

THE  
PHILOSOPHICAL MAGAZINE:

COMPREHENDING  
THE VARIOUS BRANCHES OF SCIENCE,  
THE LIBERAL AND FINE ARTS,  
AGRICULTURE, MANUFACTURES,  
AND  
COMMERCE.

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BY ALEXANDER TILLOCH,  
MEMBER OF THE LONDON PHILOSOPHICAL SOCIETY.

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“Nec araneorum sane textus ideo melior, quia ex se fila gignunt. Nec noster  
vilior quia ex alienis libamus ut apes.” JUST. LIPS. *Monit. Polit.* lib. i. cap. 1.

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is obvious : but I now purposely avoid making any practical inferences, until I can, at the same time, state a number of facts I have collected, relative both to concretions and to the urine itself.

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*V. Short Account of the last Russian Expedition for making Discoveries in the North-east Sea. By Professor BLUMENBACH at Gottingen. From Geographische Ephemeriden. Published by Major von ZACH, May 1798.*

AS very little is yet publicly known of the great six-years expedition, undertaken by the Russians for making discoveries in the Northern Archipelago or Eastern Ocean, the following short account of it, taken from the most authentic sources, and particularly from the correspondence of Dr. C. H. Merck, who was employed in the expedition as naturalist and physician, with the Royal Academy of Sciences at Gottingen, may afford satisfaction to those fond of geographical researches.

This expedition was proposed by Catherine II. so early as the month of November 1784. A plan was also drawn up for it; and the command conferred upon Captain Billings an Englishman, then in the naval service of Russia, who had accompanied Mr. Bayly the astronomer in Cook's last voyage round the world in 1776—80. Three captains of the second rank were appointed under him, viz. Hall, Sarischef and Bering, not the son, as Lesséps says, but the grandson of the celebrated Capt. Vitus Bering, who, on the 14th of December 1741, was interred on an island in the sea of Kamtschatka, named after himself, and where he had been shipwrecked.

The principal objects of this great and very expensive expedition were, to supply all the deficiencies in regard to the important discoveries with which the geography of Asiatic  
Russia



Russia had been enriched, since the time of Peter the Great, by exploring that so little known north-east corner of Asia, the land of Tschukt; to pursue farther if possible the north-east passage, attempted by Cook; and, lastly, to search out more convenient posts for the Russian fur-trade on the north-west coast of America.

Captain Billings set out with his instructions from Petersburgh in the end of the year 1785, and in July 1786 arrived at Ochotzk. Having passed the winter at Werchne Ostrog, in the beginning of the summer 1787 he left the mouth of the Kolyma or Kovyma with two vessels, the larger of which, called the Pallas, was commanded by himself; and the other, the Jeshchna, named after an arm of the river Kovyma, in which it was built, was commanded by Captain Sarischef. This was only a preparatory expedition, the object of which, however, was nothing less than to double Cape Tschelazka, (Cook's Cape North) and to proceed by this unheard-of route from the Frozen Ocean through Bering's Straits to Anadyr. I call the route unheard-of, as the romantic voyage of the Starchina Coffac Semon Deschnew, in the year 1648, notwithstanding the account of it which the Russian historiographer Muller is said to have discovered in 1736, among the archives at Jakutzk, is still doubted by many sceptics, who consider a connection of the northern parts of both continents as possible.

These adventurous navigators, however, could not proceed farther than to a certain point between Baranikamen and the mouth of the river Tschoun; because the impenetrable fields of ice which they found there, rendered it impossible for them to continue their voyage to the North-east, and obliged them to return from Seredun-Kerymsky Ostrog to Jakutzk, in order to pass the winter.

In the mean time, Captains Hall and Bering were employed in preparations for the grand expedition. The former superintended at Ochotzk the building of the two vessels destined for that purpose, and the latter had the care of transporting



transporting from Jakutzk the materials and stores necessary for fitting them out.

In the summer of 1789, the two ships were ready at Ochotzk for putting to sea; when, unfortunately, the second of them, the Dobrowa Namerine (the Good Intent), which was to be commanded by Capt. Hall, got on shore just at the mouth of the Ochochta; and as her keel was broken, it was necessary to set her on fire. On account of this misfortune, Capt. Billings, with his own vessel the Slawa Roffie (Russian Glory), was not able to leave Ochotzk till towards the middle of September; at which time he proceeded to Awatscha Bay, where he anchored in the month of October, having made in this passage a discovery of very great importance to nautical geography, as about 300 wersts from Ochotzk towards the Kurile islands, he fell in with a rock, an hundred fathoms high and a werst in circumference, surrounded by lesser rocks which were named Jonas Island, and on which many of the ships already lost have, in all probability, been wrecked. Prodigious flocks of sea-fowl come every morning from these rocks to the coast of Ochotzk, and return thither again in the evening to pass the night.

After wintering at Kamtschatka, these navigators explored, in the summer of the year 1790, the whole chain of the Aleutian islands, which seem to be of volcanic origin, and afterwards the large eastern islands explored by Cook; Onalafschka and Kadjak; the bay of Cape St. Elias, &c. and returned to winter at Kamtschatka. In the summer of 1791 they proceeded on their grand expedition, to search for a northern passage through the Frozen Ocean; and having landed on Gore's and Clarke's Island, pursued their route from thence to the Continent of America.

As the fields of ice, which extend from the Eastern Cape of America, rendered it impossible for them to penetrate any farther, Captain Billings, in conjunction with Dr. Merck, accompanied by one of the pilots, the draftsman, two interpreters, and four seamen, undertook an expedition of discovery through



through the country of Tschukt from the Bay of St. Lawrence to the river Kolyma, which they had left four years before. This wonderful journey, which they performed in sledges drawn by rein-deer and attended by some of the intrepid natives, continued from the middle of August till the end of February 1792, when they arrived at the river Angarka, which falls into the great river of Anuy, after having travelled through, and examined in regard to geography, natural history and statistics, an extensive tract of country very little known, the Bay of St. Laurence and the islands between Bering's Straits and the mouth of the Anadyr, inhabited by about four thousand Tschuktese, who are ichthyophagi or feeders on fish, and the whole almost level land, destitute of wood, of the rein-deer Tschuktese from the above-mentioned straits as far as the Kolyma.

In the beginning of May these enterprising travellers returned on horseback to Jakutzk. Their vessel, which they had left in the Bay of St. Laurence, had in the mean time proceeded to Onalafchka, under the command of Capt. Sarischef, and had wintered there, together with a small cutter called the Tschorne Orel (the Black Eagle), which had been built soon after their first arrival at Kamtschatka, to supply the loss of the vessel stranded at Ochotzk, and on board which were Captains Hall and Bering.

Next spring both vessels returned to Kamtschatka. The *Slawa Rossie* was left there in the harbour of St. Peter and St. Paul; but Captains Hall and Sarischef, in the course of the summer, paid a visit in the Black Eagle to the chain of the volcanic Kurile islands. They then proceeded to Ochotzk, from which they were followed, in the summer of 1793, by the rest of the crew of the *Slawa Rossie* in a transport commanded by Capt. Billings; and in the winter of 1794 the whole of the persons employed in the expedition returned to Petersburg.

A full account of this remarkable and interesting expedition is now preparing for publication, under the inspection of



of the Academy of Sciences at Petersburg. In the mean time, the Academical Museum at this place\*, through the liberality of its worthy benefactor Baron von Asch, counsellor of state, has received a present highly interesting to natural history and geography, consisting of works of art and natural curiosities from these remote regions of the northern part of Asia, as well as of the north-west coast of America and the chain of islands lying between the two continents.

The specimens of art of these polar inhabitants, and above all the needle-work of the women, (who, however, for the most part are troglodytes, and in their subterranean dwellings (*jurten*), must consequently strain their eyes by working at lamps filled with train oil,) exceed in elegance every thing I ever saw of such kind of manufacture, not only among savages, but even among the civilised Europeans. As a proof of this assertion, I shall here remark, that they stood examination by a magnifying glass, under which the finest embroidery of Europe lost much by being compared with them.

The assertion that, except food and drink, there is no object which engages more the attention of mankind than that of ornament, and that a turn for coquetry is one of the most general as well as most beneficent principles in human nature—an assertion strengthened by this striking observation, that though there are numerous tribes on the earth who go perfectly naked, even without so much as the covering of a fig-leaf, there are none, as far as we yet know from the information of travellers, who, notwithstanding their nudity, do not ornament themselves in some manner or other, I have found fully confirmed by various articles, the fruits of this voyage of discovery, which form part of the present transmitted to our museum by Baron von Asch.

The variety and singularity of the appendages of the toilette of these polar inhabitants, condemned as it were to the

\* Gottingen.



coldest climate in the world, and who have to struggle incessantly with frost and hunger, exceed all description. By way of example, I shall mention only one article, a first-rate ornament of the ladies of the Aleutian Islands, consisting of a pair of the long tusks of a wild boar, cut down to a smaller size, which are stuck into two holes, one on each side of the under lip, from which they project, and give the wearer an appearance similar to that of the wallrus, which is considered as a beauty almost irresistible.

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VI. *New Process for obtaining Lemon Juice of a stronger Quality.* By M. BRUGNATELLI. From *Annali di Chimia*, Vol. II. p. 31.

HAVING observed in the course of several experiments, that the slimy substance in lemon juice separates itself spontaneously from that acid, I endeavoured to find out some method of preventing it from spoiling during the time necessary for its separation, in order that the acid should not acquire any bad properties which might render it unpleasant to the taste, or uncertain in its chemical effects.

I expressed in the common manner the juice of perfectly ripe lemons, and strained it through a piece of linen. In half an hour I strained it again, to free it from a little slimy matter which had settled at the bottom of the vessel. I then added to the juice a certain quantity of the strongest spirit of wine, and preserved the mixture for some days in a well-corked bottle. During that time there was a considerable deposit, which to all appearance was of a slimy nature, and which I separated by filtering paper. If the fluid was too thick to pass through the filter, I diluted it again with spirit of wine. After this operation, the deposit remained on the paper, which was entirely covered with it, and I obtained in the vessel placed below, the purest acid of lemons combined with spirit of wine.

If