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VIII.Gamla
Stad.First intel-
ligence of
Acerbi.Process for
obtaining
Tar.

clean handkerchief, carefully folded over the sacred volume. After we left *Piteå*, the scenery continued to be exceedingly fine, for a considerable distance. We passed through Old *Piteå*, called *Gamla Stad*, signifying the *old town*. Here, for the first time since we left *Stockholm*, we heard of Signor *Acerbi*, and his companions, Signor *Bellotti* and Colonel *Sköldebrand*; all of whom we afterwards met. The two *Italian* gentlemen were described to us as upon a journey towards the *North* of *Lapland*, attended by a Colonel in the *Swedish* service; and it was added, that they were travelling for purposes of science. At *Ojebin*, we found the *Swedish* language beginning to alter. The people spoke a dialect so impure, that our interpreter with difficulty could make himself understood. The inlets of the Gulph everywhere appeared of the grandest character; surrounded by noble forests, whose tall trees, flourishing luxuriantly, covered the soil, quite down to the water's edge. From the most southern parts of *Westro-Bothniå*, to the northern extremity of the Gulph, the inhabitants are occupied in the manufacture of *tar*; proofs of which are visible in the whole extent of the coast. The process by which the *tar* is obtained is very simple: and as we often witnessed it, we shall now describe it, from a *tar-work* which we halted

to inspect, upon the spot. The situation most favourable for this process is in a forest near to a marsh or bog; because the roots of the *fir*, from which *tar* is principally extracted, are always the most productive in such places. A conical cavity is then made in the ground (generally in the side of a bank or sloping hill); and the roots of the *fir*, together with logs or billets of the same, being neatly trussed into a stack of the same conical shape, are let into this cavity. The whole is then covered with turf, to prevent the volatile parts from being dissipated, which, by means of a heavy wooden mallet, and a wooden stamper, worked separately by two men, is beaten down, and rendered as firm as possible above the wood.¹ The stack of billets is then kindled; and a slow combustion of the *fir* takes place, without flame, as in making charcoal.

(1) The Wood-Cut at the beginning of this Chapter represents.

The conical aperture in the earth, to receive the timber; as appears on the right-hand side of the Engraving.

A rampart of timber is seen placed against the orifice from which the *tar* flows; behind which is a channel leading to the bottom of the conical aperture or furnace.

A vessel of cast-iron is placed at the bottom of the conical aperture or furnace which receives and carries off the *tar* as it falls; a figure of which is seen on the left-hand side.

The timber is placed in the cone or furnace;—which the men are beating down.

And the instruments for beating and pressing the surface of the furnace, when filled, appear resting against the mound to the left of the Engraving.

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During this combustion, the *tar* exudes ; and a cast-iron pan being at the bottom of the funnel, with a spout, which projects through the side of the bank, barrels are placed beneath this spout, to collect the fluid as it comes away. As fast as the barrels are filled, they are bunged, and ready for immediate exportation. From this description, it will be evident that the mode of obtaining *tar* is by a kind of distillation *per descensum* ; the turpentine, melted by fire, mixing with the sap and juices of the fir, while the wood itself, becoming charred, is converted into charcoal. The most curious part of the story is, that this simple method of extracting *tar* is precisely that which is described by *Theophrastus* and *Dioscorides* ; and there is not the smallest difference between a *tar-work* in the forests of *Westro-Bothniä* and those of Antient Greece. The *Greeks* made stacks of *pine* ; and having covered them with turf, they were suffered to burn in the same smothered manner ; while the *tar*, melting, fell to the bottom of the stack, and ran out by a small channel cut for the purpose.

After leaving the *tar-work*, we passed through *Pårsnås* and *Rosvic* ; inlets of the Gulph being frequently in view. Between the two last places, we crossed the mouth of a river which rises in *Westro-Bothniä*, in a small lake called *Deger*

Trask. As we drew near to *Rosvick*, we found, in the forests, that beautiful plant which bears the name of *Linnaeus*, and which the Swedish Government granted to him as a crest for his coat of arms. We had seen it so represented upon the seals of his Letters to Dr. *Næxén* of *Umeå*. This plant, the *Linnaea Borealis*², is very common in *Westro-Bothniå*, and in almost all the great northern forests; but it may be easily overlooked, because it grows only where the woods are thickest; and its delicate twin blossoms are almost hid amongst the moss, through which it extends its *filiform* stems, to the length of eight or ten feet. The flowers are gathered by the natives, for making an infusion which is used in rheumatic disorders; and in *Norway* they pretend to cure the itch with a decoction of it. The smell of its flowers resembles that of *Ulmaria*, or *Meadow-sweet*; and is so strong during the night, as to discover this little plant at a considerable distance. There may be other varieties of it than those which we noticed; but the representations given of it by *Linnaeus*, in his

*Linnaea
Borealis.*

(2) "LINNÆA floribus geminatis. Habitat in sylvis antiquissimis muscosis densissimisque passim; *Stockholmie* ad *Brahælund*; in *Smolandia*, *Scania* sylvestri, *Gotlandia*, *Nericia*, *Dalekartia*, *Uplandia*, et tota *Norlandia* vulgatissima."—LINN. *Flora Svecic.* pp. 189, 190. *Stoc'h.* 1745.

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Flora Svecica, facing the last page of the volume¹, and by the authors of the *Flora Danica*², are not accurate. No person, from those representations, would be able to comprehend why it received the appellation of *Nummularia*, before Gronovius, in honour of *Linnaeus*, changed its generic name; its leaves being all figured as ovate, and serrated; whereas some of them, and sometimes all, are perfectly orbicular, like little pieces of money. We collected specimens of the *Linnaea Borealis*, principally between *Umeå* and *Luleå*. In the same forests, especially in marshy situations, we found a species of *Salix*, that would make a splendid ornament in our *English* shrubberies, owing to its quick growth and beautiful appearance. It had much more the appearance of an orange than of a willow tree; its large luxuriant leaves being of the most vivid green colour, splendidly shining. We believed it to be a variety of *Salix amygdalina*; but it may be a distinct species: it principally flourishes in *Westro-Bothniå*, and we never saw it elsewhere.

Remark-
able Wil-
low.

Erstnäs.

In our next stage, to *Erstnäs*, the dresses of the natives exhibited more gaudy colours than

(1) See the edition printed at *Stockholm* in 1755. Also *Flora Lapponica*, tab. xii. *Amstelæd* 1737.

(2) *Flora Danica*, tab. iii. *Kopenhagen*, 1761.

any we had seen in this country. The prevailing hue was scarlet; the women appearing in scarlet vests; and the men in scarlet bonnets and buskins, with scarlet bandages edged with black and scarlet, and black tassels. These dresses made a very splendid appearance, in a crowd of the inhabitants, collected from all parts of the country, and assembled for the duty of the Sabbath. As we proceeded to *Gaddvick*, we crossed the mouth of a river flowing from the *Wend Trash* and *Lang Sion*, or *Wend Water* and *Long Sea*; two lakes, lying about thirty *British* miles to the north-west. The land here was very swampy, but used for pasturage; and the appearance of the houses built to contain hay, and scattered over the meadows, resembled a large straggling village. The pastures were covered with these buildings, standing not more than a hundred yards from each other. As we advanced, the appearance of the country improved in picturesque beauty; the forests again became magnificent, containing, in great variety, *firs*, *willows*, *mountain-ash* trees, *aspens*, &c. Whenever they opened, the views to the north were uncommonly grand; and from every eminence, the eye surveyed a vast extent of woodland, so thickly set with *pinés*, that their tops, in many a waving line of uninterrupted

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Nymphs.The *Lure*,
or Trumpet
for calling
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verdure, were dimly seen through mists, like those of *Italy*, softening, without obscuring, the distant objects. In our road, we met with a group of wood-nymphs, the real *Dryades* and *Orcades* of these forests and mountains, wild as the daughters of *Phoroneus* and *Hecate*. They wore scarlet vests with short petticoats; their legs and feet being naked, and their hair floating in the wind. In their hands, they carried a sort of trumpet, six feet in length, which in this country is named a *lure*: it is used, in the forests, to call the cattle, and to drive away bears and wolves. The sound of one of the *lures*, being full and clear, is heard for miles. We offered these girls a trifle, to give us a specimen of their performance upon one of them; the workmanship of which might have passed for a specimen, brought from the *South Seas*, of the ingenuity of savages: it consisted of splinters of wood, bound together by a close and firm texture of withy. They would not comply with our request; fearing, from our offer of payment, that we wished to purchase their *lures*, which they were unwilling to part with: and upon our urging the request, with an offer of more money, they all bounded away, quickly disappearing amongst the trees. Presently, when we thought we had lost them, a

very beautiful girl of the party made her appearance, from a thick forest, upon the projecting point of a rock; where, being safe from all chance of approach on our part, she gave to the *lure* its full power,

“And blew a blast so loud and dread,

“Were ne’er prophetic sounds so full of wee.”

They have also a shorter kind of *trumpet*, which is more musical, about two feet in length, made in the same manner; and from which they sometimes produce very pleasing tones: But in the immense forests of *Angermannland*, and in many parts of the provinces bordering upon the northern shores of the Gulph of *Bothniå*, the *lure* is six feet in length. We afterwards bought some of these instruments, and sent them to *England*.

As we drew nigh to the end of this stage, a view of the river *Luleå* opened before us; which had the appearance of a grand lake, with three-masted ships riding upon it; and the effect produced by such large vessels, upon a piece of water entirely surrounded with trees, was very singular. We crossed this river by a ferry; and, as if two of the *Nymphæ* before mentioned had outstripped us in speed, we were rowed across the *Luleå* by two beautiful young women, very like those we had so lately met in the forests. It may afford an idea of the grandeur

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of this river, when we add, that on the *south* side of it, looking *westward*, the view is so extensive, that land is barely visible across the water. As we passed over, the view became more limited, owing to intervening points of land; but the effect had not less of beauty or of grandeur. The author made a sketch of its appearance from the boat, close to the *northern* shore, looking towards the *west*. All the surrounding shores are covered with woods, in which *pine-trees* are the most conspicuous.

Minerals. Among the loose alluvial deposit left upon the sides of the river, we observed *trap* of the granular kind, and many varieties of very beautiful *granite*. A river may, in this respect, be considered as tributary to purposes of science; because it brings *minerals* from places lying remote from observation, and submits them, collected together, and with a freshness as if they were polished, to the eye of the passing traveller. Sometimes, the nature of mountains which are inaccessible may, in this manner, be ascertained; so that it is always adviseable to examine the beds of torrents, and the channels worn by cataracts falling from high mountains, and as near as possible to the bases of those mountains. The *second* view of the *Luleå* was finer even than the *first*: this appeared after

crossing a promontory which was towards our right, in the first part of the passage. There was here an island, in the centre of this noble prospect; a group of buildings towards our right; and all the distant hills were clad with pines.

Soon after crossing this river, which descends from the highest mountains of *Luleå Lapmark*, we arrived at *Gamla Luleå*; the new town being situate nearer to the sea. But our surprise was great indeed, to find the place deserted; all the houses being empty, and the doors fast: and our wonder was increased when we heard the cause; namely, that all these houses were buildings erected only for temporary use, by people living far up in the country, who resort hither for the Sabbath, and, as soon as the church-service is over, respectively retire to their distant farms; many of them not visiting the place again for a quarter of a year. Dr. *Næzén* had recommended our seeing the church here, on account of a celebrated picture mentioned in many *Swedish* topographical publications. It had been formerly a Roman-Catholic cathedral, and bore the name of *St. Peter's*: owing to which circumstance, if the tradition of the country may be credited, the Pope presented this picture for an altar-piece. There

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Luleå.*

Church of
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was no difficulty in gaining admission; the church being the only building not locked up. We could observe nothing in the picture which might entitle it to any celebrity. It was painted on a long oak plank, placed above the table of the altar; and seemed to have been cut from a painting of a more proportionate form: it represented our Saviour and the Twelve Apostles; but the heads only were visible, and those were as large as life. The head of our Saviour was the best part of the picture: it had something of the air and character of the works of Old *Palma*, or of *Leonardo da Vinci*; the hair being parted over the forehead, and falling in long tresses on either side. Upon the floor, before the altar table, the skin of a bear was spread, to serve as a carpet. In this church, as at *Roschild* in *Denmark*, and many of the churches in the *North of Europe*, is preserved a quantity of gilded sculpture, executed in wood, representing, by a series of figures, the history of our Saviour's life. The altar and pulpit were laden with this kind of work. We could not avoid being struck with the fate of the former idols of the Cathedral, which were heaped, *pell mell*, into a corner, under a staircase; the Virgin, and all her family, covered with dust and cobwebs, lying one above another, just in the state of

Forlorn
condition
of the
Symbols of
Popery.

obloquy to which they were consigned at the reformation of the *Swedish Church*; their mutilated features, and disjointed members, exhibiting an awful lesson of the inevitable fate of Superstition, wheresoever she may seek for refuge. How fallen were these trophies of her pride, once the ostentation of the bigot, and the adoration of the pious! Incense rose before them; multitudes fell prostrate at their shrines; priests, decorated in all the pomp and splendour of the *Romish Church*, elevating the host beneath their feet; while devout orgies, accompanied by the full inspiring notes of the organ, echoed in harmonious thunder along the aisles! A single image had escaped the promiscuous havoc that levelled all the rest: it was a representation of our Saviour bleeding upon the cross, of the size of nature: this was still preserved, in its original position on the right-hand of the altar. Upon the desk of the pulpit stood four hour-glasses; so contrived as to turn all together, when the *pastor* begins or ends his sermon, that all the congregation may know how long he has been preaching. Upon the two sides of the pulpit-door are the following inscriptions:

Outside:

DEO
ET
ECCLESIAE
SACRVM
HOC. OPVS
CVRA. M. IOH. VMAEI
PERFECIT. N. FLVR
A. MDCCXII.

Inside:

HAEC
CATHEDRA. ECCLESIASTICA
ADORNATA. ET. SPLENDIDIOR. FACTA
CVRA. M. JAC. RENMARCK
ET. OPERA. ER. FELLSTROM
ANº. MDCCXLV.

Upon the walls of this Cathedral we observed some curious monuments in commemoration, as we were informed, of deceased officers who had served under *Charles XI.* and *Charles XII.* They were covered with inscriptions, some of which were in *Swedish*, and a few in the *Latin* language. The *Swedish* inscriptions were either engraved or painted in minute characters, resembling manuscript, upon tablets, in the centers of these monuments; but placed so high, and in such small letters, that it was impossible, from the aisles, to read them. Upon the first, however, we observed an initial of *Charles XI.* with a coronet over the tablet:



And at the bottom, below all, were these words :

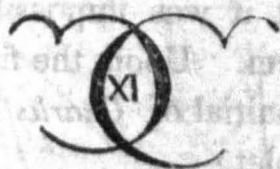
EPITAPHIVM . REFERT
MEMORABILE . NOMEN
REGIS . CAROLI . XI
QVO . EJVS . FAMAE . GLORIAE
MAJOR . ERIT

Opposite to this, was another of the same kind;
and all of them exhibited engraved medallions,
representing the heads of the Sovereigns re-
spectively alluded to. The second was as follows:



HVNGARE . CAEDE . TVA
VARNAM . PERJVRE . NOTASTI
CLADE . TVA . NARVAM
PERFIDE . MOSCHE . NOTAS

The third had the initials of both the Sovereigns,
with some pious sentences in *Latin* :



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Some Gentlemen of the neighbourhood entering the Cathedral as we were examining the last monument, prevented our further notice of it. The first questions they put to us related to the picture over the altar. They asked if we knew the name of any artist to whom it might be ascribed? Upon our answering in the negative, one of them said, "He could assure us it was a most valuable piece of painting; and for this reason, that their *Pastor* was convinced it came from *Italy*." There was no disputing such a proof of its superior merit; neither were we disposed to put them out of conceit with that which they had so long regarded with admiration.

Upon quitting the church, we went to the inn. The news of our arrival had already collected a few of the inhabitants about this dwelling: and here, to our great satisfaction, we saw, for the first time, some of the *Laplanders* in their native dresses. A *Lapland* woman, attracted by curiosity, came, with her husband and child, into the room where we were getting some refreshment: and such was our delight upon seeing her, that, ugly as she was, we even ventured to kiss her; a liberty she did not at all seem to approve. The singular machine in which she carried her infant next attracted our



PORTRAIT of a WILD LAPLAND WOMAN and CHILD.

notice. It was like a musical instrument, shaped like a fiddle-case, with strings; but made of splinters, cloth, and rein-deer skin; the child being put into the case, and the strings protecting its face from the pressure of the coverlid. All the inside of it was lined with the hair of the rein-deer. Exactly such portable cradles are used by the *Tahtars*, for conveying their infants; and it is borne among them, as among *Laplanders*, when upon a journey, behind, upon their shoulders. For her own dress, this woman had a sheep-skin; the wool being worn on the inside next to her body; and the leather outwards, bound round her waist with a blue sash. The man had a blue bonnet, with a loose grey surtout, bound also with a sash; and both of them wore the sort of buskins with which the *Turks* cover their feet, and over which they wear slippers; but made of coarser leather, and fastened round the small of the leg with a band and tassel. In their features they differed much from the *Swedes*; being round-visaged, with wide mouths and swarthy complexions; and remarkable for a timidity of manner, which we afterwards found to be strongly characteristic of the *Laplanders* in general.

There is no part of the world where geogra-

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cal Divi-
sion of the
Country.

phical names admit of such a lucid arrangement as in those provinces of *Sweden* which surround the northern part of the Gulph of *Bothniâ*. Once in possession of half-a-dozen names, you have a clue to the appellations of all the *lakes*, *rivers*, *provinces*, and *towns*. Thus, for example, *Torneâ* is the name of a *lake* in the north of *Lapland*; therefore *Torneâ* is the name of the *river* flowing from it. *Torneâ* is also the name of the *province* through which the same river flows; and *Torneâ* is the name of the upper and lower *town* situate at its embouchure. Exactly the same rule holds respecting *Umeâ*, *Piteâ*, *Luleâ*, *Uleâ*, &c. The boundaries of the southern provinces of *Sweden* are not so accurately determined. *Charles* the XIIth, whose policy directed him to preserve the *Laplanders* from mixing with the *Swedes*, sent engineers, in 1690, to mark, with all possible precision, the southern frontier of *Lapland*. Still, however, they are indeterminate. The *Laplanders*, or *Laps*, as they are always called by the *Swedes*, enjoy many peculiar privileges, and may be considered almost as in a state of freedom: they are not compelled to provide quarters for soldiers marching; they pay little or no tax; and live and act according to the usages of their forefathers. They constitute the only remaining

branch of the ancient inhabitants of *Finland*, and perhaps of *Sweden*; and their origin, hitherto not developed, would afford one of the most curious subjects of inquiry hitherto offered for consideration, as affecting the history of the human race. The names which they bestow upon their rivers and lakes, according to the *Swedish* antiquaries, are found upon the borders of *Persia*; and they pretend, that of the Ten Tribes of *Israel* led captive into *Assyria*, a portion migrated to the *North*, and bestowed their own appellations upon the mountains, lakes, and rivers; adding, that the *Lapland* language approaches near enough to the *Hebrew* for the two people to understand each other's speech. The truth of this must be left entirely to future investigation. It has been also said, as it is well known, that an *Hungarian* may converse with a *Laplander* without the aid of an interpreter: all of which only tends to prove how very little is yet known respecting the origin of this singular people. The first thing that strikes an *Englishman*, in hearing a *Laplander* speak, is the very great softness of his language, and its richness in vowels; but this is still more characteristic of the *Finnish* tongue, which, in this respect, resembles the *Italian*. The absolute certainty of an *Asiatic* origin in the *Laplander* is con-

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spicuous in all that belongs to his person; in his complexion, pliant postures, diminutive stature, air and manner, as we shall hereafter have occasion to shew: and that some of their customs exist among the *Tahtars*, has been already proved.

*Persön and
Råne.*

After leaving *Luleå*, we passed through a flat country, to *Persön*, and *Råne*; and crossed the river *Råne* by means of a ferry. The sun rose this day (July 8) at one o'clock A.M. The fogs appeared so thick, that they are perhaps dangerous in the marshes; but they quickly disperse. At *Råne*, there were quantities of undressed rein-deer skins, which the inhabitants use as covering for their beds. The road from *Råne* to *Hvita* passes, as before, over a level country,

Tar Works.

covered with forests. We observed several *tar-works*. If the wood be of a good quality for the purpose, they sometimes obtain one hundred tons of *tar* at a single burning. It sells upon the spot for three *rix-dollars* (about 1*l.* 5*s.* *English*) per ton. The *Swedish tar* and *hemp* are held in high estimation; and the demand for these articles always brisk and uninterrupted. We were told, that, in the *British* dock-yards, both the *tar* and the *hemp* are deemed superior to the *Russian* or the *American*. At this time they were favourite objects of speculation among *Danish* and *Swedish* merchants; who bought

their vessels in the Gulph of *Bothniå*, and here traded for *tar*, *hemp*, and *deal*. It was said that they obtained sixty per cent. by a voyage; but that if carried to *England*, the profit would amount to cent. per cent. But there are great expenses to be first encountered, as well as difficulties and obstacles, which diminish their profits. By the laws of *Sweden*, no person was allowed to buy *tar* of the peasants who made it: application must first be made to the merchants of the country, who fix the price, and have their profit upon it, before it is exported. The peasants, being uninformed, know little of the value of their labours. In the *north* of the Gulph of *Bothniå*, a few years before our coming, *tar* had been sold at a *rix-dollar* the ton.

Hvita, according to the best maps of *Sweden*, *Hvita*. is situate upon the most *northern* point of the Gulph of *Bothniå*. It is placed in 66° of *north* latitude. Having, therefore, now traversed all the *western* side of the Gulph, we may confirm our former observations upon the manners of the natives, by adding, that we found them everywhere characterized by a mild and peaceable disposition, without the smallest propensity towards theft or imposition. A stranger may trust his life and property, with perfect confidence and security, in their hands. This

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of the Na-
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character of all the Northern *Swedes*, as it was confirmed by our own experience of their benevolence and honesty, so was it also attested by the best-informed Gentlemen residing among them. The natives of *Westro-Bothniä*, beyond all their countrymen, rank the foremost in pious and loyal disposition, and in simplicity and honesty of character. A foreigner who leaves his open trunks in their inn-yards and stables, amidst all the haste and confusion which must sometimes take place in travelling day and night, and amidst the inability to attend to them, occasioned by pain or sickness or weariness and want of rest, will have nothing with which to reproach the inhabitants of this country.

Remark-
able Fall
of Dew.

In travelling from *Hvita* to *Tore*, the weather was so hot we could hardly bear the rays of the sun; yet *Fahrenheit's* thermometer, left for an hour in the shade, at noon, did not indicate a higher temperature than 75°. Towards midnight, when the sun set, dew fell, at one moment, as from a water-spout; and then as suddenly ceased to descend. In the same instant, exhalations are seen rising from all the rivers, marshes, and low-lands. During the first two hours after sun-rise, the cold, as before stated, was very penetrating; but even then, hot gusts of wind, as from an oven or stove, would sometimes meet

the face. These hot gusts were always most frequent at sun-set. It was our intention to visit Baron *Hermelin*, who has a seat in this neighbourhood, in order to obtain some instruction from him respecting our future progress: but as we were told that he would come to *Tore*, to meet his tenants, we preferred waiting for him here. He did not arrive until half-past-three, which occasioned the loss of a day to us, when we could ill spare it. He waited upon us in our little apartment, with great politeness; and we began immediately to profit by his instructions, spreading his own maps before him. He told us, that we were too late for a journey to the *North Cape*; but believed that within fifteen days we might still see the sun above the horizon, during the entire night, at *Enontekis*, the most northern point of *Lapland*, or anywhere else in the same latitude. He was attended by a party of youthful Academicians, selected by himself from the *Swedish Universities*, to assist him in his labours; and he frequently consulted them during our conversation. Among these were, his secretary, an *astronomer* and *botanist*, a *mineralogist*, an *entomologist*, and a *Lapland* interpreter. All these gentlemen accompanied us to *Gortnäs*, a watering-place resorted to by families resident in this part of *Sweden*. The

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Baron's secretary, Mr. *Hallström*, an amiable and accomplished young man, being indisposed, remained at *Grotnäs*, to drink the waters there. Some of Baron *Hermelin's* best maps, and the views of *Finland* which accompany them, were engraved from his beautiful drawings, and bear his name. The Baron's iron-mine at *Malmberg*, or, as it is called in maps, *Gellivara*, is the largest in *Sweden*, and perhaps in the world. It is actually a quarry of ore, wrought in a bed of magnetic iron oxide, extending for several leagues; and so rich, that it yields sixty per cent. of metal. Examples of the same ore have been found, yielding ninety per cent. of metal: They said it was sometimes too rich for casting. This prodigious source of wealth is open to the day, like the great copper-mine of the Isle of *Anglesea*.

Journey
from *Tore*
to *Malms-*
byn.

As we journeyed from *Tore* to *Malmsbyn*, the forests were full of rocks and large loose masses of quartz and granite. We passed two lakes with islands, one on each side of the road. The heat of the sun was very great, and the dust troublesome. A lady and gentleman, in a carriage behind our waggon, feeling the effects of the latter, ordered their driver to call to us, and allow them to pass. Seeing the lady, we immediately complied; but she was offended

because we did not grant the same indulgence to a whole caravan of carts in the rear, containing gentlemen belonging to her suite; and gave us a hearty scolding afterwards. A dispute about rank and precedence upon the borders of *Lapland* was as unexpected a thing, as our finding a party of philosophers in the forests of *Westro-Bothniå*, and a fashionable watering-place in the neighbourhood of *Torneå*. Before we arrived at *Malmsbyn*, we had a noble prospect of the river *Calix*, flowing in great breadth and majesty towards *Grotnås*; and of the *Gulph* itself, visible amidst rocks and islands. The coast of *Westro-Bothniå* is not much cultivated, the peasants being chiefly occupied in the *tar* and *timber* trade, and in *fishing*; but we observed small inclosures, containing *rye* and *barley*, in going from *Malmsbyn* to *Grotnås*. The *barley* seemed in a forward state; and, as nearly as we could ascertain, would be harvested about the first week in *August*. The sun has more power here than in the southern provinces, from being so long above the horizon: we saw no longer the machines for drying corn, which were in such general use elsewhere. The women of this province excel the southern *Swedish* females in the beauty of their persons. We met a *Lapland* girl, with a wolf's-skin apron, and a blue

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VIII.Iron Mine
of Gellivara.

Baron's secretary, Mr. *Hallström*, an amiable and accomplished young man, being indisposed, remained at *Grotnäs*, to drink the waters there. Some of Baron *Hermelin's* best maps, and the views of *Finland* which accompany them, were engraved from his beautiful drawings, and bear his name. The Baron's *iron-mine* at *Malmberg*, or, as it is called in maps, *Gellivara*, is the largest in *Sweden*, and perhaps in the world. It is actually a quarry of *ore*, wrought in a bed of *magnetic iron oxide*, extending for several leagues; and so rich, that it yields sixty per cent. of metal. Examples of the same ore have been found, yielding ninety per cent. of metal. They said it was sometimes too rich for casting. This prodigious source of wealth is open to the day, like the great *copper-mine* of the Isle of *Anglesea*.

Journey
from *Tore*
to *Malms-*
byn.

As we journeyed from *Tore* to *Malmsbyn*, the forests were full of rocks and large loose masses of *quartz* and *granite*. We passed two lakes with islands, one on each side of the road. The heat of the sun was very great, and the dust troublesome. A lady and gentleman, in a carriage behind our waggon, feeling the effects of the latter, ordered their driver to call to us, and allow them to pass. Seeing the lady, we immediately complied; but she was offended

because we did not grant the same indulgence to a whole caravan of carts in the rear, containing gentlemen belonging to her suite; and gave us a hearty scolding afterwards. A dispute about rank and precedence upon the borders of *Lapland* was as unexpected a thing, as our finding a party of philosophers in the forests of *Westro-Bothniä*, and a fashionable watering-place in the neighbourhood of *Torneå*. Before we arrived at *Malmsbyn*, we had a noble prospect of the river *Calix*, flowing in great breadth and majesty towards *Grotnäs*; and of the *Gulph* itself, visible amidst rocks and islands. The coast of *Westro-Bothniä* is not much cultivated, the peasants being chiefly occupied in the *tar* and *timber* trade, and in *fishing*; but we observed small inclosures, containing *rye* and *barley*, in going from *Malmsbyn* to *Grotnäs*. The *barley* seemed in a forward state; and, as nearly as we could ascertain, would be harvested about the first week in *August*. The sun has more power here than in the southern provinces, from being so long above the horizon: we saw no longer the machines for drying corn, which were in such general use elsewhere. The women of this province excel the southern *Swedish* females in the beauty of their persons. We met a *Lapland* girl, with a wolf's-skin apron, and a blue

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night-cap on her head: behind her was suspended a large wallet, made of the bark of trees. Her petticoat reached only to her knees. She was pacing along, at the rate of five miles an hour, without any apparent symptom of fatigue or quickened respiration.

Finlanders. We were now drawing near to the dwellings of a race of men very different in character and morals from the *Swedes*, namely, the *Finlanders*; and as this race prevails among the inhabitants, a greater vivacity of spirit, a more irascible disposition, and a propensity to criminal actions, begins to be manifested. This change becomes remarkably conspicuous to those who pass round the *northern* extremity of the Gulph; but the river *Torneâ* has been generally considered as the boundary separating the two people. We had, here, a proof that we were leaving the land of righteousness and peace in which we had long been travelling, as soon as we quitted the forests near *Calix* and once more approached the river. The town or village of this name appeared upon its opposite shore: upon our right, exactly opposite the town, we observed twelve upright posts, on each of which was placed a wheel with either the scull or carcase of a malefactor. These were the gibbeted remains of criminals who had robbed the mail;

for which, in *Sweden*, the punishment is amputation of the right-hand, and afterwards decapitation; the mutilated members and body being exposed, in the manner now described. As spectacles of this kind are very rare in the country, we were the more particular in inquiring into the nature of delinquency for which those men had suffered.

A little farther, on the same side of the river, *Grotnäs*, is *Grotnäs*, the watering-place before alluded to. Its medicinal springs are chalybeate, like those of *Tunbridge Wells*; and they agree with the expectation that might have been formed of them in this region of *iron*. We found here a few of the *Swedish* nobility; to whom were now added Baron *Hermelin* and his youthful band of philosophers; also a party of clergymen, one of whom politely ceded to us his apartment; and some other strangers. Immediately after our arrival, we bathed in the *Calix*. Upon the shores of this river we found the following plants: *Comarum palustre*, *Epilobium angustifolium*, *Rubus Arcticus*, and *Rubus Chamæmorus*. Thence, returning to our inn, it was proposed, by Baron *Hermelin's* party, that we should all sup together, in a room belonging to a gentleman of *Umeå*, which was offered for this purpose. Our supper consisted of a kind of fish, the name of which we have

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lost, about the size and shape of *carp*; to which were added *pancakes*, and some toasted bread soaked in a tureen-full of lemonade, mixed with *Rhenish* wine. The Academicians then adjourned to our apartment, and passed the remainder of the evening with us in conversation which we regretted to conclude. They said they were going with the Baron to make astronomical observations in *Luleå Länmark*, and invited us to join their party. Mr. *Hallström* had an excellent sextant, made by *Ramsden*, and one of *Arnold's* chronometers. The appearance of the setting-sun, this night, was more than usually fine. Its disk, like red-hot iron, appeared as large as the fore-wheel of a carriage; and, owing to the vaporous atmosphere through which we saw it, the full orb might be viewed without any uneasy sensation. The entire night was spent at *Grotnäs*; and it gave us a foretaste of the suffering we were soon to experience in *Lapland*, in the attacks made upon us by *mosquitos*; which were such as to banish all hope of rest, our bodies being covered with the wounds they inflicted. Nearly the whole of our short attempt to obtain repose was passed in a continued combat with these little tormentors. So powerful was the glare of the atmosphere between the setting and the rising of the sun, that we drew

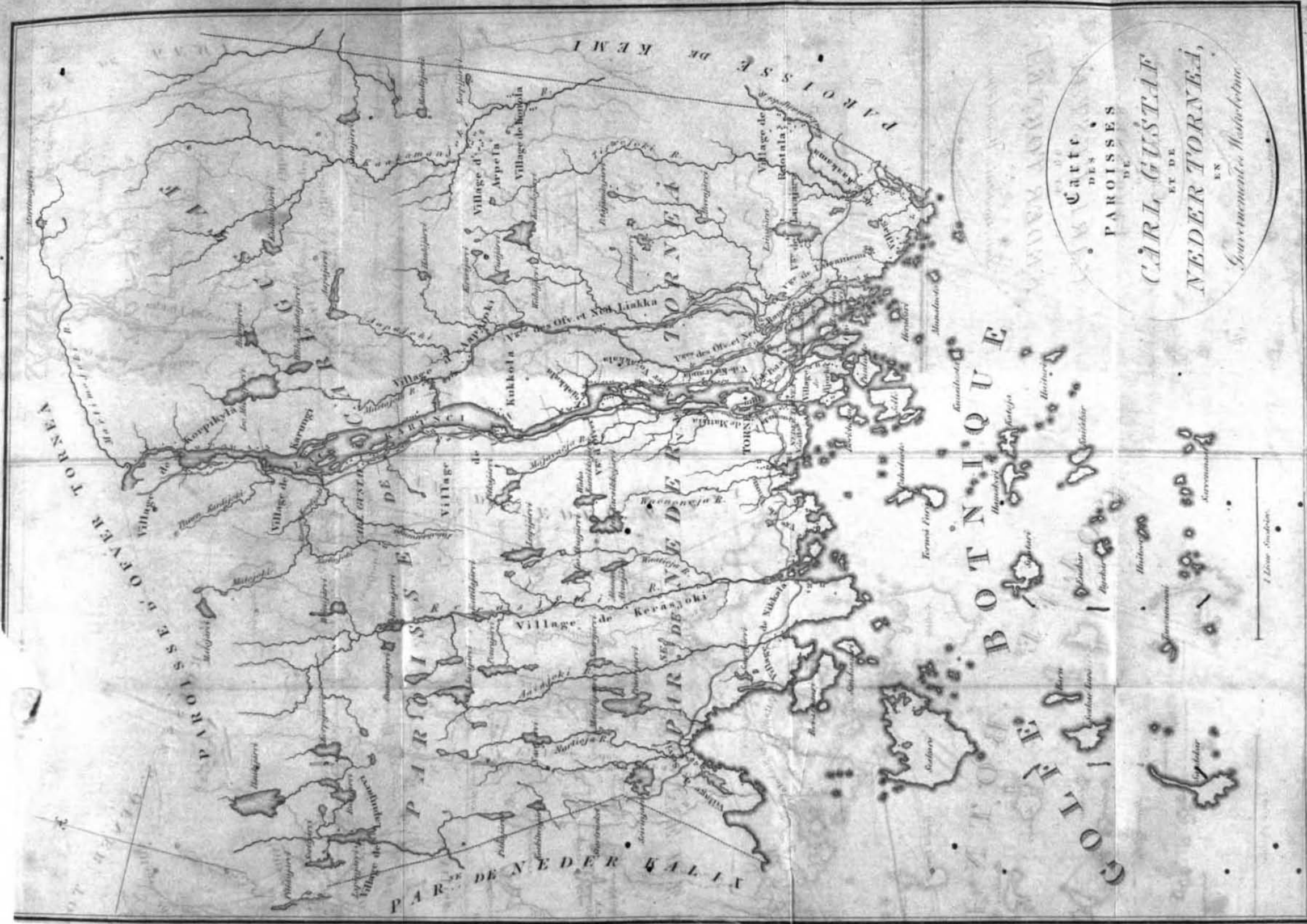
down a thin linen blind which we found in the window, by way of softening the effect of it. We resumed our journey (*July 9*), more fatigued than when we halted to rest. The party with whom we had supped accompanied us as far as the ferry over the *Calix*, which conducts to the village of the same name.

Nothing remarkable occurred in our route through *Landtjerf* and *Sanjis*, to *Seivis*. In the forest between the two last-mentioned places, we found a remarkable variety of *trap*: it did not occur in any regular stratum, but in separated masses of two tons in weight, and upwards. When fractured by the hammer, the marks of *ferns*, and the fibres of other vegetable remains, were visible in its interior texture—proofs of its aqueous origin. We also found in it the impression of something resembling a fish, separable as a nucleus from the matrix of *trap* in which it was imbedded. Near the same spot were varieties of *granite* and of *quartz*, and an aggregate of *quartz* and *hornblende*. We came in view of an inlet of the Gulph, between *Seivis* and *Nikkala*. The coasting-vessels of the country, trading to *Stockholm* with *tar*, were here and there visible among the well-wooded islands which lie scattered over its surface. Arriving at *Nikkala*, a single post-house, we

Organized
remains in
Trap.

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VIII.Boundary
of the
Finnish
Language.First Sight
of *Torneå*.

found the *Finnish* language exclusively in use, for the first time. It reminded us strongly of the *Italian*, in its sound, and in the plenitude of its vowels. Leaving *Nikkala*, we passed over a wooden bridge, nearly a quarter of a mile in length; consisting, as it were, of two bridges connected into one. In the centre of the *second* stands a stone monument, erected during the reign of *Gustavus the Third*; bearing his name, and an inscription in the *Swedish* language, purporting that the inhabitants of the parish of *Torneå* had erected the *eastern* part of the double bridge. After proceeding hence for a short time, through a forest in which the *pin*es, *birch*, and *aspens* (*populus tremula*), called also *asp* by the *Swedes*, and *supp* by the *Laplanders*, were dwindled into shrubs, the object of our long hopes and curiosity suddenly appeared, above the tops of all the intervening trees; namely, the town of *Torneå* itself, exhibited by the spires of its old and new churches. An almost irresistible impulse tempted us to rise up, and wave our hats in the air; and our horses, which for the first time we had complained of, as being the dullest of our whole journey, at this sudden movement mended their lagging pace. We lost sight of it again: the prospect changed to views of inlets of the *Gulph*, with low shores and



shallow water. The roads were still excellent. Patches of *rye* and *barley*, in small quantity, but of excellent quality, were dispersed over a soil otherwise characterized by low and swampy marshes. Close to the road grew *birch*-trees, different kinds of *willow*, dwarf-*firs*, and *juniper*.

The river *Tornea* was now in sight: and as we approached its banks, the town appeared upon the opposite side. To our great surprise, we saw houses of two stories, with sashed windows, and painted palisades in front. The principal objects, however, were the two churches, and a number of crazy windmills¹. Boats, like large canoes, with paddles, were passing to and fro, in great number: more distant, toward the mouth of the river, we saw some large vessels lying at anchor, with two and with three masts. The harbour is yet farther distant towards the *Gulph*, seven *British* miles from the town; and here vessels principally have their station, as the river is too shallow to admit ships of burden close to *Tornea*, which is situate upon a peninsula, frequently made an island by the inundation of the isthmus. This was the case when

Appear-
ance of the
Town.

(1) It is commonly from one of those *windmills* that travellers view the sun at midnight, in the month of *June*.—*Acerbi's Travels*, vol. 1. 244. Lond. 1802.

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VIII.Descrip-
tion of the
Streets.

Shops.

we arrived; the water being, on either side of it, a quarter of a mile broad.

We crossed over to the pier-head, and found it covered with barrels of *tar*, lying ready for exportation. Passing into the streets of the town, we were surprised to find them covered with long grass, as if the place were uninhabited: nor was our wonder diminished, when we were given to understand that this grass was reserved for mowing. The best houses in *Torneå* are those which we had seen from the opposite shore, which face the western division of the river. They belong to petty merchants, or shop-keepers, whose shops face the water, having, generally, each a small wooden building as a warehouse. When you enter one of them, it is by a flight of steps; for the lowest floor is one story high. Here goods of various sorts are offered for sale—pipes, tobacco, caps, gloves, jackets, trowsers, cloth, linen, beds, trinkets, children's books, toys—as in the petty shops of *England*. The paper, too, which is used for packing is torn out of old books, purchased at the sale of the libraries of deceased clergymen. We examined these books: they consisted either of old works in *divinity* or *physic*. Among them, we found a *Latin* Dissertation, published at *Upsal* during the preceding century, whose

author professed to prove that the Pope was Antichrist: some of the passages, even in *Latin*, could not with any propriety be cited. Each dwelling-house forms a square, surrounded principally by warehouses, containing *stock-fish* and *rein-deer skins*, the two chief articles of trade in *Torneå*. The other articles of exportation are, *iron*, *deal-planks*, *tar*, *butter*, pickled and smoked *salmon*, and dried *meat*. The *rein-deer skins* are sent to *Stockholm* and into *Russia*. The *stock-fish*, *butter*, *salmon*, and *tar*, also go to *Stockholm*: the *deal-planks*, to *Stockholm* and to *Copenhagen*. The price of *tar* in *Torneå* was now three rix-dollars the ton: in *Finland*, it sold for four rix-dollars; and if taken to *England*, the ton sold for twenty-five shillings. The inhabitants are not well versed in commercial speculations; if they were, they might soon become rich: it is the merchant, who conveys away these commodities, that reaps the greatest share of profit. Their imports are, *corn*, *flour*, *flax*, *hemp*, *salt*, *woollen cloth* which they carry to *Norway*, *coarse linen*, *tobacco*, and *spices*. The resident traders go regularly, in the winter, into *Lapland*, to buy *furs*, *butter*, *stock-fish*, &c.; extending their journeys, in parties of pleasure as well as business, with the greatest ease and amusement, even to the coast of the *Icy Sea*, and to the most distant

Commerce.

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VIII.Lake
Enara.

shores of *Finmark* and *Norway*. Several of them had been repeatedly to the great Lake *Enara*, called *Enara Trask*. They gave us a description of it. From the mountains around, the most magnificent views are exhibited of the lake and its numerous islands: those islands are covered with trees, and inhabited by *Laplanders*; the lakes of *Enara* and *Torneå* being almost the only parts of *Lapland* which they do not desert in summer for the shores of *Norway*, going there to fish. Of the *Laplanders*, those who migrate are always poor. The wealthier *Laplanders* are less vagrant in their habits; they possess from a thousand to fifteen hundred rein-deer, the only riches this people know; and the whole distinction between wealth and poverty consists in the possession or want of these animals. The poorest of all the *Laplanders* are those who betake themselves to the cultivation of land; for they never turn farmers until they are completely ruined: when such an event happens, they settle by the side of some river, and, for the first time, endeavour to gain a subsistence by clearing the soil, and cultivating little patches of land. Such efforts may be considered as the germs of all the farms which are found upon the banks of the *Arctic* rivers. On the first of *November*, a fair begins at *Enara*, which lasts until the sixth; and

thither the traders repair, to purchase *rein-deer* skins, *stock-fish*, and all kinds of *fur*. The *Tornea* merchants do not start upon their grand expedition towards the *North*, before *February*. It is said, that this march constitutes one of the most remarkable sights that can be imagined. Each merchant has in his service from five to six hundred *rein-deer*, besides thirty *Laplanders*, and other servants. One person is able to guide and manage about fifteen *rein-deer*, with their sledges. They take with them merchandize to the amount of three thousand rix-dollars. This consists of *silver plate*, in the form of drinking-vessels, spoons, &c. They also carry *cloth*, *linen*, *butter*, *brandy*, and *tobacco*, all of which they take to *Norway*. Upon this occasion, they display as much magnificence as possible. The *rein-deer* are set off with bells and costly trappings. We saw some of their collars, made of buff kerseymere, embroidered with flowers. The procession formed by a single merchant's train will extend two or three *English* miles. Provisions of every kind are carried with them; and, among these, their own candles. Their dealing with the *Lapps* is not transacted by means of money, but in the way of barter. As a preparation for the coming of these merchants, the *Lapps* begin to hunt the *bear* in the autumn, as

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soon as the first snow falls, by which they track him to his den. This being ascertained, a single man sets out, attended by his dog, and armed with a pole pointed with a quadrangular piece of *tron*. The *dog* assaults the *bear*, as soon as he is discovered; and the *bear* rising upon his hind legs to seize the *dog*, is made the victim of the *Laplander*, who plunges the pointed pole into his heart. The route observed by the *Torneå* merchants differs; but the same family adheres, for years, to the same route. Some ascend the *Kiemi* and *Aunis* rivers; others go up the *Torneå* and *Muonio*. Some go as far as the *North Cape*; others only to the sources of the rivers; or to *Enara*, and to *Alten*. The principal article of commerce with which they return, consists in *rein-deer skins*. Of these, they bring back thousands; to which are added *bear skins*, some *white-fox skins*, and the skins of *wild cats*. The price of the best *rein-deer skin* in *Torneå* was a rix-dollar (three shillings *English*) for each skin. For a *bear skin*, if large, they asked twenty dollars. All articles of domestic use are dear in *Torneå*. *Loaf-sugar* sold for 3s. 4d. per pound. *Tea*, notwithstanding their commerce with *India*, was universally bad. *Hyson* sold for nine shillings the pound; the *black teas* from six to nine. *Wheat-flour*, all

Price of
Commo-
dities.

round the *Gulph*, sold at the rate of 3s. 4d. for 20lb. *Rye* was eight rix-dollars the ton: *barley*, four rix-dollars and sixteen sous: *salt*, four rix-dollars twenty-four sous. *Medicines*, if good for any thing, were from *England*; but they are often adulterated. In the list, we saw *bark*, *opium*, *saline purgatives*, *emetic powders*, &c. We paid twenty-four shillings, *English*, for a pound of *bark*: but when we came to use it, there was not a grain of genuine *bark* in the whole pound. The imposition, however, was not of *Swedish* origin: it bore this inscription, "*Fine English Bark*." Bookbinders are found in all the small towns of *Sweden*; but their charges are high. For binding a single volume, in *Torneå*, they demanded a *rix-dollar*. The price would not have been greater in *England*.

Of a town so little known as *Torneå*, one would wish to convey an accurate idea by description. It consists of two principal streets, nearly half an *English* mile in length. The houses are all of wood. After what has been said of its civilized external aspect, it ought only to be considered as less barbarous, in its appearance, than the generality of towns in the north of *Sweden*. It must not be inferred, that there is the slightest similitude between this place and one of the towns in *England*. If it

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VIII.Biörkö
Church.

side, being, as before stated, a quarter of a mile¹. The number of inhabitants amounts to six or seven hundred; the aggregate of persons in about 120 families. Yet it is an unusual thing to see any body in the streets: and this deserted appearance, added to the grass growing in them, makes *Torneå* look as if the place were abandoned, and had not been inhabited for half a century. In the little garden belonging to our inn were *potatos, lettuces, carrots, parsnips, cucumbers, and tobacco-plants*. On another little island, called *Biörkö*, about a mile south of *Torneå*, stands the new church: this is appropriated to a service in the *Finnish* language, having been built expressly for this purpose by the peasants; the service in *Torneå* church being in the *Swedish* language. These churches have congregations in such multitude, that they astonish a stranger. The duty of the Sabbath seems never to be neglected: and the Church of *Sweden* knowing neither heresy nor schism, there are no such places as Meeting-houses, either to excite fanaticism, or to foment and cherish religious dissensions among the people. The merchants,

(1) See Mt. *Hülström's* Map of the Parishes of *Carl Gustafs* and *Lower Torneå*, as annexed.

who constitute the principal inhabitants of *Torneå*, appear to live together in great harmony and friendship : their amusements seem principally to consist in playing at backgammon and cards, and in smoking ; but gambling, in our sense of the term, is never practised here. Their parlours are not inelegantly furnished. In many of them were portraits, either of the Kings or Queens of *Sweden*, or engravings bought in *Stockholm*. We were greatly surprised to observe, in one of these apartments, a set of coloured drawings, by one of the old masters, representing the *Cries of Bologna*. They were in old gilt frames, covered with the best plate-glass ; which proved that some former possessor had been aware of their merit. It happened, however, that their present owners were not pleased with these designs. The lady of the house said, they were dull and stupid performances ; preferring the coloured prints hawked about by vagrant *Italians* : and, as she wished to sell them, we bought the whole set of her, for about half-a-guinea of our money ; valuing them ourselves more from the place where they were discovered, than on account of any excellence which they possessed as works of art.

Houses of
the Mer-
chants.

The town of *Torneå* was founded in consequence of an order of *Charles IX.*, who passed

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VIII.Aubry de la
Motraye.

through this province in the year 1602¹. In the year 1694, it was visited by *Charles XI*: The well-known visit of the *French Academicians*, under *Maupertuis*², took place in 1736. But the stranger whose visit to this place is more worthy of notice than any other, not excepting even *Linnæus*, was *Aubry de la Motraye*, in 1718; because the account of his travels, published by himself in *English*, and dedicated to the King, in 1732, contains as accurate and well-written an account of this country, and of *Lapland*, as any which has since appeared. He arrived upon the site of *Torneå* upon the nineteenth of *March*: scarcely a vestige of the town then remained; the *Russians* having burned it, together with *Umeå*, and many other towns upon the coast. The inhabitants then made their *Missne bread* like some that we were afterwards compelled to eat, and as he most correctly describes the process³, “of the rind of *pin*es and *fir-trees*, in the following manner. They scrape the rough crusty outside of the rind clean off the peel, that part of it which is soft and white:

(1) *Acerbi's Trav.* vol. I. p. 345.

(2) *Voy. La Figure de la Terre*, par M. *Maupertuis*, Paris, 1738.

(3) See the *Travels of A. de la Motraye*, vol. II. p. 282. Lond. 1732.

this they dry; and with water- or hand-mills they grind it, and with the meal they make their bread, in the same manner as we do with wheaten flour. There are some, who, at the same time, dry and mix it with the powder of a certain herb, also dried up, which they call *Myessein*, and which is very plenty on the river side and in shallow waters; and others mix meal, made of wild oats which they gather in the woods." The inhabitants of *Torneå* are become too fastidious, now, to feed on this primæval bread, for which the *Swedish* name is *Missne*; but the lapse of nearly a century has not banished it from the more northern parts of the country; and it is still found, in seasons of scarcity, even in *Angermannland*. We brought some of this bread to *England*; where it does not otherwise alter by keeping, than that it is apt to become worm-eaten, like an old board. In its original state, when we were pressed by hunger to eat it, we never considered it as being worthy of the commendation which *Linnaeus* bestowed upon it⁴. The inhabitants of *Ostro-Bothniå* call it *Müss*; and thus have preserved,

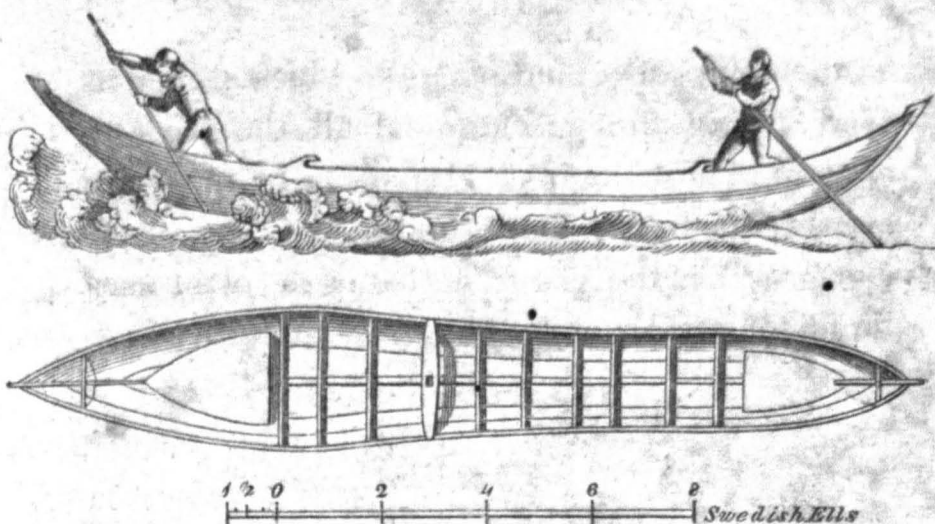
Myessein,
or *Missne*.

Primæval
Bread of
all the
Northern
Nations.

(4) "Panis hic albus est, dulcis et gratissimus, præsertim recens."
Flora Lapponica, p. 250. *Amst.* 1737.

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VIII.

in the name of a kind of *bread* which served as food among the ancestors of all the *Northern* nations, an undoubted etymology of our word *mess*. The name, both among the *Swedes* and *Finlanders*, is derived from that of the plant used in making it; namely, the *Calla palustris*.



CHAP. IX.

FROM TORNEÅ, TO THE MOUTH OF THE MUONIO RIVER.

*Preparations for an Expedition beyond the Arctic Circle—
Lapland Beds—The party leave Torneå—Salmon
Fishery—Falls of the Lapland Rivers—Manner of
passing them—Incipient Trap—Frankilä—Antient mode
of covering the Head—Dr. Deutsch—Carl Gustaf—
Steam Baths—Korpikylä—Cataract of Matka Koski—
Primæval Mill—Beverage of the Laplanders—Rubus
Chamæmorus—Hjetaniemi—Isle of Tulkila—Fishing
by torch-light—Appearance of the Country towards
the Arctic—Ofver Torneå—Adventure that befel the
Author—Plants—Conflagration of the Forests—Havoc
made by Wild-beasts—Kattila Cataracts—Passage of
the Polar Circle—Scenery of the Frigid Zone—Breed of
Cows—Tavonico—Beautiful Isles—Svansten—Mos-
quitos—*

quitos—their providential utility—Hirvas Koski—Pello—Skiders—Scriefinni—Aquatic Birds—Diet of the Natives—Lapland Nectar—Checks to Population—Jarhonnén—Mode of killing Bears—Extraordinary Prospect—Tugurium of the Laplanders—Junction of the Torneå and Muonio Rivers.

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WE had now completed a journey in Sweden of above twelve hundred miles. Our further progress beyond the *Arctic Circle*, and to those distant regions of the *Frigid Zone* described by *Linnaeus* as *terra ultima*, might not be attended with the facility and expedition which we had hitherto experienced. In the countries we were to traverse, there was no road of any kind: the only method of pursuing our route must be by ascending to the sources of the rivers in boats; and for this purpose, an additional interpreter became requisite, who not only could converse with the natives, but who also possessed a thorough knowledge of their manners and customs. And with regard to houses of accommodation, such dwellings alone might be expected as the casual settlements of these *Laplanders* upon the banks of the rivers would offer: in these, neither beds nor provisions would be found. It was therefore necessary to take every thing with us that we might want: but there was one thing more necessary than all the rest;

and, unfortunately, one that cannot be commanded; namely, *health*. This began to fail the author, when it was most wanted. Although naturally of a robust constitution, yet a total neglect of that rest which is necessary for recruiting exhausted nature, during many nights and days of incessant fatigue without sleep, while it deprived him of strength, also brought on a total loss of appetite, attended with symptoms rather of an alarming nature. Being determined, however, to persevere to the last, no time was lost in getting every thing ready. Mr. *Pipping*, son of one of the merchants, who had been accustomed to attend the annual expeditions to *North Cape*, volunteered his services, as a *Lapland* interpreter; for which we agreed to give him, for each day that he might continue to be so employed, half-a-crown, *English*. In lieu of beds, we devised, for each person, a portable kind of frame-work, on which might be laid a couple of *rein-deer* skins¹. These *Lapland* beds have every recommendation, both as to utility, and the ease by which they may be transported. They are so light, that one of them will not weigh more than the two *rein-deer* skins which are to be placed upon it. Being at the

Prepara-
tions for an
Expedition
beyond the
Arctic
Circle.

Lapland
Beds.

(1) See the *Vignette* at the beginning of the next Chapter.

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same time provided with an empty linen pillow-case, a person may stuff this with his cloak, or with any part of his clothes; and thus lie down in luxury, even in the midst of a forest; being neither exposed to dews, nor to venomous insects. We found them so comfortable, that we regretted the loss of them, when we had left them behind us, after quitting *Lapland*: and for officers of the army engaged upon military expeditions, they would be not less convenient than they are quickly and easily made.

Portable beds being thus provided, nothing remained but to lay in a stock of such provisions as might be kept for occasional use; but Mr. *Pipping* told us he had a companion who would cater for us, and often find plenty of food, where we might most stand in need of it. This companion was nothing more than his *Lapland* dog; to which he added two fowling-pieces: and he assured us, that we might generally rely upon finding fresh salmon, at this season of the year, in all the lower parts of the country. A little tea therefore, some rolls of pig-tail tobacco and a small cask of brandy for the natives; together with a cheese and a few rusks; constituted the whole of our stock. Thick gloves for the hands, and veils to cover the head, ears, and face, being passed over the hat, and tied

close round the neck, were absolutely necessary; and every person was accordingly provided with them: yet even these were not found a sufficient protection from the mosquitos, as will appear in the sequel.

The Party
leave Tor-
neå.

Our boats being in readiness, and every thing on board, several of the merchants, together with Baron *Hermelin's* Academicians, who had arrived the day before, accompanied us to the water-side; bearing with them a large goblet of the sort of beverage which we call *cool-tankard*, to make a copious libation at parting, and drink success to our future voyage. As soon as we had taken leave of these gentlemen, we found our company to consist of five persons, besides boatmen; including the *Lapland* and *Swedish* interpreters, an *English* servant, and ourselves. The first named of these was acquainted with the inhabitants of all the countries through which we were to pass, and from his earliest years had been accustomed to associate with *Laplanders*. Being received everywhere, and his coming hailed, as a person of much consequence, we gave him the appellation of "*King Pipping*;" neither did his figure ill accord with this distinction. To great personal strength and activity, was added no small degree of corpulency; and under a look as grotesque and wild

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as any *Laplander*, were couched the utmost good-humour, cheerfulness, and benevolence. He was the very reverse of our *Swedish* interpreter; a little meagre man, generally out of temper with himself and every one around him.

Salmon
Fishery.

Soon after leaving *Torneå*, we passed a *salmon-fishery*, consisting only of an inclosure made by driving a palisade of stakes into a shallow part of the river near the shore. Within this palisade, draught-nets were used; by means of which, the owners sometimes took from 1000 to 1200 salmon in a single night, and commonly from 300 to 400. For this fishery they paid an annual tax to Government, of a hundred rix-dollars. It belonged to the peasants of the adjoining village of *Kiviranda*. Many rafts, freighted with barrels of *tar*, passed us in their way down the river, coming from *Upper Torneå* and the more northern forests. This river, like all the others falling into the north of the Gulph of *Bothniå*, is full of rapids; which have been too generally described, by some writers, as *cataracts*. They are very rarely entitled to so sounding an appellation; being, for the most part, like *mill-forces*. The *Swedes* call them "*forces*." We shall always notice them as they occur; because their list will afford some idea of the elevation of the country, at the sources

Falls of
the Lap-
land Ri-
vers.

of the rivers, above the level of the sea¹. There are no less than 107 of these *Falls* between *Torneâ* and *Enontekis* at the source of the *Muonio*; some of which are really *cataracts*. The most surprising part of their history is, that the persons appointed to work the boats, or rather large canoes, which are employed in conducting persons up the rivers, actually force their vessels up these Falls, by means of long *poles*, which are always used instead of *oars*: and their dexterity in doing this is so marvellous, that it is one of the first things that ought to be noticed; the success of a voyage into the interior of *Lapland* depending entirely upon it². In descending the same rivers, they also suffer their boats to be precipitated with the torrent, guiding and preserving them from being upset with wonderful skill and address. All these *forces* have their separate names; with this distinction, that if the Fall be insignificant, the word *Niva* is generally added to its name: if a water-fall of greater magnitude, the word *Koshi* is substituted, instead of *Niva*. We passed three of these *rapids*, before

(1) "In Sweden, the country rises so gently from the *Bothnian* Gulph, that we frequently can only discover the ascent from the course of the rivers."—*Von Buch's Travels*, p. 347. Lond. 1813.

(2) See the *Vignette* to this Chapter. Sometimes, but very rarely, the boats are hauled up these Falls by means of ropes.

CHAP.
IX.Incipient
Trap.

Frankilä.

we halted for the night, at a place called *Frankilä*. The first occurred soon after passing a village called *Wojakkala*: it is named *Iso nárä*: the second *Karsicho*; and the third *Gylka*. The ordinary depth of the *Torneå* is not more than three fathoms, or three fathoms and a half; and sometimes it is so shallow, that dry places are left in the midst of the river. A gradual formation of *trap* may be observed in its crumbling banks, which exhibit this substance in an incipient and a semi-indurated state; separating, like starch, with a prismatic fracture, or falling into the form of *rhombs*, and *rhomboidal parallelopipeds*. At the second rapid we found *trap* deposited in a regular *stratum*, full of vertical fissures; and in this *stratum* there was a vein of some substance, one shade darker than the *trap* itself, resembling rotten wood, but in thin *laminæ*, full of minute particles of *mica*. At *Frankilä* we set up our *Lapland* beds, for the first time, in a place without a roof or doors, filled with tar-tubs and chips¹. From *Frankilä*, the

(3) "The family at *Frankilä* had just been baking, which they do here twice a year. The bread was made of *rye* and *barley*, in biscuits, to be hung upon poles for the next six months. (See *Vignette to Chap. VII.*) This was the only eatable they had to set before us. Upon making inquiry as to the quantity of exports sent down the river annually, I found that 1800 tons of pickled-salmon, and 400,000lb. of butter, came down every year to *Torneå*; besides
12,000

mountain *Nivavara* is visible; on which still remains the signal-post erected by the *French Academicians*, to assist in their trigonometrical operations. The author's illness had increased to such a degree at this place, that it became necessary to send back to *Torneå* for a physician, if one could be found, before we proceeded any farther. The simple inhabitants, however, when they heard for what purpose a messenger was despatched to *Torneå*, expressed their surprise, and said, we ought to learn of them to cure all ills ourselves, without depending upon others for remedies. A peasant here had brought with him, from a neighbouring forest, a musical instrument, which exhibited the simple origin of the *German* flute. It consisted of the bark of young trees, in cylinders of different sizes, fitted one into the other, with holes in the sides for the fingers, and one for the mouth; being played exactly as a *German* flute. They also make *trumpets*, by twisting the bark spirally, so as to give it the form of an elongated cone, and sewing it together

12,000 *tolf* of deals, each *tolf* consisting of 12 planks; and from 10 to 12,000 tons of *tur*. After leaving *Frankilå*, we passed four islands, prettily situate in the midst of the river, which is here a mile and a half wide, with neat little cottages upon them. The *barley* about *Frankilå*, and elsewhere, was in a very healthy and forward state. I was informed that it is sometimes sown and mown in the space of seven weeks." *Cripps's MS. Journal.*

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Antient
mode of
covering
the head.

with twigs. The beds of the people of this place were merely wooden cradles, like mangers, not more than one-third of the length of their bodies; in which they slept, between skins with the fur inwards. Instead of hats, they all wore scull-caps, shaped like scalps, and fitting close to the crown of the head: they are made, almost universally, of black plush (of which there is a manufactory at *Torneå*), with cross ribands of the same colour. This kind of cap is exactly the same as the *Fez* worn by the *Turks*, and by all the *Greeks* antient and modern; precisely as it appears upon the medals of *Ænos* in *Thrace*, where *Hermes* is represented wearing such a cap. The *Finlanders* and *Swedes* wear the same kind of covering for the head. Industrious as are the inhabitants of this district in cases where their labour is wanted for others, they seem to have little inclination to bestow it upon themselves, further than is absolutely necessary to procure the means of subsistence: having obtained these, they betake themselves to sleep. We saw a peasant spend a whole day in cutting three wooden pegs; but when the same man was afterwards in the boat with us, he worked hard enough, and shewed no disposition to evade any part of the severe labour in which he was engaged.

Towards evening, on the following day, the

physician arrived. He proved to be no less a personage than Dr. *Deutsch*, the *Entomologist*, the same who accompanied *Acerbi*, from *Torneå*, as far as the Iron Works of *Kängis*, when upon his journey to *North Cape*; and whom he has so justly described¹ as “a person skilful in his profession, of gentle and engaging manners.” Dr. *Deutsch* told us, that upon the Festival of *St. John*, at *Kängis*, the sun, at midnight, was two diameters above the horizon. He had returned to *Torneå* upon the very day of our leaving it; and from him we learned, that although we might meet with *Acerbi* in his way back, it would be impossible to overtake him; as he was by this time, in all probability, at *North Cape*. The complaint under which the author laboured, he ascertained to proceed principally from an obstruction of the biliary duct; caused by long travelling, exposed to nightly dews, excessive watchfulness, and a *Swedish* diet of salted provisions. It would not, he said, be speedily removed; but the feverish symptoms might be abated; and, upon the whole, continual change of air, accompanied with exercise, would rather tend to cure than to increase the disorder. As soon as he had prescribed the

(1) See *Acerbi's Travels*, Vol. I. p. 354, &c. *Lond.* 1802.

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rules to be observed for its removal, he returned by land to *Torneå*; and we continued our voyage up the river. The circumstances of this illness would not have been mentioned, but in the hope that other travellers may benefit by the caution it will suggest to them.

Carl Gustaf. July 13.—The first picturesque view which occurred was afforded by the church of *Carl Gustaf*, or *Charles Gustavus*, surrounded by farm-houses, towards the north, and islands to the left of it. The river, after passing this village, is, in some places, a mile wide. Its shores are low, but prettily dressed. The numerous farms and villages give it a pleasing appearance. The levers belonging to the wells of the respective dwellings rise above the tops of the little wooden buildings, like so many huge fishing-rods with their lines. About a mile beyond the church of *Charles Gustavus*, looking back at the village, the view was perhaps still more beautiful. The language spoken throughout the parish of *Torneå* is that of *Finland*. There is not a village, nor indeed a dwelling, without a *steam-bath*; in which the inhabitants of both sexes assemble together, in a state of perfect nudity, for the purpose of bathing, at least once in every week; and oftener, if any illness occur among them. These *steam-baths*

Steam
Baths.

are all alike: they consist of a small hut, containing, a furnace for heating stones red hot, upon which boiling water is thrown; and a kind of shelf, with a ladder conducting to it, upon which the bathers extend themselves, in a degree of temperature such as the natives of southern countries could not endure for an instant: here they have their bodies rubbed with birch boughs dipped in hot water; an office which is always performed by the females of each family, and generally by the younger females. It is to these *baths*, and to the natural cleanliness and temperate habits of the people, that the uninterrupted health they enjoy may be ascribed. The only disorder to which they seem liable is the small-pox: the dreadful havoc this makes among them is visibly manifested by the countenances of the survivors, who very generally bear the marks of its ravages. This remark applies to the *Finns*; for the *Laplanders*, owing to their caution with respect to this malady, more frequently escape the effects of it. The *Finns* are also characterized by the light colour of their hair, which is frequently of a bright yellow colour, and sometimes almost white. At a salmon-fishery above *Frankilä*, we saw the fishermen cast and draw their nets. They caught a *salmon* which weighed twenty-one

pounds: we bought it of them for two *Swedish* bank-notes of a *Plåte* each. The *Plåte* is worth sixteen-pence *English*; that is to say, (*sexton schillingar*) sixteen shillings *Swedish*; so that we bought our *salmon* at the rate of about three half-pence, *English*, the pound. We no sooner had it on board, than our *Lapland* and *Finnish* interpreter, Mr. *Pipping*, cutting a slice, began to eat it raw; and this not owing to hunger, or to any want of what are considered refined manners in this country, but as the greatest possible delicacy. He endeavoured often, afterwards, to prevail upon us to do the same; laughing at our prejudices, and saying, if we knew what a luxury raw *salmon* affords, when quite fresh, we should not hesitate. But to have it in a state of perfection which is esteemed equally delicate and delicious, the fish should remain in salt a single night, and then be eaten raw; in which state, *salmon* is eaten by many of the principal inhabitants of *Torneå*, who consider it as being thus preferable to *salmon* that has been boiled or fried. This night we reached *Korpikylä*: not being able to find a human being, we began to suspect that the place was deserted; when our boatmen, knowing better where to look for the people, opened the door of one of the little *steam-baths*, for all the

world like a cow-house, and out rushed men, women, and children, stark-naked, with dripping locks and scorched skins, and began rolling about upon the grass. Here we passed the night, in a room with windows like small port-holes of a ship. Having occasion for some cordage, they brought us ropes of their own making, of willow bark. In the morning (*July 14th*), a large party had assembled, who gathered round our table, to see us eat our breakfast; to them a very curious sight. We made them all very happy, by distributing small pieces of pig-tail tobacco among the men, and a few needles among the women.

One of the Falls of the *Torneå* occurs near *Korpyhyla*: it is called *Matha Koski*, and is really a clamorous and turbulent cascade. Having inquired whether any of them ever ventured down this cataract in their canoes, they answered in the affirmative: upon which the author expressed an inclination to accompany any of them who would descend with him; and two men gladly volunteered their services, desiring him only to sit perfectly still in the boat, without moving hand or foot, and not attempt to interfere with its management. The rest all crowded to the side of the river, as the boat was pushed off towards the middle of the

Cataract of
Matha
Koski.