

over and over again, "My poor brother! My dear brother!"

Meanwhile, with emotion no less intense, Mr. Sylvester had dropped upon the ground by his daughter's side, and had laid his hand upon her heart. But his fingers so shook with the palsy of grief that for a long time he could arrive at no result of his examination.

As to what that result would be, however, Horace McLean entertained no doubt. On first entering this chamber of horrors, his eye had been caught by the bottle, on which was printed in large characters the word "Poison;" and, ignorant of the fact that the bottle did not, in reality, contain poison, and having observed a dark stain on the bosom of poor May's light dress, he had naturally drawn the conclusion that she had been put to death by this means. Stooping down, he began reverently to unloosen the handkerchief that bound her small hands—his face still pale with agitation, and his faithful heart aching with an agony of sympathy, as he thought of the fearful blow which awaited John Oliver, when

he should learn the tragic fate of the gentle girl whom he so passionately loved. Suddenly a cry from Mr. Sylvester startled him—a low, inarticulate cry of joy. Horace cast one glance at him, then turned to May. Her eyes, closed a moment before, were now open.

"My darling! my darling! she is alive," cried Mr. Sylvester, finding voice. "Oh, thank God! thank God!"

Horace thanked God, too—with his heart, but not his lips—and began to chafe May's hands which he held, for he felt her shivering from head to foot.

Mr. Sylvester drew her up to rest against his shoulder, and covered her face with kisses. "Oh, my darling! my darling!" he repeated. "Speak to me, love. You know me, don't you?"

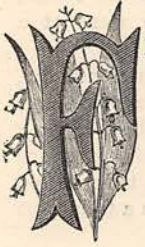
May made some reply, but her voice was very weak.

"What does she say, McLean?—What do you say, my pet?"

May spoke again: "Please, nurse, let me have my best doll; Dopsy has broken the one with the china head."

END OF CHAPTER THE THIRTY-SIXTH.

PROFESSOR NORDENSKJÖLD AND THE NORTH-EAST PASSAGE.



NEW men have sprung so rapidly out of comparative obscurity as Professor Nordenskjöld, who has recently been occupying so much of the attention of the civilised world, and whose discovery of a short and practicable passage between the north of Europe and the Pacific Ocean probably signifies new life and continually increasing trade to races and countries that have hitherto been almost outside the pale of commerce, and certainly beyond the ken of other nations.

Arctic explorers in quest of a North-west Passage have gone far towards the mysterious point we call the Pole, have explored Spitzbergen, discovered Franz Josef Land, been repeatedly frozen in, undergone terrible hardships from want of food, clothes, and fuel, from scurvy and frost-bite, and, even if they have returned alive to their respective countries, have done so without producing any great amount of good or profit; in fact, those who sit at home at ease, watching for results, may be pardoned if they have often been tempted to think it lost time, labour, and money, for men thus to brave the dangers of those frozen seas. It has been reserved for a Scandinavian to go north-east with one small steam-vessel, coasting rapidly along the Asian shores, and striking through Behring's Straits right down upon Japan, with but little danger and no suffering, without the loss of a single man or the least injury to his ship. By tracing the course of the little *Véga* from her starting-point at Vardo on the 1st of July, 1878, to within a few hours' steam of Behring's Strait, about two months later, it may

readily be seen that two great maritime routes have been opened—one between the Siberian rivers Obi and Yenissei, the Atlantic Ocean and western countries generally, and the other between the river Léna, the Pacific Ocean, and the East. To fully appreciate the value of these commercial highways of the future, we must remember that Siberia is not merely a conglomeration of barren plains and steppes, but is rich in minerals, possesses vast herds of cattle, valuable fisheries, dense forests, and wide tracts of corn-growing land, whose soil is of the most wondrous fertility.

Nils Adolphe Erik Nordenskjöld is a scion of an old and aristocratic family in Finland, and can count the doers of some mighty deeds among his ancestry. One of them, being a great naturalist and altogether a man of learning, was regarded as somewhat of a sorcerer by his neighbours, and when the plague ravaged Finland, in 1710, was enterprising enough to charter and provision a small vessel, in which he took refuge with his wife and children, cruising about the Gulf of Bothnia and adjacent seas till the pestilence had disappeared. The son of this original personage embraced the profession of arms, and was present at the death of Charles XII. at the siege of Fredrikshall. He was subsequently ennobled, and changed his patronymic, which had until that time been Nordenberg, to Nordenskjöld, which if literally translated signifies "Shield of the North." Another member of the family was Vice-Admiral of Sweden in the early part of this century, and fought like a lion under the French flag during the American War. There was also another Nordenskjöld who about the same time devoted himself to the abolition of slavery, and died

at Sierra Leone, where he had been expending his energies in the endeavour to found a free Negro state. It will thus be seen that our Professor has the blood of heroes in his veins, as well as a considerable share of the adventurous spirit of those old Vikings of whom he is no unworthy representative. His father was not only a man of great cultivation, but an accomplished mineralogist, and superintendent of the mines in Finland. The son was born at Frugard, a small estate near Helsingfors, in 1832, and was the youngest of seven children, four boys and three girls. He is said to have been a handsome boy, of studious mind and ardent temper, and with an expression in his blue eyes which led friends of a prophetic turn of mind to say, "That child will see much, and travel far."

At thirteen years of age he and one of his brothers entered the University of Borgo, where Nils says of himself that he was only distinguished by his want of application. There was scarcely a single subject on which his masters did not report his progress, or rather lack of it, as eminently unsatisfactory. His parents, however, who perhaps saw a little further into their son's character than the tutors could be expected to do, neither reproached nor exercised any strict *surveillance* over either of their boys, but after making very modest arrangements for their board and lodging, left them free in the following term to follow whatever studies they preferred in their own fashion. This course seems to have awakened a considerable share of self-respect, and the younger one worked so hard as to gain the approbation of all the Professors with whom he had to do. So good a use did he continue to make of his time, that in 1853 he passed a successful examination at the School of Mines, and immediately afterwards accompanied his father on a mineralogical excursion among the Oural Mountains, where they especially explored the iron and copper mines of the Demidoffs at

Tagilisk. After his return he pursued his studies in this subject, and also in chemistry, with so much ardour that he was made Director of the Faculty of Physics and Mathematics at the University of Helsingfors, and at the same time a mining engineer, though without active employment. Nothing, however, is certain under a despotic government, and he lost both his posts and the emoluments attached to them, within six months, on account of the political views he had expressed at a public dinner.



Nordenskjöld

the following summer Professor Arppé asked him if he would become a candidate for the chair of mineralogy and geology, then newly created, or whether he would prefer to undertake explorations at the expense of funds set aside by the University for that purpose. A friend, M. Almyvist, however, superseded Nordenskjöld; but he was formally promised an allowance known as the *Subvention Alexandre*, which would soon be at liberty, and which would allow him to travel as a student through Europe. He had not long to wait for this money, but instead of starting at once lingered till 1857, when he

hoped to receive his diplomas as Master and Doctor, with the first place of honour among the ranks of the former, and the second among the latter. Fate, however, stood once more in his way, for deputations of students came from Upsala and Lund, and in entertaining them Nordenskjöld was so imprudent as to express his love of fatherland, and his faith that there was yet a future for Finland. This was quite enough to ruin what then appeared to be his bright prospects, and a few days later came a despatch from the Government of St. Petersburg,* declaring him *incapable for ever* of holding any office in the University of Helsingfors. Being well aware that it would be immediately followed by an accusation of high

* Finland is a Russian province, having been ceded at Abo in 1809.

treason, the young man made haste to escape from Russian territory, and remained away till 1862, when the invitation of Professor Edlund to make some inquiries as to the formation of ice on the sea, and perhaps the chains of Love, drew him to Finland again. At all events, he was affianced while there to the daughter of Count Mannerheim, the ex-President, and returned to Sweden in less than a month. On the 1st of July they were married at Willnos, near Abo, and Nordenskjöld as a family man seemed to give up all ideas of exploration.

In 1868, however, circumstances had again roused the passion for adventure and research, and with the assistance of a rich Swede—M. Oscar Dickson—a Polar expedition on a small scale was fitted out, and proceeded to the north of Spitzbergen. It was not heard of for so long that the Professor and his companions were given up for lost; and a Russian merchant sent a vessel, which he named the *Nordenskjöld*, in search of them. Unhappily, she was wrecked, while the small steamer in which the explorers were, lay safely among the ice-fields, looking like a fly in a vast bowl of milk. The sailors and *savants* on board enjoyed plenty of sport, caught seals and blue foxes, and made acquaintance with huge bears, which were too ignorant of man to show either fear or ferocity, and rolled over and over and gambolled like so many dogs. They made holes in the ice, so as to obtain dredgings from the bottom of the sea, and found abundance both of animal and vegetable life developing in the utmost vigour, which previous physiologists had always supposed to be impossible in such a temperature and without solar light or warmth. When able to reach any Arctic lands and search for fossils, they discovered abundant remains of the luxuriant vegetation popularly known as that of the coal-measures—which is, of course, an indubitable proof that tropical heat once reigned in those sterile regions. Having plenty of food and a tolerable stock of patience, they seem to have led lives which were, at all events, tolerable; and by-and-by the ice broke up and they reached home safely, to the equal surprise and joy of their families and friends.

The expedition, whose success has made the name of Nordenskjöld familiar as a household word, was undertaken in 1878 at the joint expense of King Oscar of Sweden, M. Oscar Dickson, and M. Alexandre Siberiakoff. The latter gentleman had long contemplated the possibility of trading with the tribes on the northern coasts of Asia; and his instinct in this direction has proved to be a prophetic one. The *Véga*, in which Nordenskjöld and Captain Palander embarked, is small, but has considerable steam-power, and is built with her bows as pointed as possible, so as to cut through the ice when necessary. She started from Vardo, and instead of steering right out to sea, bent her course first to Nova Zembla, and from thence hugged the shore pretty closely, and thus proceeded to the mouth of Behring's Straits, which she would probably have passed through before the closing of the ice, had she not been delayed by the

Professor's hydrographic experiments. Winter caught and imprisoned her on September 27th, and for six months she remained at the north-eastern extremity of Asia. The ice between the *Véga* and the shore was not firm enough to bear a man's weight, but the sight of her in the offing drew a crowd of Tschoutsches—men, women, children, and dogs—to the beach, whence they gazed at the strangers and their craft with the utmost astonishment. Still, they had enough acquaintance with civilisation, to understand that their advent savoured of tobacco and brandy, and contrived to reach them by means of a species of half boat, half sledge, covered with skins. They were perfectly friendly, and were allowed to run all over the vessel; their honesty was unimpeachable, but their mendacity beyond bounds, and the little communication they had previously had with Europeans had developed in them such keen ideas about business, that they would sell an article, take it away, and sell it over again with the utmost *sang-froid*. Finding that their visitors bought hares readily, they hit upon the expedient, when "puss" was not obtainable, of catching foxes, skinning them, and cutting off their heads and feet. How the Swedes found out that these carcases were not hares, they could not understand at all! They were quite ignorant of money, and were surprised that the strangers preferred bartering beads, &c., for native costumes and weapons, instead of for furs, blubber, or whalebone. Their chief was named Menka, and he wore a robe of white reindeer-skin and a blue flannel shirt, spoke Russian of a very curious kind, and could neither read nor write. He knew that a powerful personage resided at Irkutsk, but had not an idea of the existence of the Czar of all the Russias; he was nevertheless sufficiently intelligent to comprehend a map when it was shown him, and pointed out confidently a number of important localities in North-east Siberia.

Lieutenant Nordqvist, one of the officers, set to work with so much zeal to study the Tschoutsche language that he could speak it so as to be understood within a few weeks; and he and one or two others then paid a visit to Menka's encampment. It consisted of about eighteen tents, pitched on either side of a little river in a valley, and between them were visible plenty of reindeer sledges, both empty and laden. The utensils to be seen were principally copper coffee-pots, used for boiling water, one or two cups and saucers, a single glass, with an English inscription, and a few wooden platters. The knives and hatchets appeared to be Russian and American, and the trade carried on seemed to be with the Russians of Kolyma, and a people called Yékarguales, who live on the American side of Behring's Straits. All were dressed either in reindeer or seal skins, or in striped woollen garments, the women being tattooed, and wearing necklaces and headdresses of pearl beads. The tents were divided into two compartments, in the interior one of which all sleep, with a slight covering round the loins. In the morning the mistress gets up, lights a fire, and cooks some strips of flesh, which are then handed round on platters. The visitors were everywhere well received, but did not remain more than four

days away, and they were very glad to return to the *Véga*.

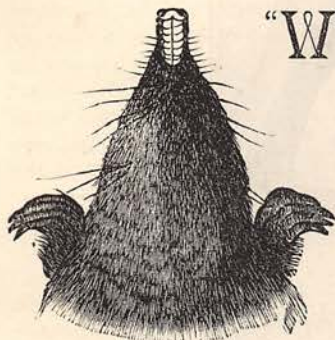
When the ice broke up, and the vessel steamed down Behring's Straits, her great task was accomplished; and it adds not a little to the pride and gratification of Sweden that it has been done under her banner.

Professor Nordenskjöld is now about forty-seven years old, broad-shouldered, of medium height, with thick brown hair, blonde whiskers and moustache,

blue, short-sighted eyes, and a somewhat disdainful expression of countenance. The disdain is, however, for difficulties, and not for persons; and, popular as he has become in Europe, he is already contemplating another Arctic voyage. He thinks that the one he has just completed ought to be accomplished in favourable seasons in about two months by vessels intent upon carrying a cargo throughout, instead of stopping to make discoveries on the way. E. C.



A SAPPER AND MINER.



“WELL said, old mole! Canst work i' the earth so fast? A worthy pioneer!”

So says Hamlet to his father's ghost—a remark which points to the fact that Shakespeare was no mean observer of Nature. As to the rapid working of the little

animal he named, if any enthusiast will take a spade and start fairly against a mole to try and dig it out, he will throw down the implement at the end of five minutes and confess himself thoroughly beaten; for, almost in a twinkling, the little fellow will have buried himself, and the effort to dig him out will be a vain one, so rapidly can he bore and tunnel through ordinary, moderately soft soil.

It may be taken for granted that there are many hundreds of thousands of people who never have seen, and never may see, this little animated subsoil plough and drainer, who, if allowed to follow the bent of his inclinations, will completely undermine a field, running through it a series of veins and arteries, opening the one into the other—making, in fact, hundreds upon hundreds of yards of subterranean passages, just large enough to admit his body, and depositing the soil taken out of the tunnels in the neatest of little, soft, crumbly heaps on the surface of the grass.

Fields or gardens so treated are generally beside a wood, and out of this the mole—or, as the learned

call it, *Talpa Europæa*—starts on his hunting trips, his hunting grounds being subterranean.

Here is the little fellow just caught in a noose by an ingenious arrangement placed in his burrow, and the first feeling is one of amazement that such a little, round, soft, shapeless creature could perform so much work. For we have here what looks to be a little round, sausage-shaped bag some five or six inches long, made of the most delicate black silk velvet, the pile, which lies smooth in any direction, being so soft and fine that beside it velvet plush is a coarse and barbarous production. Our little defunct nuisance seems to have no shape beyond being round and long. One end comes to a point, and on examination you find that it is flattened at the extremity, being, in fact, an exact pig-like snout; and at the other rounded end there is a tail like an elongated camel's-hair pencil. There is no shape of head, no trace of shoulder or hip. Even the eyes are invisible, being completely covered by the velvety pile; and but for the legs it would be hard to tell that it is an animal at all. The legs! It should be the feet, for the legs are almost entirely within the skin, while the feet are wonderfully developed, especially those in the anterior part of the body. The ordinary illustrations of our natural histories give a very inaccurate idea of the fore-foot or hand of the mole, which is almost circular, and of enormous strength. It is covered with a very tough skin, and its claws are solidity itself.

On examining these implements—for such they really are—the surprise at the mole's power of locomotion, and sapping and mining process, ceases at once, for they are wonders of construction and models of perfection. Set in motion by exceedingly powerful muscles, it is seen that they are not placed like the