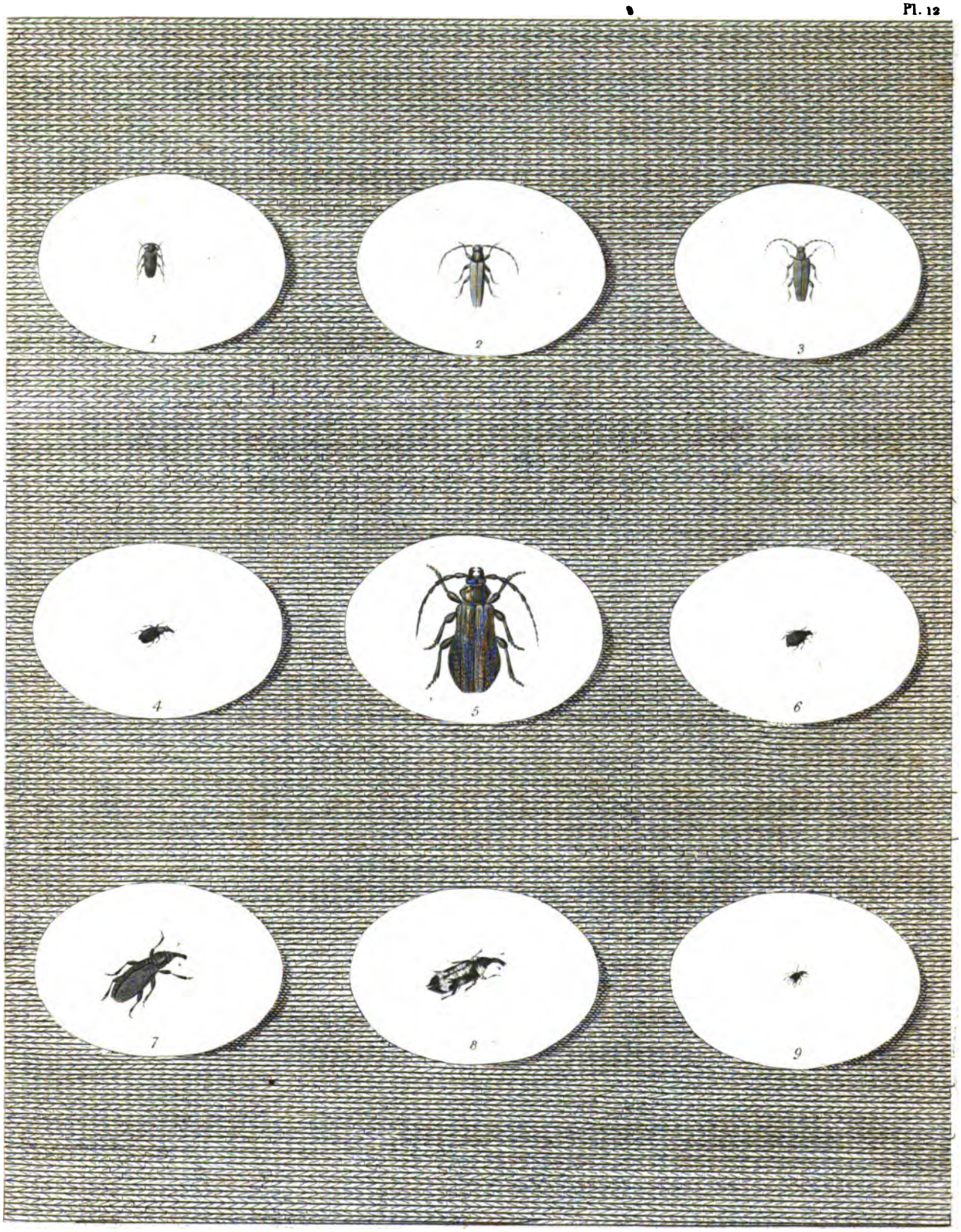
381 Nucum.

380 tortrix ? Capite pectoreque fuscis.

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380*	Curculio tortrix ? var.	Capite, pectore, abdomineque fuscis.
392	viridis.	
403	roridus.	Niger albo maculatus, rostro apice sulcato. Longitudine ———
	marmoratus.	Niger albo maculatus, rostro bisulcato. Longitudine ———
393	sulcirostris.	
394	obliquus.	
395	3-guttatus.	
397	punctatus.	
401	niger.	
398	Liguslici.	
399	nubilus.	
400	gemmatus.	
405	argentatus.	
389	danubialis	Schrankii.
369	capucinus	Schallerii, Acta Hallensia.
370*	Artemisiæ.	Faunæ Germ. Panzerii.
370†	Absinthii.	Ibidem.
385	maculatus.	Nov. Spec. Pl. XII. fig. 9. Char. Specif. Longirostris, femoribus simplicibus, niger, glaber; elytris striatis, apicibus macula magna communi rufa. Caput nigrum, rostro lævi arcuato thoracis longitudine. Thorax niger oculo armato subtilissime punctatus. Elytra glabra striata nigra, apicibus macula magna rufa communi. Pedes nigri, femoribus simplicibus. Longitudine —
396	seminulum ?	Si seminulum sit, femora pedum posticorum dentata, non mutica. Æneo-niger. Thorax latus, brevis, scaber. Elytra hemisphærica, punctato-striata. Pubescit. Longitudine —

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REGNUM

VEGETABILE.

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REGNUM VEGETABILE.

VERONICA aphylla.
bellidioides.
fruticulosa.
alpina.
agrestis.

POA disticha. — In Alpibus Carpathicis, in monte Fleisch-Bank dicto.

CYNOSURUS cæruleus.

GLOBULARIA vulgaris.

MYOSOTIS scorpioides. var. β. — In Alpibus Carpathicis prope lacum Grün-See dictum.

ANDROSACE villosa. — Haud procul a Grün-See.

Foliis ciliatis, perianthiis villosis; nec foliis pilosis & perianthiis hirsutis ut in Syst. Vegetab.

ANDROSACE pauciflora. — In rupibus calcareis haud procul a Grün-See.

Foliis setaceo-linearibus glabris, pedunculis binis longitudine scapi, segmentis corollæ emarginatis.

Hæc est descriptio cel. Villarsii in Flora Delphinatus, unde in editionem Gmelianam System. Vegetab. migravit. Rectius forte, saltem secundum mea specimina: Foliis linearibus glabris, scapo subunifloro.

Inter viginti exemplaria unum tantum biflorum inveni, idque pedunculis vix flore longioribus. Ipse Villars dicit nunc unifloros nunc biflores esse.

PRIMULA

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PRIMULA minima.

Folia cuneiformia apice acute crenata; nullo modo hirſuta ut in Syſt. Vegetab.

CORTUSA Matthioli. In monte Fleiſch-Bank.

Capſula 1-locularis ovalis, apice 5-valvis, ut in Syſtem. Vegetab. cel. Murrayi, non bivalvi ut in Syſtem. Nat. edito a cel. Gmelin, qui ſecutus eſt Gärtnerum de Seminibus, &c.

SOLDANELLA alpina. Ad Grün-See.

CAMPANULA lilifolia. Prope Botſdorf infra Alpes Carpathicas.

carpathica. Ibidem.

alpina. Prope Weiſe-See?

SWERTIA perennis. Ad Grün-See.

GENTIANA punctata. Ibidem.

aſclepiadea.

Pneumonanthe.

verna.

tenella. (Pl. XIV) In monte Fleiſch-Bank.

Radix flaveſcens ſimplex tenuis flexuoſa, fibrillis ſparſis.

Caulis adſcendens, bi- aut tri-pollicaris, baſin verſus tantum folioſus quatuor circiter paribus, unde nonnunquam pedunculi floriferi proveniunt; ſuperne nudus tenuis tetragonus parum curvatus.

Folia oblonga et ovato obtuſa, inferiora ſenſim longiora connata vaginantia, ſuperiora ſemiamplexicaulia interdum baſi ſoluta.

Flores ſolitarii.

Calyx tetraphyllus, foliis alternis latioribus, baſibus ſolutis & in modum ſcroti parvuli productis, latiora ovata, anguſtiora lanceolata.

Corolla calyce duplo longior, limbo 4drifido ſegmentis lanceolatis, fauce barbata, in planta ſicca flaveſcit,

Obſ. Sine dubio Gentiana tenella cel. Rottöbollii in Kiöbenhavns Selſkabs Skrifter, Tom. X. p. 436. Tab. II. fig. 6. bene deſcripta et depicta. Figura optime cum ſpeciminibus meis convenit niſi quod

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Gentiana frigida ?

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magis ramoſa ſit. Cum ea quæ Rottböllius de hacce planta notavit lingua Danica ſcripta ſint, ideoque noſtratibus ignota fere remaneant, gratum illis fore arbitror, ſi deſcriptionem in linguam Latinam tranſlatam addam. Ita Rottböllius:

" Gentiana 5ta omnium eſt rariſſima et pulcherrima; nulla apud auctores invenitur quacum hæc comparari poſſit, et ſine dubio igitur nova eſt ſpecies. *Flos* illius eſt hypocrateriformis, habet tubum mediocriter longum & 4drangularem, cujus apertura (faux) in parte ſuperiori eſt nonnihil contracta, & margo quo illa circumdatur crinibus occupatur criſpatis. *Limbus* in quatuor dividitur partes (lacinias) parvas et ovatas, memorabilis eſt ob pedunculos longos erectos et elegantes, foliaque illius gaudent facultate quæ in nulla hujus generis planta reperitur; ſunt nempe baſi ſua ſoluta, et in parte ſuperiori invicem conjuncta. Quo Gentiana hæc ſatis diſtinguitur a G. campeſtri Linnæi, cujus nonnulli putarunt varietatem, ob calycem inæqualem et faucem barbatam; ſed, hac ſimilitudine excepta, tam multæ aliæ adſunt differentiæ, et forma externa adeo variat, ut plurimæ aliæ Gentianæ potius eſſent conjungendæ quam hæc. Creſcit in Iſlandiæ montibus; color floris ſaturate cæruleus. Inter Linnæi ſpecies locum inter G. campeſtrem et ciliatam occupare debet; nomen illius triviale ſit, caulium tenerorum cauſa, G. tenella. Character & deſcriptio ejus ſunt ſequentes.

Gentiana tenella, foliis ovatis baſi ſolutis, pedunculis filiformibus longiſſimis, fauce 4fida, barbata.

Radix ſimpliciſſima, filiformis, flexuoſa.

Caulis unicus, tener, delicatus, tetragonus, ſubfuſcus, mox ſupra radicem in ramis abſumptus.

Rami. Inferiores oppoſiti vel 3ni, pollicares, minima diſtantia remoti, filiformes, flaccidi. *Superiores* alterni, breviores, $\frac{1}{2}$ vel 1. poll. remoti.

Folia oppoſita, ovata vel obovata, parva, ſeſſilia, obtuſa, venoſa, erecta, cauli appreſſa, *baſi ſoluta*, eo remotiora quo ſuperiora.

Pedunculi uniflori, filiformes, ſtricti, erecti, caulem & ramos, quibus 2plo circiter longiores terminant.

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Perianthium 4-phyllum, *foliolis* ovatis, venoſis, obtuſis, erectis, parum *ſupra baſin* affixis, alternis latioribus.

Corolla monopetala, hypocrateriformis, ſtriata, venoſa, calyce 2plo longior. Tubus amplus, longus, tetragonus. *Faux* contracta, villis candicantibus flexuoſis clauſa. *Limbus* parvus, 4-partitus, laciniis ovatis, erectis, patentibus.

Stamina. Filamenta 4, ſubulata, tubo breviora. Antheræ incumbentes, oblongæ.

Piſtillum. *Germen oblongum*, filamentis æquale. *Styli* 2 *breviſſimi*. *Stigmata recurva*."

GENTIANA frigida. Pl. XIII.

Radix ex radiculis flaveſcentibus.

Caulis aſcendens, pollicaris ad 3-pollicarem, petiolis tabidis vaginantibus foliorum obductus.

Folia caulina lineari-lanceolata obtuſa connata vaginantia evenia pollicaria, 3 aut 4 paria circiter, quorum duo ſumma paria ſibi approximata immediate ſub calyce poſita ſunt modo involucri.

Folia turionum caulinis ſimilia et latitudine eadem, at longitudine fere triplici, ita ut linearia evadant.

Flores bini terminales ſeſſiles, fere ſeſqui-pollicares.

Calyx tubuloſus 5-fidus laciniis lanceolatis alternis majoribus.

Corolla imberbis calyce duplo longior, campanulata plicata membranacea flaveſcens ſtriis longitudinalibus & punctis conniventibus cæruleo-viridibus notata; 5-fida laciniis triangularibus æquilateralibus acutis, totidem denticulis vel lacinulis interjectis.

Capſula columnaris utrinque acuminata.

Cum hæc deſcriptio plantam ſiccam ſequatur, non ingratum fore lectoribus ſpero, ſi optimam deſcriptionem cel. Hænkii *, quæ ad amuſſim cum planta mea quadrat, addam: " Gentiana corollis quinquefidis, campanulatis, terminalibus, ſeſſilibus; foliis obtuſis, radicalibus linearioblongis, caulinis lanceolatis; caule ſubbifloro. *Radix* ei perennans, oblique aſcendens, gracilis, bi- et tri-pollicaris, utcumque teres, ſed

* Hænkens botaniſche Beobachtungen auf Reiſen nach dem Rieſen-Gebirge.

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geniculis noduliſque per intervalla aucta pluribus: e quibus fibras perquam copioſas, longiſſimas, teretes, perpendiculares, verticillatim ſubinde egredientes, demittit, verſus ſuperiora a tabidis imbricatiſque albido aut flaveſcenti pellucentibus petiolorum præteritorum annorum exuviis craſſeſcens: coloris cæterum ut et fibræ dilute flaventis, ſapore vero intenſe amaro, diu inhærente. Eadem nunc utplurimum ſimplex, *caulem* ſolummodo unicum edit, aut multiceps plures, numeroſos inter foliorum faſciculos, intricatis duntaxat atque accumulatis plurium caulium radicibus, ut ceſpites exigui non raro inde exſurgant: erecti hi ſunt ſatiſque pro puſillo plantæ habitu firmi, bi- aut ad ſummum tri-unciales, ſæpe adeo humiles, ut caulem vix ullum, floreſque vere acaules, Gentianæ acaulis in morem dixeris: glabri cæterum iidem, angulati, ſubtiliter ſtriati, geniculo uno alterove modice ad foliorum conjugationes incraſſati, ex flavo virides, ſtriis hinc inde purpuraſcentibus picti, in ſummitate binos utplurimum flores, rarius unum, rariſſime vero tres ſuſtinentes. *Folia* caulina bina et bina oppoſita, patentia, baſi connato-ſeſſilia, lanceolata aut ex lanceolato linearia, obtuſa, margine integerrima aut rarius ſubundulata, craſſiuſcula, ſubcarnoſa, utrinque glabra atque ſaturatius virentia, pollicem unum plus minus longa, lineas duas ſæpe tres lata: ſuprema eorumdem paria, ſibi approximata, calycibus florum immediate ſubjecta. Radicalia vero, atque illa in faſciculis, caulem ima baſi veſtientibus collecta, numero varia, in orbem expanduntur, vereque linearia ſunt, aut ex lineari oblonga, itidem obtuſa, in petiolum ſenſim attenuata, atque inde in vaginas illas aridas ſubdiaphanas, imbricatim imo cauli incumbentes abeuntia: caulinis cæterum excepta longitudine ſimilia; pollices duos, etiam tres, longa; lineam unam et dimidiam, ſæpe duas, lata. *Flores* terminales bini utplurimum e ſinu ſupremorum foliorum prodeuntes, pedunculo omni deſtituti, majuſculi, erecti. *Calyx* tubuloſo-cylindraceus, erectus, corolla duplo brevior, ore ſuo in ſegmenta quinque dividitur erecta, lanceolata aut linearia, auctiuſcula, integerrima, glabra, una cum toto calyce craſſiuſcula. *Corolla* perſiſtens,

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tenuis, papyracea, ſubdiaphana, Gentianæ punctatæ adinſtar, albida, ſed punctis rariter ſparſis ſtriiſque ab apice fuſceſcente ad ipſam baſim uſque decurrentibus, cæruleſcentiſque coloris variegata, duorum fere pollicum longitudine, diametro vero lineas tres, quatuor, circiter æquans: ad formam vero quod attinet, ea ex baſi anguſtiore tubuloſa ſenſim in ventrem ovato-cylindraceum utcunque campanulatum dilatatam, tandem in limbum panditur angulato-plicatum, rugoſiuſculum, quinquefidum: ore patulo, glabro, imberbi: ſegmentis erectis lanceolato-ovatis, acutis, latere uno rotundatis, dente ſingulis minore acutiuſculo alternatim interjecto. *Stamina* quinque: filamenta ſubulata, baſi dilatata, internoque parieti in corollæ fere medio adfixa, aquoſe cærulea ſunt, corollaque breviora. *Antheræ* breves, oblongæ, erectæ, apice ſubconniventes, flavent ſtyli longitudine. *Germen* ovato-oblongum pedunculo ex fundo corollæ enato tereti, ſenſim magis magiſque matureſcentibus ſeminibus increſſato elongatoque inſiſtit, ſuperne vero in ſtylum cylindricum breviſſimum tandem bifariam dehiſcentem abit: *Stigma* craſſiuſculum orbiculato-capitatum, ætate una cum ſtylo in duas partes ſecedit, extrorſum revolutas, ut bicorne demum appareat. *Capſula* ex ovali oblonga, acuminata, glabra, unilocularis, bivalvis, ſuccreſcentibus ſeminibus ultra corollæ faucem exſerta, atque ad unam tertiam, ſæpe et dimidiam, longitudinis ſuæ partem, dehiſcens. *Semina* angulato-ſulcata aſpera fuſca."———Et inſuper addit: "Nequaquam ego ſtirpis perquam raræ primus inventor: et Carpatus mons eandem alit, unde plures ante annos beatus Lipp rei herbariæ peritiſſimus attulerat. Deinceps et ab illuſtri Jacquinio eodem loco lecta: ſed altum hucuſque de ea ſilentium, nec apud veteres, quantum novi, ejus extat memoria."

Mihi tamen videtur eadem planta eſſe quam in Tab. 50. Tom. 3. Itineris Pallaſii ſub nomine Gentianæ punctatæ affinis alpinæ albifloræ depictam cernimus. Folia tamen diſcrepare non negandum eſt, folia enim in ſpeciminibus meis, plane ut in deſcriptione Hænkii, nec trinervia nec lato-lanceolata ſunt; flores etiam non terni vel 4-terni ſed bini. Si autem reſpicimus ad Gentianam floribus terminantibus diaphanis

Floræ

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Floræ Sibir. cel. Gmelini, pag. 106. tom. 4. ab ipſo Pallaſio citatam, dubitatio ſubit an deſcriptio cel. Pallaſii accurata ſit: nam cel. Gmelin Gentianam rupeſtrem folio plantaginis anguſtifoliæ, flore albo diaphano ſtriis et punctis cæruleis vario, Stelleri Irc. 4. citat. Flora Irc. adhuc inedita reſtat, deſcriptio tamen in Flora Sibirica in extenſo data eſt, et bene cum planta noſtra, et deſcriptione Hænkii convenit, et folia ibi deſcripta ſunt ſequenti modo: "Radicalia numeroſiſſima, diverſæ longitudinis in orbem ſparguntur, longiſſima 5, breviſſima 2 pollicum, lata ad ſummum $\frac{3}{10}$ pollicis, hinc anguſta, glabra, nervoſa, coſta ipſa radici adnata 5 ad 8 faſciculatim, ex uno ramulo prodeunt, flavo-viridia, qualis plantarum, in hybernaculo adſervatarum, primo vere color eſſe ſolet. E medio foliorum caules ſurgunt, flavo-virides, teretes pro annoſitate plantæ geniculati, ab unico ad quatuor, duos et quinque pollices alti. Ad ſingula genicula caulis duo ex adverſo alterno ordine eriguntur folia, ſub florendi tempus punicea, poſtea plane emarcida. E ſummo caule ſurgunt unus ad quinque flores ſibi arcte incumbentes, faſciculoſi, campaniformes patentes multifidi ſeſquipollicem longi, totidemque expanſo et diſciſſo flore in ſummitate lati, calice monophyllo albo, ſuperius quinquefido, inferius tubulato et diaphano comprehenſi. Floris fundo 5 adnaſcuntur ſtamina trigona, pyramidata, apices verſus acuminata, diaphana, cæruleſcentia, quibus antheræ ſecundum longitudinem inſident. E mediis ſtaminibus adſcendit piſtillum fuſiforme, ovato-acuminatum, pollicare, violaceum, quod ſub medium Septembris in teſtam membranaceam abit, intra geminas ſuas valvas ſemina continentem fuſca, papyracea. Planta hæc, pergit, coloris plane ſingularis eſt, nihil cum colore aliarum ſpecierum analogi habentis, æmulatur veſicam piſciam anémiam diaphanam, ſtriis, et punctis plumbeis, lividis viridibuſque variam."——Nec minus congruit locus natalis,——"Rupes videlicet ad minimum 2000 orgyias elata, undique præruptæ ſeptentrionem verſus æterna nive tegebantur."——Quæ cum ita ſint, plantam noſtram, cum planta Hænkii, Gmelini & Stelleri eandem eſſe probabile eſt; idem ne vero de planta Pallaſii affirmare licet?

Color

Color & conſiſtentia floris peculiares in hacce ſtirpe ſunt, & flos ad amuſſim quadrat tam quoad formam & magnitudinem quam colorem & conſiſtentiam; in numero ſolummodo variant, in deſcriptione Haenkii et in ſpeciminibus meis bini adſunt flores, Pallaſio teſte terni vel quaterni, & Stellero unus ad quinque. Folia profecto, ut antea dixi, cum noſtris ſpeciminibus non conveniunt, æque autem cum deſcriptionibus ab ipſo Pallaſio citatis; folia enim quæ in icone appoſita exhibuit in Terminologia Linneana non nominantur late lanceolata. Icon habitum noſtræ plantæ bene exprimit: inducorque ideo ut Pallaſii quoque Gentianam Gentianæ punctatæ affinem eandem cum noſtra eſſe cenſeam. Neque aſſentire poſſumus cel. Gmelin cui eſt ſolummodo varietas Pneumonanthes, neque immortali Linnæo qui in ſecunda editione Spec. Plant. varietatem Gentianæ punctatæ eſſe opinatur: "Hujus (punctatæ) varietatem, inquit, legit cel. Gmelinus in Siberia foliis lineari-lanceolatis, floribus terminalibus ternis, pedunculis propriis, corollis flavis punctis ſparſis purpuraſcentibus;" Rectior nobis videtur hæc opinio celeb. Pallaſii: "Gentiana punctata quæ in Alpibus Sibiriæ itidem albo flore occurrit, & præſertim conſiſtentia differt, forſitan diſtinguenda, licet pro varietate poſita ab illuſt. Linnæo." Plantam eſſe ſolummodo alpinam omnes convenimus: in vertice rupium altiſſimarum circa Barguſinum perpetua nive rigentium ad altitudinem 2000 orgyiarum legit Stellerus; in altiſſimo monte Sochondo in frigidiſſimis alpibus Dauriæ cel. Pallaſius. Cel. Haenke in alpibus Styriæ, & ego in excelſis rupibus montium Carpathicorum haud procul a Grün-See.

LASERPITIUM ſimplex.	In alpibus Carpathicis.
PIMPINELLA dioica.	
SAMBUCUS racemoſa.	Prope Smölnitz.
LINUM hirſutum.	In monte prope Tokai.
tenuifolium.	Ibidem.
flavum.	Ibidem.
ILLECEBRUM Paronychia.	

THESIUM

THESIUM alpinum.
linophyllum.
ANTHERICUM calyculatum.
JUNCUS ſpicatus.
EPILOBIUM alpinum. — Siliquis petiolatis, non ſiliquis ſeſſilibus ut in Syſtem. Vegetab. & in Flora Danica.
Siliquæ ad maturitatem perductæ petiolatæ petiolis longis.——Folia oblonga, ſuperiora anguſtiora.

EPILOBIUM Dodonæi. — Prope Botſdorf.

VACCINIUM uliginoſum. — In monte Krivan.
Tabulæ 62. Cluſii.

MOEHRINGEA muſcoſa.
SAXIFRAGA Aizoon. — Prope Grün-See.
Var. petalis rubro punctatis.
Var. petalis impunctatis.
androſacea. — Ibidem.
Exemplaria mea fere omnia uniflora ſunt: ex Monte Auſtriæ Schneeberg etiam uniflora accepi.
cæſia. — In ſummitate Montis Fleiſch-Bank.
bryoides. — Prope Grün-See.
Caulis non multiflorus in exemplaribus meis; circiter centum legi, et omnia uniflora. Hallerus caulem uniflorum dicit, Scopoli caulem pauciflorum.
oppoſitifolia.
autumnalis.
rivularis.
adſcendens.
cæſpitoſa.

SAXIFRAGA.

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SAXIFRAGA nivalis. var. racemoſa. Pl. XV.

Char. Eſſentialis. Foliis ovatis & ellipticis dentatis longe petiolatis, ſcapo nudo pubeſcente, floribus racemoſis.

Radix fuſca brevis nodoſa præmorſa, radiculis fuſcis undique obſitis.

Scapus adſcendens pubeſcens ſpithamæus et pedalis.

Folia ovata et elliptica glabra nervoſa remote dentata, dentes apice calloſa, in petiolis longis ſubvaginantibus deſinentia.

Flores inconſpicui (ut in Saxifraga nivali) breviter pedunculati racemoſi ex decem circiter racemis partialibus ſubtrifloris alternis.

Bracteæ ad baſin pedunculorum tres, lineares, intermedia maxima.

Calyx 5-fidus.

Corolla. Petala 5 parva ovalia pallida. Stamina rubra. Antheris luteis.

Capſula bicornis, apicibus lividis.

GYPSOPHILLA repens. Non foliis lanceolatis ut in Syſtem. Vegetab. ſed linearibus et enſiformibus ut in figuris & deſcriptionibus cel. Jacquini, Gerhardi, aliorumque.

DIANTHUS proliſer.
deltoides.
ſuperbus.
alpinus. In ſummitate Montis Fleiſch-Bank.
arenarius. Linn. Pl. XVI.

Char. Eſſent. Caulibus ſubunifloris, ſquamis calycinis breviſſimis ſubrotundis acuminatis, corollis multifidis, foliis ſubulatis glaucis ciliatis.

Radix

Caules ſemipedales adſcendentes angulati glauci.

Turiones foliis imbricatis cæſpitem conficientes.

Folia ſemipollicaria connata ſubulata triquetra canaliculata ciliato-ſerrulata glauca, 5 paria circiter.

Flos ſubſolitarius pollicaris & ultra.

Calyx viridis lividuſque longus ($\frac{1}{4}$ pollicis) cylindricus apicem verſus anguſtatus quinquefidus laciniis lanceolatis; ſquamis duabus, nonnunquam quatuor breviſſimis ſubrotundis acuminatis.

Corolla. Petala alba? ſpatulata, limbo fimbriato vel multifido.

In Hungaria legi, quo loco me fugit.

SILENE acaulis. ARENARIA

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Dianthus arenarius. Linn.

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London Published by G.G.& J.Robinson, Paternoster Row, July 1st 1796.

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ARENARIA ciliata Wulfennii.	
laricifolia.	Exemplaria mea non bene quadrant cum characteribus Syſt. Vegetab. Foliis ſetaceis, caule ſuperne nudiuſculo, calycibus ſubhirſutis. Potius foliis ſubulatis, caule ſuperne folioſo, calycibus ſubtomentoſis.
cæſpitoſa Erharti.	
CHERLERIA Sedoides.	In ſummitate montis Fleiſch-Bank.
CERASTIUM alpinum.	In alpibus Carpathicis.
latifolium.	Ibidem.
EUPHORBIA epithymoides.	
SORBUS aucuparia.	Ad Grün-See.
MESPILUS Chamæ-Meſpilus.	Ibidem.
POTENTILLA ſupina.	
ſubacaulis ?	Folia, in exemplaribus meis, magis ſerrata quam dentata.
GEUM montanum.	
reptans.	Ad Grün-See. Nec 5-petala, nec ſem. ariſta geniculata, generis characteres. Petala plerumque 8, nunquam minus quam 6. Ariſtæ curvatæ.
DRYAS octopetala.	In ſummitate montis Fleiſch-Bank.
CISTUS œlandicus.	Exemplaria mea, non foliis utrinque glabris, nec petalis emarginatis. Folia utrinque piloſa, magis in pagina ſuperiore, etiam calyx piloſus, pedunculi tantum pubeſcunt.
ACONITUM Napellus.	Ad Grün-See.
ANEMONE alpina.	
ſylveſtris.	
narciſſiflora.	
ADONIS apennina.	Prope Oedinburgh.
miniata.	

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RANUNCULUS Thora.	In monte Fleiſch-Bank.
aconitifolius.	
rutæfolius.	Prope Grün-See.
glacialis.	Ibidem. Exemplaria mea non calycibus hirſutis, nec caulibus bifloris, gaudent. Calyces denſe villoſi ſunt, & caules variant, uniflori, biflori, triflori & quadriflori. Linnæus ipſe in Flora Lapponica dicit: "Communiter eidem cauli inſident flores duo." Apud Hallerum multiflori, rarius biflori & uniflori: inter 20 ſpecimina 4 ſolummodo inveni biflora. Plantæ pumilæ ſæpiſſime unifloræ, majores 4drifloræ.
alpeſtris.	Ad Grün-See.
falcatus.	
MELITTIS Melliſſophyllum.	Prope Bude.
BARTSIA alpina.	Ad Grün-See.
PEDICULARIS verticillata.	Ibidem.
flammea.	
folioſa.	
DIGITALIS ambigua.	Prope Bude. Folia ſubtus nervis tantum pubeſcentibus.
DRABA aizoides.	
hirta.	
LEPIDIUM alpinum.	
petræum.	In alpibus Carpathicis. Foliola ſubmucronata ſunt.
BISCUTELLA lævigata.	
CARDAMINE petræa.	Prope Grün-See.
POLYGALA amara.	
major.	
HEDYSARUM obſcurum.	In monte Fleiſch-Bank.
PHACA frigida.	

ASTRA-

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ASTRAGALUS alpinus. Ibidem.
veſicarius. Ibidem.
SCORZONERA laciniata. In mœnibus urbis Bude.
Caulis aſcendens nec erectus.
SONCHUS alpinus. Ad Grün-See.
Pedunculis ſtrigoſis, foliis pinnatifido-runcinatis, lobo extimo deltoideo.
LEONTODON aureum. In monte Fleiſch-Bank.
HIERACIUM alpinum. Ibidem.
ANDRYALA lanata. Ibidem.
HYPOCHÆRIS helvetica. Ibidem.
ARCTIUM Perſonata.
CNICUS pygmæus. In monte Fleiſch-Bank.
CACALIA albifrons. Ad Grün-See.
GNAPHALIUM alpinum. In alpibus Carpathicis.
Gnaphalium alpinum Linn. G. puſillum Haenkii & G. fuſcum Scopolii, eadem planta eſſe videtur; dum floreſcit, flores in capitulo congeſti ſunt; floreſcentia autem peracta flores ſeſſiles vel ſubſeſſiles, in axillis foliorum diſcreti.
ERIGERON uniflorum. In monte Fleiſch-Bank.
TUSSILAGO alpina. Ad Grün-See.
SENECIO incanus. In Lomnitzer-Spitze.
Folia non ſunt tomentoſa ut in Syſt. Vegetab. ſed ut apud Hallerum argentea.
SENECIO abrotanifolius. In monte Fleiſch-Bank.
Omnia mea exemplaria uniflora ſunt. Cel. Jacquin dicit ſe accepiſſe a Dom. Lipp. ex montibus Carpathicis plurima ſpecimina, omnia uniflora. Folia radicalia bipinnatifida, caulina pinnatifida.
SENECIO tenuifolius.
ſarracenicus.
ASTER alpinus. In monte Fleiſch-Bank.
Amellus.

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SOLIDAGO minuta.

CINERARIA cordifolia. — Ad Grün-See.

ARNICA Doronicum. — In Lomnitzer Spitze.

DORONICUM bellidiaſtrum. — In monte Fleiſch Bank.

auſtriacum. — Ad Grün-See.

CHRYSANTHEMUM alpinum.

Character generis Chryſanthemi in Speciebus Plantarum Reichardi eſt abſentia pappi; in Generibus Plantarum cel. Schreberi pappus marginatus aut nullus; in Syſt. Vegetab. cel. Gmelini pappus marginatus; in Syſtem. Vegetab. cel. Murrayi primum in conſpectu generum pappus nullus, deinde in charactere generis, ſingulis generibus præpoſito, pappus marginatus. In hacce ſpecie nullum inveni. Folia ſpatulata potius quam cuneiformia, longe petiolata, pinnatifida, ſupra glabra ſubtus tomentoſa; folia ſumma caulina integra linearia.

CENTAUREA montana. — In monte Fleiſch-Bank.
Foliis latè lanceolatis, utrinque tomentoſis.
Varietas? Prope Botſdorf.
Foliis anguſte lanceolatis tomentoſis enervibus.

FILAGO Leontopodium. — Prope Koſteleſko.

VIOLA biflora. — Prope Grün-See.

grandiflora.

ORCHIS globoſa.

conopſea.

SATYRIUM viride.

albidum.

CYPRIPEDIUM Calceolus.

OPHRYS arachnites.

alpina.

SERAPIAS latifolia.

CAREX pauciflora.

atrata.

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CAREX limoſa.

ſemper virens Flor. Delphin.

PINUS pumilio. Ita nuperrime a cel. Dom. Haenke deſcriptus eſt.

Pinus pumilio. Krumholz. Knieholz.

Pini, No. 1660, pag. 319, variet. *v.* Hall. Hiſt.

Pinus conis erectis. Tournef. Inſt. 586.

Scheuchz. It. VI. pag. 460.——Du Hamel, No. *13* et

Pinus humilis iulo purpuraſcente. Tournef. Inſt. du Hamel. No. 12.

Pinaſter conis erectis. C. Bauh. p. 492.

Pinaſter pumilio montanus. Parck.

Pinaſter pumilio montis Arbæ (Arber) Bavariæ. Camerar. Hort. hcic Lackholz.

Pinus pumilio. Clusi Pann. p. 15.

Pinaſter alpinus repens. Schwenckfeld. Cat. p. 159.

Pinus Sudeticus ſeu Carpaticus. Ungariſch. Magaz. 3ter band, p. 38.

Arbor humilis ſumma alpium juga, ubi quævis alia pini ſpecies fereque omnis arbor creſcere recuſat, incolit, atque ingentes ſæpe tractus, denſo confertoque fereque impenetrabili ramorum agmine obducit.

Radices longæ craſſæ duræ lignoſæ obliquæ aut ſubhorizontales, cortice fuſco extus veſtiuntur ſæpe ad notabile intervallum nudæ ſupra terram continuatæ.

Rami vel immediate prodeunt ex ipſa radice, aut ex trunco, ſi adſit, proſtrato atque radicante, ſparſi conferti aſcendentes longi tenaces flexiles altitudine pedum 4, 5, ſæpe ipſam humanam altitudinem pede uno alterove plus minus ſuperantes, teretes cortice craſſo cinereo, a foliorum delapſorum tuberculis elevatis inæquali aſpero tecti, ſuperne ramoſiſſimi. Ramuli ſparſi confertique breves, baſi inflexi nudi adhinc aſcendentes, ſuperne coarctati denſeque folioſi.

Folia confertiſſima ſummitates ramorum occupant, binis atque binis ſemper conjunctim ex communi vagina membranacea arida lacera fuſca aut cinerea prodeuntibus, atque tuberculo communi elevato inſidentibus: ipſa cæterum linearia firma rigida ſubincurvata, ſæpe etiam torta, apice obtuſo,

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obtuſo mucrone terminata, latere interiore ſibi obverſo plana aut leviter excavata, extus convexa, marginibus quam argutiſſime ſerrulata, glabra nitida ſubtiliter ſtriata, profundius virentia, apice flavicante, unciam 1—1½ longa vix lineæ quadrantem lata.

Coni mares ſuperiores plurimi congeſti: feminini inferiores laterales ſeſſiles conſtanter erecti ſæpe ſolitarii ſæpe verticillatim numero 10—12 congeſti, ovati, aut ſubgloboſi obtuſi, conis pini Laricis magnitudine & figura ſimillimi, unciam unam aut paulo ultra longi, ultra unciam craſſi, dilute fuſci, aut purpuraſcentes.

Squamæ imbricatæ, in adultioribus patulæ, mucrone qui in junioribus adeſt deſtitutæ, cæterum apice incraſſatæ obtuſæ, extrorſum gibbæ, intus nonnihil excavatæ, lateribus parallelis.

Rami diffracti uti et tota arbor reſina hyalina fragrantis atque balſamici odoris turget, quæ pura hinc inde, præprimis in Hungaria ex montibus Carpaticis allata balſami nativi forma divenditur. Parant vero et ſimul ex ramorum combuſtione violenta deſtillatione olei ætherei nonnihil empireumatici ſpeciem, quod a vulgo ſub titulo Krumholz-oel circumfertur et divenditur, atque in varios uſus cedit.

Differt a Pin. Mugho Jacq. Icon. plant. rar. Tab. 193. montium ſubalpinorum Auſtriæ atque Stiriæ incola, 1mo. trunco proſtrato radicante ſæpe nullo, nec erecto: 2do. foliis confertioribus, craſſioribus rigidioribus, obtuſo mucrone præditis, profundius viridibus, ſubincurvatis: 3tio. vaginis foliorum brevioribus: 4to. conis ſemineis ſemper erectis ſubgloboſis minoribus obtuſis: 5to. cortice ramorum magis tuberculato. A Pin. ſylveſtri differt itidem trunco proſtrato radicante: cortice magis æquali, nec ita rimoſo: ramis confertioribus aſcendentibus ſupra coarctatis: foliis brevioribus confertiſſimis rigidioribus, tuberculo proprio notabili inſidentibus, apice obtuſe mucronatis: conis quoque minoribus ſubgloboſis, erectis fuſcis aut ex fuſco purpuraſcentibus.

SALIX herbacea.

reticulata. In monte Fleiſch-Bank.

VERATRUM album. Ad Grün-See.

FINIS.

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ELEMENTS OF MINERALOGY,

BY DR. TOWNSON.

IN ONE VOL. OCTAVO.

AS I attribute the backward ſtate of Mineralogy amongſt us not to our indifference to purſuits of this kind, nor to our Iſland not affording a ſufficient variety of the objects of this ſtudy to attract the attention of the inquiſitive; but rather to the difficulty we labour under of acquiring this knowledge; I am induced, particularly by ſeeing with what zeal other branches of Natural Hiſtory are cultivated, to attempt making this a more general ſtudy amongſt us, by facilitating its acquiſition. With this view I intend ſhortly to publiſh a Work entitled THE ELEMENTS OR PRINCIPLES OF MINERALOGY.

THAT the deſign of this Work may not be miſunderſtood; that it may not be ſuppoſed to be a *Syſtem of Mineralogy*; it is requiſite I ſhould ſay that my principal view is not to claſſify and deſcribe Minerals, but to lay down the method in which they ſhould be inveſtigated, explain the language uſed in their deſcription, and fix the principles on which they ſhould be claſſed, and ſo forth: in ſhort, to write a Work for this ſtudy ſimilar in its deſign to that of the *Philoſophia Botanica* of LINNEUS, or ROSE'S, LEE'S, and ROUSSEAU'S *Elements of Botany*, long ſince publiſhed.

To ſecond this view, and to facilitate the ſtudy of this entertaining and uſeful Science; as many of the characters are very difficultly expreſſed in language, and on ſome points far more ſo by figures, which are always reſorted to in difficult caſes in the other branches of Natural Hiſtory; I ſhall annex a copious *Catalogue Raiſonné*, or *Deſcriptive Catalogue* of a COLLECTION OF MINERALS which at my deſire will be formed for this Work. The ſpecimens which will compoſe theſe collections, beſides ſhewing the characters, or thoſe marks which are to be attended to in inveſtigating and deſcribing of Minerals; and beſides explaining the language uſed in this Science, will form a CABINET containing moſt of the intereſting objects of this ſtudy, particularly thoſe which form the great maſs of Rocks of which our Globe is compoſed, the Ores and their Matrices, and thoſe Foſſils which are intereſting in Agriculture, the Arts, and Philoſophical Speculations.

As the object of this Work is to introduce ſound principles of Mineralogy, Scientific Terminology, and accurate denominations amongſt us, I ſhall be very particular in the Diagnoſticks.

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Diagnoſticks and Nomenclature of theſe bodies: and without this the obſervations of Travellers, the ſpeculations of Philoſophers, and the communications of Œconomiſts, Technologiſts, &c. &c. &c. when relative to this ſubject, are unintelligible.

THE number of ſpecimens in theſe Collections will, I think, be about Three Hundred, each properly numbered and arranged in a convenient cheſt: the price Twenty-five Guineas; and as ſome of theſe Foſſils muſt be procured from foreign countries, no Collection will be formed, unleſs ordered, and Five Guineas depoſited at the time of ſubſcribing. The Collections will be delivered in about a twelve-month, and according to priority of ſubſcription.———Leſt the Public ſhould ſuppoſe that I intend in nowiſe to interfere in the forming of theſe Collections, and that they will therefore be at the mercy of ſome ignorant Dealer in Minerals, who may at my deſire form them, I aſſure them that I ſhall make a Collection myſelf as a MODEL after which the others will be formed, and I will inſpect every Collection, and be anſwerable for their accuracy.

Subſcriptions for the Collections will be received by

Meſſrs. G. G. and J. ROBINSON, Paternoſter-Row.
Mr. GEORGE NICOL, Pall-Mall.
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Next Winter will be publiſhed a Tranſlation of my OBSERVATIONES PHYSIOLOGICÆ DE AMPHIBIIS, with an additional Paper on the Reſpiration of the Tortoiſe.

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