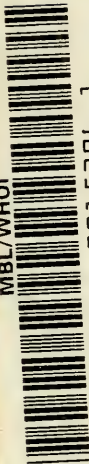


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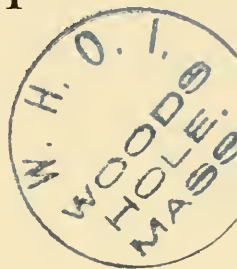
A. A. Harvie Brown

Travels of a Naturalist in Northern Europe

Norway, 1871

Archangel, 1872

Petchora, 1875



BY

J. A. HARVIE-BROWN, F.R.S.E., F.Z.S.

MEMBER OF THE BRITISH ORNITHOLOGISTS'
UNION, ETC.

*Joint Author of 'Fauna of the Moray Basin' and
'A Vertebrate Fauna of Orkney';*

AND

Author of 'A Vertebrate Fauna of the N.W. Highlands and Skye'

WITH COLOURED PLATES AND OTHER ILLUSTRATIONS
AND 4 MAPS

VOL. I

LONDON: T. FISHER UNWIN
PATERNOSTER SQUARE, MCMV

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Preface

IN the following narratives of three visits paid to the northern parts of Europe, I have made no attempt to rewrite or clothe in new phraseology my original journals. Therefore, any claim they may have upon those of the public who may be disposed to read them is their simple journalistic form and continuity of events—just as they occurred; just as they appeared to me; and just as I wrote them down at the close of each day.

At the times my companions and I visited these countries, they were considered as being amongst 'the remoter regions of the earth,' unless perhaps Norway be excepted; for even Wolley and other British collectors had not penetrated so far eastwards as the White Sea, nor collected steadily on the Delta of the Dvina.

For many years I had studied the collecting experiences of the late Mr. John Wolley, and, as early as 1865, I had possessed treasures of his finding, which had been placed in the market, through Mr. Baker at Cambridge; and a friend and myself secured the first selections from that mine of oological wealth.

I had also treasured up in memory and in notebooks, etc., many sentences of Wolley's writings, regarding the discoveries he had made, and about those which *might*

come to be made 'by some younger man than himself East of the White Sea.' Amongst those, he mentioned the eggs of the Little Stint and Grey Plover. For years, I gathered up all the information I could lay hands upon, which bore directly or indirectly upon these more distant hunting-grounds. I dreamed of them by night and even betimes by day.

In 1871, but not till then, my first preliminary canter was made in the charming companionship of my friend, the late Edward R. Alston, to Norway. Then more dreams were dreamed, and even future plans plotted out, and in the same way more accumulations of preliminary materials were made.

Amongst these, plans were formed to revisit the fringe of Wolley's country, and work eastward into the Kola Peninsula; and we were greatly assisted by many kindly Brethren of the B. O. U.—Professor Newton, H. E. Dresser, and others. But that dream proved strongest which repeatedly beckoned us and said: 'Eastward; further eastward;' and at last, the Delta of the Dvina and Archangel—'East of the White Sea,' was decided upon as one step at least in the right direction; and in 1872, Alston and I were again afoot, this time among the many islands of the Dvina Delta; and many happy weeks were spent there. But 'Eastward still,' only rang louder in our ears or postured in our dreams, when we seemed at last, merely to touch the fringe of the nesting distribution of the Little Stint, by obtaining a specimen or two in full breeding plumage on the furthest outer islands of the Delta. Ah! only passing migrants going '*Eastward still*'!

Again, eagerly we collected scraps of information at all hands—*good, bad, indifferent*; and *dreamed* again.

But not till 1875, were my dreams brought to some extent at least to fruition. In 1874, an old and trusty

friend and schoolfellow—we had bird's-nested together as boys and as men—were on the eve (literally) of starting from Charing Cross Hotel for the far Petchora—*when the door—so to speak—was closed in our faces!* A telegram from Archangel said: '*Too late—roads broken up.*'

Next morning saw us off for 'the land beyond the wood,' and the ornithological results of that most enjoyable visit to Transylvania were recorded in the pages of the 'Ibis' for 1875. We had bought all our outfit suitable for far north-eastern travel. We made it serve for a very different climate; but much repacking and alteration had to be performed at the last moment on arrival there.

But in 1875, Seebohm and I went '*Eastward still.*'

Not desiring to undergo many little annoyances and inconveniences of travel in Russia, which Alston and I had experienced, for want of authoritative papers, etc., this time the very best of introductions possible to be obtained were provided.

This entailed several visits to the Russian Embassy in London, a part of the work connected with our start which devolved upon me. These more formal visits had again to be repeated, when we interviewed the Minister of the Interior at St. Petersburg; but I need not enter here into further detail. Suffice it to say, I was courteously received, welcomed, encouraged, and our views forwarded in all things; and most gratefully, we remember and acknowledge that kindness, and the ease with which eventually we travelled through the vast dominions of the 'Great White Tzar.'

Of the results of that expedition it is not for me to enlarge, further than the facts and sequence of events show, as they appear in these pages. I may only add—no account of the two first Northern Trips has appeared

before, though a good many of Alston's and my notes appeared in the then current Parts of Dresser's 'Birds of Europe,' for both Norway and the White Sea; and a short paper appeared in the 'Ibis' on the Birds of Archangel, etc., by Alston and myself.

Of the two Russian journeys, the first was undertaken entirely in the summer months; but the second was travelled in the late winter, under—needless to say—totally different conditions and aspects, as perhaps a few of our illustrations may be found to indicate.

And now, perhaps, last if not most imperative, I believe some apology to that portion of the public and my friends, who may deign to peruse these after-date narratives, is due; and possibly one little word may be attempted of doubtful justification.

The lapse of years between the dates, 1871, Norway, 1872, Archangel, and 1875, Petchora, and the present day is great, and must be the theme of my apology.

Justification I personally doubt—but I have been encouraged—wisely or unwisely, it is not for me altogether to say, '*to do this thing*'—and the reason amongst others given, was, the very *antiquity of the relation!*

Mr. Henry Cook, lately H.M. British Consul at Archangel, to whom at different times, I had, at his request, sent extracts from my old journals, and my collected information concerning the Government of Archangel, *strongly urged me to publish.* 'Because,' he said: 'they contain matters of much interest connected with the Archangel Government, as it was known thirty years ago.' Other friends nearer home who had seen the journals in their original condition also advised it. More I cannot say. But is this justification? I doubt it!

There is a soup in Russia—a vegetable soup—with lumps of ice in it, called 'Stchee.' There is another equivalent, but without the extra 'flip' of the ice; in

Scotland, called '*Cauld-kail*.' When this is heated up, it becomes '*Cauld kail het again*;' which, being interpreted into 'English language as spoke,' is the equivalent again of 'Stale news.' I have thought it the right thing to do to mention these things in apology for serving up such remnants from the high table, and—from at least one point of view—offering such *iced bouillée*.

I have no idea in this place of bringing 'down to date,' events which have occurred there since; but I may be allowed to mention, that in 1876, I received from Captain Wiggins, of Sunderland, an invitation to accompany him to the Yenesai. I had been for some years in very regular correspondence with him before 1875. Alas! due to family reasons, I could not go with him; but I did what I considered the best thing for the purpose of furthering the interests of Ornithology, and that was to wire to Captain Wiggins as follows: 'Can't possibly. Wish I could. Wire Seebohm, Sheffield. He will go.' And I wired to Seebohm also.

Now let me say one word of thanks. The successes of our journeys to a little known and remote part of Europe, I consider were greatly due to the kindly help and furtherance of our plans by those in high places and official positions in London and in Russia. My reception at the Embassy by an A.D.C. of Count Schuváloff was most cordial. The only *little word* of warning which he gave me was, just as he was saying 'good-bye' and 'good luck'—'Now, Harvie-Brown,' he said, with a smile, 'don't take too much English powder into Russia;' to which, likewise with a smile, I replied: 'Dear sir, we will just take as much as we require.'

However, there is one thing I feel sure of, it is not best to travel in Russian territory with commercial introductions only, if one desires to avoid many minor unpleasantnesses, and possibly some bigger ones.

These facts I have some cause to know about, from the experiences of two journeys. Though in neither of them did we suffer *really serious* inconveniences, still they were in many respects in striking contrast in small things; and many small things make it big in time, and in contrasts between comforts and discomforts. *Vale!*



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NORWAY

1871

NORWAY

1871

May 5.

ON Friday, the 5th of May, 1871, Edward R. Alston and I left Granton about noon on board the ss. *Scotia*, bound for Christiania, and came in sight of the coast of Norway about Lycter. Gannets were the only birds we saw, the first about noon. About 4 p.m., when just in sight of land, a Meadow Pipit and a female Wheatear came aboard. During Sunday, May 7th, we passed along the southern coast of Norway, and entered the Christiania Fjord about half-past 1 o'clock p.m. Here we observed a flock of about forty Common Scoters, not yet off to their breeding haunts in Valdres, etc.

We landed late in the evening, and put up at the Hôtel de Scandinavie, where we supped on Salmon, Capercaillie, and Norsk öl (beer). Some half-dozen different kinds of cold viands were set before us, amongst which we found some raw sausage to be far from unpalatable.

May 8.

On Monday, May 8th, we made various calls—on Mr. Bennett, to arrange for our journeyings; on Prof. Collett, and at the Museum, which is very good.

In the town we saw the Continental White Wagtail on the roofs of the houses and in the streets, also a nest like that of a Magpie in a tree in one of the gardens. These

seemed to be common, as we saw several afterwards during a drive we took to Frognor Sæter. This drive was up a high wooded hill overlooking Christiania, winding all the distance amid pine forest, from the trees in which hung long bearded lichens, streaming from the direction of the last prevailing winds. There was deep snow all through the forest, and it was with great difficulty in one or two places that we could get the wheels of our little spring-cart through. Near the outskirts of the town we saw for the first time a pair, ♂ and ♀, of the Pied Flycatcher. They were very tame, sitting close to us on the railings of a private garden. In the forest we saw one pair of Hazel Grouse, which flew up close to the road as we were ascending; also Mavises, Chaffinches, a female Wheatear, and we heard a species of Tit, not, I think, the Marsh and Hooded Crows, in which I thought I noticed a faint rosy flush of colour, as remarked by Smith in the *Zoologist*. From the Sæter we had a magnificent view (udsigt) of the Christiania Fjord and town. We saw several Thrushes close to the Sæter.

May 9.

We spent Tuesday, the 9th of May, in packing our luggage, shopping, and a second visit to the Museum in company with Prof. Collett.

May 10.

On Wednesday, the 10th of May, we left Christiania at eight o'clock by rail for Eidsvold, with through tickets for ourselves and carioles to Gjøvik on the Miösen Lake. We passed through an uninteresting clay and sand country, crossing and recrossing a small river full of snow water. At eleven o'clock we got on board the steamer *Kong Oskar*, and arrived at Gjøvik at about four o'clock. On the lake we saw large flocks of Goldeneyes and some Red-throated Divers, and on the river below it Sand-



PROF. ROBERT COLLETT (1871).

pipers, five together. Hooded Crows were common, Magpies, flocks of Fieldfares, and three Red-throated Divers close to the village of Hammer. The scenery of the Miösen Vand does not come up to that of many of our Scottish lochs, and is somewhat tame and uninteresting. There was much snow lying on some of the wooded hills, scarcely any on others.

At Gjövik we made our *débüt* in our carioles, and drove one Norsk mile (which is equivalent to seven English ones) to Mustad, which we did in about an hour and twenty minutes, but could have gone faster had it not been for another slow horse and cariole in front, by which a young officer, Lieut. Brüner, of the 2nd Infantry Regiment, was posting on to Sköién. We found him extremely civil, and he spoke English. He is also a student in the University, and seems acquainted with the Latin names of various birds. He is going to shoot Black Game at Frydenland, and afterwards to join a party of recruits. Any child could have driven our little 'Hesté,' so easy is it! On our drive we saw but few birds. A Brambling was recognised by the militia officer.

At Mustad we took a walk with the stick guns before supper, but only shot a Yellowhammer. We saw a Kestrel, Chaffinches, Robin, and Sparrows. The Magpies always seem to prefer to build in the close vicinity of houses. We had a capital supper, including some most original cheese, just like fine brown soap in appearance ['Gedé-öst'], but, as Alston put it, 'very goode meate.'

Mustad is a good station. All about it the country was so deep with snow that it was impossible to go into the woods even to shoot specimens, let alone nesting. The fact is that we were at least a fortnight too soon, but we cannot now help that.

Herr Collett most kindly gave us a letter of introduction to Dr. Printz, who lives near Slidré, on our route,

and he also gave us various useful hints as to the mode of breeding of the *Picidæ* and other birds. He himself goes this season to Nordland to collect.

Our Norsk sentences we find useful, and we may find them more so when we get away from places where nearly every one speaks English.

May 11.

On Thursday, the 11th of May, not finding Mustad to our fancy as a locality, we left at 8 a.m., and drove the first stage to Lien. On the way we had the great good luck to see a Northern Jay, which we could have killed had we had the big gun out. He settled in a tree and allowed a close approach, then flew downwards and into the forest. We heard and saw great numbers of Bramblings, but they were not nesting. They were wild, and perched high up. One fine old cock with rich black head gave us, however, a close inspection before flying off, and we returned the compliment.

At Lien we stopped two or three hours, and went out with the stick-guns in an open part of the forest in which there was comparatively little snow, and in which Alder and Birch, principally the latter, were growing. Here I shot a Fieldfare, a Redwing, and a Whinchat, and Alston shot a fine Wryneck. The latter when wounded twisted its neck in a very characteristic way, and tried to bite. The Fieldfares and Redwings are not breeding, but the latter are in full song, which is quite clear and distinct from that of the Thrush. Bramblings were plentiful here, but most unapproachably wild. I missed one or two with the big gun (Alston's breechloader). This station has every appearance of being a good one for birds.

After bread and cheese and milk (no ale was to be had) at Mustad, we drove on to Sköiën, about nine English miles, and down hill almost all the way, Mustad being

1,760 feet above sea-level, and Sköiën only 470. We passed the end of the Rands Fjord, and the road was good all the way except for a little bit near Lien. The difference of climate of the two places is very marked, still there is a good deal of snow in patches about Sköiën, and the Rands Fjord is still frozen. The scenery, too, improved, becoming wilder and rockier. For the present we must fight shy of all places above 500 feet in elevation. Sköiën is prettily situated, with a tolerably large river running past it into the Rands Fjord, and with wooded rocks rising behind the house.

We saw two Magpies' nests from which the birds flew out, but we did not disturb them, as the people are very fond of them and like to have them building near the houses. I shot a ♂ White Wagtail close to the house, which was along with a female, which I also shot.

This day for the first time we tasted 'fläd bröd,' and most excellent it was, a thin, wafer-like barley cake, beautifully made, crisp and hard. Also 'Gedé-öst,' which is palatable, but has the appearance of brown windsor soap. It had a somewhat soapy taste too, we thought, but is fairly palatable. This was at Mustad. For dinner at Sköiën we had excellent blackgame, and ham and eggs.

Our quarters here, Sköiën, were most comfortable, 'the grub magnificent,' and the daughter of the house speaks capital English.

May 12.

After breakfast on Friday, May 12th, I went out with my big gun (in contradistinction to the walking-stick gun). I tried first the pine woods where I heard what I took to be the 'laugh'* of a Woodpecker of some species. Finding the woods of no use, I went down to the river-side, and saw and chased for more than hour two Sand-pipers, one of which I at last knocked over. These

* No doubt *Gecinus viridis*.

birds were haunting a sandy offshoot of the river amongst osier, alder, and birch, with in the centre of the island a clump of fir. The cry was, as far as I could remember, similar to that of a Green Sandpiper, killed by me at home last autumn, and in fact the bird was of that same species. The outer tail feather had a single faint black mark on the outer web. In the morning, immediately after breakfast, I shot a beautiful little Pied Flycatcher.

Alston, after his dose of skinning, also went out along the river, but in another direction. He obtained a Lesser Spotted Woodpecker, and another Pied Flycatcher.

While out I saw old nests of Thrush and Hooded Crow, and saw Great Tits and what I took to be a Willow Warbler. Altogether we had not a bad day's work.

May 13.

On Saturday, the 13th of May, we walked to the head of the Rands Fjord at Oddénaes, and returned along the river (Etnadals Elv) to Sköién. Alston shot a Green Sandpiper, and I a Greenshank. These last birds were going in parties of three to five, and evidently not paired, but the Green Sandpipers were mostly in pairs. We saw about eight Greenshanks and the same number of *Totanus ochropus*. We saw also several Black-throated Divers on the Fjord, a lot of Goldeneyes, Common Sandpipers, and Wheatears. We saw a very light-coloured Buzzard, and also a small Hawk, either Hobby or Merlin, which perched on the top of a bare post; and which I now (1900) believe to have been a Hobby.

After lunch I went up the river and took a Hooded Crow's nest with five eggs. The nest was in a spruce fir, and was lined with wool and cow's hair. I shot a fine ♂ Brambling.

Alston went separately with the stick-gun, and after a long hunt found Bramblings and Titmice up the hill,

and shot one of each. The Bramblings have a very peculiar, harsh call-note. The Tits were *Parus borealis*—our first experience of the species. Its note seemed to us both to be quicker and softer than that of *P. palustris*, a short 'pey-pey,' sometimes 'pey-pey-pey,' instead of the long-drawn and rather rough 'pe-ey pe-py' of our British bird.

We both saw droppings of some species of *Tetrao*, or *Lagopus*, from the size most probably *L. saliceti*. We saw several Pied Flycatchers.

May 14.

On Sunday, the 14th of May, we bought a small pair of shed Elk horns for 2m. 12sk. (about 2s. 2d. sterling). They are said to be numerous up this valley, as are also Bears.

May 15.

Monday, the 15th of May, we left our comfortable quarters at Sköiën, after packing up in one of the native manufactured boxes—made of plaited, thin, long splints of pinewood—fourteen birdskins, mostly obtained at Sköiën.

The first stage of our drive, to Tomlévolden, was of no interest. The second was up a very long hill—perhaps six English miles—to Gravidalen on the ridge between the Etnadal and the Beinadal. On the way up the view of the Etnadal reminded us of the Murzthal as seen from Eberstein ('E. R. A.'). All the road after attaining the plateau was very bad with snow, and just close to the road, and all through the great pine forests fully three feet of snow lay.

At Gravidalen we had 'middagsmal,' and most excellent it was, costing 30sk. each. The fare included Capercaillie, skov-ryper, beautifully cooked, and 'möltebaer' preserve with thick milk. Möltebaer is our 'cloudberry,' which grows here in great abundance. On the plateau—2,580

feet above sea-level—we saw a Redstart, and a large flock of Bramblings.

Descending from the plateau, we left the valley of the Etnadals Elv and entered that of the Beina Elv, which rises near Nystuen on the Fillé fjeld. Then down a long hill to Frydenland, with fine views of the Strandé Fjord, which is very like a Scotch loch. Changing horses at Frydenland, our road now led along the side of the river and of the Strandé Fjord. In the distance we caught sight of the pure white heights of the Fjeld which we intend to cross the day after tomorrow if possible. Part of this stage was broken up badly, as a new and better road is being formed. The present one is very hilly. It was good practice in driving straight, the little Norwegian 'hesté' going fast down the hills to keep the weight of the carioles from pressing too heavily on them. The latter part of the road ran close alongside the Fjord.

Before arriving at Fagernaes, Divers, Scaup, and Goldeneye were seen, and on a small island close to the station house, a pair of Pintail Ducks rose close to us and circled twice round our heads. Of course the guns were in the house.

On the plateau I have mentioned, the small lakes were quite hard-frozen, and marks of skier (snow skates) were observable on some of them.

Here at Fagernaes most of the Strandé Fjord was still covered with ice, not, however, of great thickness. Curious to say, a trout or two were nevertheless seen rising, and at 'aftensmal' we had very fine trout, which, however, had been caught by a net.

We had quite a little chapter of accidents on this journey, the principal one being that, close to Frydenland, I dropped my little stick-gun out of my cariole, and it was brought this evening by a lad who must have

followed us with it nearly the whole way. Alas! however, the handle was snapped off, and the screw had got a jamb. By dint of strong tying on the latter was repaired after a fashion, and with oil the screw was improved. It will yet serve its turn, we believe.

Our drive to-day was thirty-eight English miles.

May 16.

Tuesday, the 16th of May, was a very cold day, with snow showers. We had slept well at Fagernaes, and at 9 a.m. started again for another long journey. At Fagernaes we saw a Dipper and an Eagle, which we thought might be the Golden. The road continued along the Strandé Fjord, amid beautiful scenery, and past a fine waterfall, though of no great height, and so on to Rien. About three and a half English miles from Rien we stopped to call upon Herr Dr. Printz, at Slidré. He did not speak English, but his daughter did, and we succeeded in getting a good deal of information from him. He also promised us some eggs of his collecting when we returned from the west coast. He showed us eggs of *Gecinus canus* and *Coturnix communis*, the latter rare here.

He told us that a jägerman had gone out this morning to shoot a Bear which had been marked down in the hills. What a pity we were not a day sooner, we might have seen some fun.

Thence we went on to Stè through a good Woodpecker country, as we saw many holes.

We had meant to sleep at Stè, but the good woman was ill; so we dined on eggs, bread, omelette, and milk, changed horses, and went on by Piloé to Thuné.

From Stè the valley narrowed, and the great giant tops of the Fjeld reared their snow-covered heads before us. A bitter cold blast laden with snow swept down the glen in

our faces, and we had to grin and bear it the best way we could. The snow lies deep on the Fjeld, and after arriving at Skogstad, at its base, the rest of our journey over the heights must be done in sleighs—at least, so we are told.

Cold were we when we arrived at Ölöe i Vand, where once more we changed horses and drove off again for seven English miles more to Thuné. The road was now truly grand, being cut out of the face of the solid cliffs which rise perpendicularly from the waters of the Lillé Miösen. In one place the road was covered in, and on looking up to see the reason of this precaution, I caught a glimpse of a great mass of overhanging snow. The side of the road next the loch was guarded by a strong wooden railing fastened to the solid rock with iron clamps, and along the face of the rock the telegraph wire was run. Along this road we drove merrily, notwithstanding the icy blast which blew right in our faces and curled up the dark green snow water of the Lillé Miösen. (The hills reminded Alston of Glencoe.)

Thuné was reached about seven o'clock, after our long drive of about thirty-one English miles. Very obliging landlady, but a poor station. We then had truly Highland fare—eggs, fladbröd, cheese, coffee—and we had a Reindeer tongue boiled for our journey over the Fjeld to-morrow.

Here, at Thuné, everything is bleak and bare, and we have reached the region of 'Birkébelter,' far above the fir-trees. The only fuel for the stove now is fragments of stunted birch.

Just behind the station-house rises a high mountain clothed to its foot in deep snow, and along the base of which, we believe, we drive to-morrow over the Fjeld.

May 17.

We left Thuné on Wednesday, the 17th of May, about

9 a.m.; we had a bitterly cold drive along the side of the Lillé Miösen, amidst very fine scenery. On the way we saw numerous Redwings, Fieldfares, and a few Ring Ouzels, also one Peregrine Falcon, a fine adult ♂ Merlin, a Kestrel, a few Bramblings and Dippers. Leaving the lake we ascended to another small lake, which was entirely frozen over. We saw water only where the river ran in and out of it; and shortly afterwards we arrived at Skogstad, 1,830 feet in elevation, where, on looking round, we found ourselves quite surrounded with snow mountains, the frozen lake lying behind, and the vast Filléjfeld before us.

We found that Olé Nystuen (see Bennett) was going up with us, and we at once tackled him about collecting. We found him to be quite *a brick* (Alston).

We now prepared for our passage across the Fjeld. After getting warm we got into our carioles and proceeded, two other horses drawing two sleighs in carts behind.

After going about one English mile, we changed carriages; that is, our carioles were placed upon two sleighs—the wheels having been taken off—and we ourselves on two others. Alston's was a most luxurious affair, while mine was a very simple one, on which I sat on my portmanteau.

Being uphill almost all the way, we went nearly the whole distance at a walking pace, our horses occasionally plunging deep in the snow, and I once getting a half-upset. Far as we could see around, the snow lay 6 or 8 feet deep, and deeper where the wind had drifted it. We sleighed over at least 3 feet of hard snow, and the dog that accompanied us ran lightly over it, scarcely leaving the impress of his feet.

The last mile (English) to Nystuen we sleighed over the frozen lake at a rattling merry pace up to the very

door. There was a strong and cutting west wind blowing over the Fjeld, and drifting the fine dry snow into our faces and eyes, so that we could scarcely see our horses' heads before us. Still the novelty of the thing made it very enjoyable, especially the drive over the lake, and shivering, yet withal happy, we arrived at Nystuen. Our day's travel had been altogether nineteen English miles, six of them by sleigh. We had a good 'aftensmal' here—eggs, 'bröd og smør,' and our Reindeer tongue. It seems a capital station.

As I have said, Olé Nystuen came with us—one of the two brothers to whose acquaintance we had looked forward with great hopes as regards our collecting at this place. Nor do our hopes seem futile. Olé is an intelligent fellow, speaks English well, and takes up our ideas sharply. We made all arrangements with him, to pay him four marks per day, on our return from Gudvangen, to guide us and assist us in collecting. His brother Knut, who is now at Bergen, will be here when we come back, and render assistance also. We gave Olé a blow-pipe and a drill, and showed him the way to use them, and he understood everything at once.

'Eagles' (really Rough-legged Buzzards, *Archibuteo lagopus*) breed in the high rocks above Nystuen, and he will try for the eggs, and take everything else besides. His brother Knut also can skin.

We bought from Olé four pair of Reindeer horns—three of them with heads attached—for three dollars, one mark altogether. Three of these were males and one a female. He also showed us skins of two bears and of two foxes in winter coat, all of which were fine, but as they seemed expensive we did not take them at present. The Reindeer horns were (seemed, 1900) at all events cheap enough in all conscience, and we take them with us to-morrow, and will ship them to

Christiania from Løerdalsören, addressed to the Museum, as recommended by Prof. Collett.

This is a most comfortable station, far better than Thuné. At Thuné, however, we made the mistake of not sleeping at the inn, but putting up at the station-house. But we were cold and hungry and glad to stop, and the people, too, were kind and obliging, and did all that was in their power to make us comfortable.

We are here now (Nystuen) 3,100 feet above sea-level, and the mountains rise around to the height of 5,000.

May 18.

On Thursday, the 18th of May, about 9 a.m., we left Nystuen in sleighs to complete our passage of the Fillé-fjeld. There was bright sunshine and wild wind with snow drifting in our faces. The men put on their snow goggles, and we our veils, which proved a great comfort.

Being downhill, we went for the most part at a merry pace, but in one or two places fresh drift had filled up the road, and then we took to the open fjeld. Here in some places where the snow was soft our horses plunged in up to their bellies. They always put out their hind legs, so that if they broke through, the weight of their bodies came upon their hocks. They quickly recovered themselves in all instances.

No Reindeer were sighted, though Olé ('Nystuen')* told us that often some hundreds were to be seen at this particular part of the route.

About five English miles from Nystuen we entered the Bergen Stift, marked by a pile of stones and a wooden post. Here we drank 'skaal,' and proceeded.

No living thing was seen until we began to descend from the plateau. Then we saw a scattered flock of Snow Buntings, and two Titmice, which we could not

* To distinguish between 'Olé Nystuen' and 'Olé Lysné.'

identify as heavy snow was falling and our veils were close around our faces. They looked like Crested Tits, but the altitude was considerably above the fir woods. We heard a Peregrine Falcon.

Our sleighing came to an end at Maristuen, where we took again to our carioles and proceeded down the grand valley of the Lørdal all the way to Lørdalsören. The first, or upper, part of the valley we saw little of, owing to blinding hail showers in our faces and snowdrift whirling along the sides of the mountains.

Just above Husum, however, it cleared up, and the rest of the journey was very enjoyable.

We left for our return journey the inspection of the ancient wooden, tar-covered church of Borgund, which Alston described as like a model in ebony of a Chinese Pagoda.

We descended to Husum by a wonderful series of zigzags of solid masonry, called 'Bindehellen,' down which we had to walk our horses, keeping a tight rein, and so down the hillsides to Blaaflaten.

Alston described his impressions of the Lørdal as a most magnificent gorge, something like an exaggeration of Glencoe, but much deeper and narrower, and about thirty English miles in length. It winds and twists in a wonderful way, presenting new views at every turn, and the road sometimes runs close to the river, and is sometimes hundreds of feet above it.

The scenery of the valley is very grand in some places, strongly reminding me of the view at Fluélén at the head of Lake Lucerne: a narrow, winding valley, shut in on every side by grand snow-capped mountains, the snow whirled in wreaths along their sides by the wind.

In one place between Husum and Blaaflaten the road winds along the edge of a precipice of 200 or 300 feet,

and we could have 'chucked a biscuit' from our carioles right down into the Lœrdal River.

At another spot the road wound in and out along the face of a precipice, having been cut out of the solid rock, the river foaming along in a narrow gorge about 160 feet below us. Every turn of the road discovered a new scene, some other high snow mountains taking the place of the last.

We met with but little appearance of costume among the natives, except a worsted nightcap, either red or blue, and blue jackets with silver buttons. We expect to see more of this at Vossévången.

The lower part of the Lœrdal River, below Blaaflaten, runs through a wider part of the valley, and the road becomes level. The birch-trees coming into leaf were very pretty.

Here we saw a Trout or two rising, but the water was bright green and full of snow.

One cliff was pointed out by our Shütsgaaden between Blaaflaten and Lœrdalsören, where Eagles (Örné) breed. We saw numbers of Fieldfares, Ring Ouzels, etc., and one fine adult Merlin kept flying alongside our carioles for a considerable part of the road.

We drove into the village of Lœrdalsören up to the door of the inn, and after an unusual delay we had an excellent supper about nine o'clock of trout and 'beefsteaks.' The trout had the decided flavour of very fine river-trout, and little flavour of sea-trout, yet curdy like salmon.

At Hœg and at Blaaflaten we saw Clarke-Kennedy's name in the 'Dag-bok' under date of May 4th. He had come from Christiania *viá* Hallingdal.

May 19.

Friday, the 19th of May, was a tiresome day, as we had to wait for the steamer to start for Gudvangen.

This did not take place until the postman arrived from Christiania, which was not till nine o'clock at night.

Our quarters here were good, but the country is not good for birds, the hills rising almost perpendicularly on all sides, and there is very little wood of any kind. Altogether we liked Lœrdalsören less than any place we have yet visited in Norway. The charges are higher than most, besides which it is infested with a sort of English-tourist touting society of roughs, who are quite delighted to do you if they can, even in only the small sum of four skillings. These are mostly porters, who crowded round us on our arrival at the inn.

As there really were no birds, or places likely for birds, we waited as patiently as we could. We left Lœrdal at four o'clock, the night journey depriving us of the sight of the fine scenery of the fjord. Here we left the Reindeer heads in charge of the innkeeper, to be sent to Christiania.

This day we saw Common Gulls at the mouth of the river.

May 20.

We arrived at Gudvangen about one o'clock in the morning of Saturday, the 20th of May, and turned in for forty winks.

At 9 a.m. we started for Vossévangel, 28 English miles, carioling up a magnificent glen, the Nærödal (Narrow Glen), a most magnificent gorge, finer, if possible, than the Lœrdal, though on a much narrower scale. The mountains which closed it in rose in some places *almost* perpendicularly to the height of 3,000 feet. At one part of the valley two immense mountains rose opposite each other and towered far above the others. A beautiful river ran along the valley, which had its slopes well wooded to a considerable height above the stream with alder and birch, suggestive of Fieldfares breeding later in the season. We saw several old nests along the

road, in alder underwood. After about half a dozen English miles of this fine scenery we ascended a hill at the top by a series of seventeen steep zigzags similar to the Vindhellen at Husum in the Lørdal valley, and made by the same engineer (Captain Finne). This is called Stalheim Cleft, and on each side of it is a fine waterfall which were named the Saloklevfos and the Stalheimsfos. While our horses drew the carioles slowly up the tortuous ascent, we who reached the top looked back, and Alston took a rapid sketch of the glorious valley we had left, we being seated some couple of hundred feet above the tops of the waterfalls. So sharp were the zigzags that from where we were sitting I could throw a stone down over five of them, and the arms of each zigzag were not more than fifty yards in length.

We changed horses near the top, on the other side, and drove on, down into a wide fir-wooded valley, and far in the distance before us were the Snowy Fjelds. We saw here a good deal of heather, rare in this country.

At Tvindé we had a cup of milk and some bad 'fladbrod og smør' at a most wretched hovel of a station-house, and the woman looked sulky at getting 12 sk. for it.

Thence we went on through a somewhat similar country to Tvindé, near which is a rather good waterfall, the Tvindéfós. Here for the first time we had a girl as Shützgaaden, and a most uncomfortable seat she must have had, to judge from appearances. During this stage we passed numerous lakes, free of ice, on which we saw a few Ducks and Divers, and we arrived at Vossévangen after a 28-mile drive. The hotel there looked comfortable, and the landlord (Fleischer) was obliging and civil.

After 'Aftensmal' I took my gun and went over to a thick fir-wood—pine-trees—but got nothing. I saw lots

of Fieldfares and found the nest of a Long-tailed Tit, *Acredula caudata*, L.—a great beauty. The bird flew off and sat close to me, and I could distinctly see the white head which is peculiar to the Continental form. I took the nest, which, however, contained no eggs. I saw some eight or nine Goldeneyes in a flock, but could not get near them. Also during our drive two or three Missel Thrushes—the first we have seen in Norway—also a White Wagtail building its nest. Also in the Gudvangen Valley we heard a Peregrine Falcon, saw Kestrels, a couple of Great Tits, Wheatears, etc.

The Shützgaaden along one of the stages and myself interchanged lessons in Norsk and English, naming the different trees, etc., which we met with on the way, both of us, in fact, endeavouring to improve the opportunity. On the other hand, another Shützgaaden was singularly stupid. I asked him a question which had always been answered before, but he could not understand my bad Norsk. I asked, 'Er der öret; Elven, storé öret, eller smaa öret?' and again, 'Eller fiske *lax* i Elven': but he simply stared and spoke not. I put *him* down as an idiot, and thereafter preserved a sullen silence, as I gazed at the tempting-looking pools of the fine river. (I wonder what he thought of me?)

I afterwards learned from the landlord of the inn at Vossévängen—Herr Fleischer—who speaks English well, that the Trout attain to the size of 6 lbs. No Salmon, however, go up further than the lake which lies in front of the inn.

Herr Fleischer told me that the Ducks we see on the lake here breed in the neighbourhood, in holes in trees. We had formerly understood that Goldeneyes bred only much further north.

Alston, in his diary, noted that, on the whole, we were disappointed in the western slopes from a 'birdy' point

of view, and intend to retrace our steps to Valdars, and wait there instead of at Vossévangen till it is time for the Fjelds, probably at Reien and Thuné. We shall have to wait till Thursday, however, for the steamer from Gudvangen to Lørdalsören.

Since starting from Gjøvik on the 10th, we have driven about 176 English miles in carioles and sledges, besides thirty miles in steamer (Lørdalsören to Gudvangen), of which we have driven 153 in five days, or an average of about $30\frac{1}{2}$ in a day.

May 21.

On Sunday, the 21st of May, we rested at Vossévangen, Alston having a bad cold.

We saw the costume of the peasants as they passed to and from church. The women had caps of large size with two peaks pointing backward, pure white, and two broad bands of white down in front.

The men had little observable costume, save silver buttons on their coats.

Many of the women did not wear any 'costume,' but simply the everyday dress, viz., a black 'mutch,' long-waisted gown of blue stuff, or the younger ones a handkerchief tied round the head.

Some of the high large caps fell behind in a single broad wedge, and were richly embroidered in colours.

May 22.

Monday, the 22nd of May, there had been a little rain through the night, and there was heavy rain mist low down over the hills. In fact, we had a change of weather at last, which it was hoped would aid the disappearance of the snow on the Fjelds. Alston's cold was much better, but he did not go out much, however. He shot a Redshank on the lake, but spoilt it badly.

I took a 'hest' (horse) about three English miles from

the hotel to the top of the second lake, and walked back. I shot a ♀ Green Woodpecker with the hatching spot on the breast. I searched for the nest, but in vain, looking at all the pollard-trees in the vicinity. I saw also a Tree Pipit, two pair of Wild Duck, Mergansers, Pied Flycatchers, Redstart, Black-throated Divers, and Common Sandpipers; and shot a Redshank.

I heard Tits, and besides seeing and hearing numbers of Bramblings, found the first nest, but without eggs. The ♀ came flying close around me, and sat within four yards of me, uttering a note lower and less harsh than that of the ♂. I left the nest, and hope to get eggs ere long.

In the same wood I found an immense number of Fieldfares, with many old nests. They kept up an incessant chattering, and several times I distinctly saw one, as it flew overhead, in the act of uttering a low song, between a warble and a chatter. A Kestrel flew round over the wood, and at once all was still; and it was with difficulty I could see a single bird.

I saw also a little bird against the light on the side of a tree, but as it flew off at once I could not say whether it was Nuthatch or Creeper.

When a Hooded Crow flew over the Fieldfares' wood, several of the latter gave chase and darted down at the Hoodie, like little hawks.

To-day we saw the first Sand Martin.

After 'midday's meal' we both went to the pine-wood, which is just 'hotching' (*Anglice*, 'alive with'*) Fieldfares and Bramblings, but we could find no *new* nests, although there were heaps of old ones. Fieldfares have a curious way of singing on the wing, with their peculiar chatter coming in between the notes.

Alston's diary of 25th May stated that he forgot to say that:

* To use an appropriate Scots expression from Alston's diary.

‘On Monday evening we found an apparently new Fieldfare’s nest, an empty one, in the big wood, in which were a few pellets of earth rather larger than big peas. Possibly the birds bring the plastering material in that form.’

In the evening I took the boat and rowed across the lake to a wood on the other side. It was too late, however, to see many birds, but I put four young Squirrels out of a small drey on a low pollard within about 10 feet from the ground. I shot two of them, which, strange to say, were nearly full-grown, so that the weather must have been pretty severe when they first made their appearance in this world.

When crossing the lake, I saw a Lesser Black-backed Gull, which hovered close over the boat.

At the other side I got a glimpse of a very romantic little burn running between perpendicular rocks about 60 feet high, with a considerable body of water.

Since yesterday there is more (certainly no less) than a foot of difference in the depth of the lake. The boat was high and dry yesterday, and to-day it was lying though not floating in *at least* a foot of water. At this rate summer will soon come.

May 23.

Tuesday, the 23rd of May, was hot. The rapidity of change in the weather is very remarkable, and the streams from the snow-covered hills are raging torrents by the middle of the day, and quite small in the morning and evening.

We heard the Cuckoo for the first time.

After breakfast we went out, up the other side of the river, but did not see very many birds. Alston shot a ♂ Brambling, and each of us a Titmouse (query Marsh Tit?). We saw and heard two Hawks, which we both

thought different from Kestrels; but we could not get them.

We got a good male Red-breasted Merganser, which Herr Fleischer bought from a boy.

We skinned our birds, but most of our afternoon was lost in waiting to see a peasant wedding procession leave the village. We had a weary wait while the good folks were liquoring up, but the sight was well worth waiting for.

The men had little costume—dark blue clothes, some with silver coin buttons—but the ladies were gorgeous.

Most of the women rode on curious old-fashioned side-saddles, but the bride (in her gorgeous tinsel crown, silver overlaid with gilt, and with many loose ornaments hanging down from the edges) sat astride the horse, and seemed to have quite a comfortable seat, much more so, indeed, than many of the cavaliers who preceded the marriage party as convoy. The latter sawed most unmercifully at their horses' heads, with hands wide apart and almost at a level with their heads, their legs stretched at full length with or without stirrups, and at the same elevation as the horses' shoulders, while their bodies lay backwards at an angle considerably less than 45°. The faces of some expressed great bodily anguish!

These gentlemen rode as fast as they could—*faster than their 'hesté'*—about a couple of hundred yards from the town, and when the marriage party passed and had almost gone out of sight, gave three cheers. They then rode backwards and forwards about four or five times before the spectators, who were lining the road on either side.

One old fellow—'half-seas over'—stopped his horse beside where Alston and I were perched on the top of two posts, and said something relative to 'to Katugle,' evidently a hit at our costume and position, the ears of

our caps no doubt bearing some resemblance to those of that bird.

The costumes of the female portion of the wedding party were very picturesque, some wearing silver girdles with many hanging ornaments and large silver brooches, a dress of red and dark, and some with white jackets or shawls. The head-dresses also were similar in some cases to those we saw on Sunday. Others had simply a white hood over the head. All the female portion, except the bride, rode in large chairs sideways on the horses, with a single large stirrup about a foot in length, and they seemed much less at ease than did the bride.

May 24.

Wednesday, the 24th of May, was a very hot broiling day, and coats and waistcoats were pitched aside. Having had tubs and bread and milk put in our rooms overnight, we got up about half-past four or five o'clock and repaired to the upper end of the second lake.

On the way we shot two Wrynecks perched on trees and uttering their Kestrel-like cry, and we heard others. We saw also two Creepers. The Wrynecks were perched, and uttering a low cry very like that of some small raptorial bird—Kestrel, for example. We found two breeding-holes of Pied Flycatchers, but on examination found we could not cut into them with our 'tolle-knives,' but must wait till saw, chisel, and hammer are procured. The birds flew close round us. Later in the day I bought a small saw and a huge chisel for the benefit (?) of these and other birds which build in holes.

In the pine-wood at the head of the second lake we found a nest and eggs of the Northern Marsh Tit. It contained eight eggs, and we got the female bird. The nest was of moss, lined with strips of the inner bark of the alder (*see Bree*) and with a few of the bird's

feathers. It was in a freshly-made hole (? made by the Tit or by Nuthatch or Wryneck) [in a rotten birch stump (Alston)] in the hollow stump of a decayed and broken willow-tree, and was fully a foot below the entrance-hole. The eggs were about three days incubated. One—the last laid—quite fresh. Fresh chips of decayed wood lay under the hole, at the foot of the tree. The hole may have been made by a Nuthatch (or Woodpecker?) and afterwards abandoned, but the fresh appearance raised the query in our minds as to whether the Tit itself in some instances makes the hole.* The note of the bird shot from this nest was, as far as we could judge, precisely similar to that of our *Parus palustris*.

In taking out the nest and eggs our 'tollé-knives' proved very useful, though had the wood not been *quite* decayed, they would not have been found so effectual.

I shot a Long-tailed Tit with a fine white head, a very different-looking bird from our darker British species, or race.

We returned home rejoicing, but very hot, and after breakfast we occupied the heat of the day in skinning the various birds we had secured, and altogether we did not do a bad day's work.

May 25.

Thursday, the 25th of May, was a hot day, but there was more air than yesterday. We rose at 5 a.m., and, after milk and bread and cheese, we took a boat and rowed down Vangé Vandet to a birch-wooded glen, about two and a half miles from the hotel.

Not long after landing we fell in with a small colony of Fieldfares, and with some help from a couple of small boys, we found ten nests, besides one with hard-set eggs. I took the first nest, which contained four eggs, then Alston took one with five, and the others, which respectively

* We afterwards proved it did.

contained five, four, three, five, two, five, five, and five eggs each, were found mostly by ourselves, but a few by the little boys who helped us. The nests were composed almost entirely of a fine, long, dry grass, with layer of mud or clay between the outer and inner layers of grass. The first nest found had a few birch twigs in the foundation, the others have a few sprays of moss. They were pretty well scattered in an open birch-wood situated in pollard and other birch-trees, most in the forks, a few on tops of stumps, none at more than 20 feet from the ground, most of them about 10 or 12 feet, and an unfinished one taken by Alston was about 2 feet only from the ground. I shot the hen bird off the first nest, the eggs in which were finely covered, and like some eggs of the Ring Ouzel. The birds were not at all bold.

We sawed into the nest of the Pied Flycatcher, but found no eggs. Our tools worked well. Alston shot an immature male bird of this species and another Northern Marsh Tit.

We got back about 1 p.m., and then had breakfast, for which we were in uncommonly good form. Alston had two cups of coffee, half a bottle of beer, *five* eggs, ham, cheese, bread, etc., etc., and I was not far behind him, although at one time he was two eggs ahead of me. Bad look-out for Herr Fleischer's larder and profits. The rest of the day was spent in skinning birds, blowing, marking, and packing eggs, nests, etc. We had coffee and trout at 6 p.m. instead of dinner.

This day we saw the first Blackbird, a female. We also saw a pair or two of Bramblings, but do not think they have nests yet.

To-day we saw another peasant wedding party pass the hotel, much the same as on Tuesday, but the costumes slightly different. This party came from the westward. The bride came in one head-dress, but went away with

the crown, similar to that of Tuesday's bride. The attendant females wore red tartan shawls or white ones, and had a red scarf thrown over and covering their white head-dresses.

This day I was complimented on my Norsk by the landlady's sister, who said I had 'meget Norsk,' but I found out afterwards that the question I had asked had been somewhat wide of the meaning I intended, and was answered accordingly, scarcely to my satisfaction.

May 26.

Friday, the 26th of May, was a very hot day. We rose at five o'clock and were out about six. We went to the wood at the top of the second lake, where we got the nest of the Northern Marsh Tit on Wednesday.

On the way we took a nest of six nearly fresh eggs of the Wheatear from under stones supporting the sides of the road; it was of dry grass lined with cow's hair mixed with feathers, etc.

In the wood we searched every stump and pollard-tree for Tits' nests, watched the birds, etc., but all in vain; our careful looking only produced one last year's nest of doubtful species with a rotten egg in it, and one or two empty ones.

Coming home rather disconsolately along the middle lake, Alston noticed a morsel of down at the mouth of a large hole in an old pollard willow, and, putting in his hand, *something bit*. Drawing back his hand, out dashed a female Goldeneye, displaying to our delighted eyes seven bright, beautiful green eggs, which proved to have been sat on for about a week. The nest, which was composed of the bird's own down, mixed—probably accidentally—with chips of rotten wood, was about fifty yards from the lakeside, and near which was a small clump of alder-trees, with grass land all around.

The female did not return while we were near the place. We had no large gun with us, and could hardly have used it if we had, as we were not expecting anything of the kind. Alston took out the first egg, and I also had a *finger* in the nest. We took also the down, which was, as nearly as possible, pure white.

So Herr Fleischer was correct when he told us of the breeding of a black and white duck in holes in trees, but we were not sure what sort, and certainly did not think of their laying so early.

We came back to our inn rejoicing, and after breakfast at eleven o'clock we went to the 'big wood' near the village, armed with climbing-irons, collecting-boxes, etc. We found there were plenty of Fieldfares, and that they *have* begun to breed, but our hopes of a big haul were doomed to disappointment, as very few of the nests are to be had without more climbing than they were worth, and many were quite inaccessible from being over-near the ends of long branches. Almost all were from 30 to 50 feet from the ground. I climbed up to several, but some were empty, others old, one of five very hard set, and one, which was comparatively near the ground, with four good and very handsome eggs. There must be an immense number of nests in this colony, judging from the number of birds seen. All, however, are not, we fancy, yet built, and some I climbed to contained no eggs yet. These observations argue considerable irregularity in their time of laying, both as regards different colonies and as regards different individuals in some colonies.

We visited the Bramblings' nest which we found last Monday, but it was still empty, and we feared forsaken. Alston found another empty one, and marked the place, and just as we were leaving the wood I noticed a third nest close to where we were standing. We watched the

hen bird on to the nest, which contained five eggs, which proved to be very hard set, one breaking in being blown. This nest, the first we had seen with eggs, was situated about 6 feet from the ground in a young *Pinus sylvestris*. In appearance it was very similar to a Chaffinch's, built with lichen, moss, bits of paper, etc., and lined with hair, feathers, etc., and the eggs were darker green than most Chaffinches'. After watching the hen to her nest, I went up. She almost allowed me to touch her as she sat. I fired at her, as we want ♀ specimens, but missed her.

The lake in front of the inn has now fully 4 feet more water in it, and the hills have now quite a different appearance from what they had when we came.

May 27.

Saturday, the 27th of May, was likewise a very hot day. We started about 7 a.m. and drove in our carioles to Tvindé—one Norsk mile distant. The Foss was very fine, as a large body of snow water was coming down. At the bridge we sent the carioles back and separated, Alston to walk back along the west, and I along the east side of the lakes.

I carried an indiarubber cloth bag holding the chisel, paper for birds, flask, etc., my telescope, collecting-box with belt round waist, gun slung on back, and stick-gun in hand—a somewhat heavy equipment for hard working and such hot weather. Alston was somewhat similarly equipped.

Alston, on reaching the head of the highest lake, saw a pair of Mergansers, and a pair of Goldeneyes, which latter seemed to have a nest on an island at the mouth of the river. While he was watching them a stranger drake made his appearance, and a grand fight ensued, which ended in the intruder being driven off after a great deal of splashing and excitement. He noted that the male, in

feeding, dived almost incessantly, and remained beneath water from 10 to 20 seconds.

Thence he worked down the chain of lakes, seeing another pair of Mergansers, a pair of Black-throated Divers, and another of Wild Duck.

When he got to the third lake he saw a Wryneck in a tree, and in looking for its nest stumbled on a nest of the Northern Marsh Tit with seven or eight eggs, which, however, he could not get at without a chisel. He shot the hen (which, though subsequently mislaid, was certainly the same as our other specimens) and filled up the hole with cotton and moss.

Then he went down to the lake, where he saw a fine ♂ Goosander alone, which he watched a long time. Most likely the ♀ was sitting on her nest.

For my part, about an English mile from Tvindé I came to a small birch wood at the riverside, where I took five nests of Fieldfares, found three or four nests of Bramblings, and one with five eggs of Redwing—our first.

The Bramblings' nests I got up to had no eggs, but two I could not climb to without the irons, as the birch bark was as slippery as any maypole. I lost my blowing instruments, and only found them again after an hour and a half's search.

The Redwing's nest was placed about a couple of feet from the ground. It was smaller than those of the Fieldfares, and in this instance with no grass *outside* the mud, except a few blades partly interwoven through it; and it was lined with a wiry grass different from that used by the Fieldfares. It was situated—as stated above—at 2 feet from the ground, on the strong branches of a juniper bush at the foot of a birch-tree. The eggs—four—were hard set, except one which was addled.

The wood in which this nest was found contained also

a small colony of Fieldfares, and also some numbers of Bramblings. It is a low young birch-wood with a few fir-trees of older growth, and a quantity of juniper growing in some parts. Several other pairs of Redwings were noticed, which probably had nests also. I watched the bird to this nest, which was not accomplished for more than an hour. Previous to that the bird had gone off the nest. I wounded her so severely that she became quite stupefied, and flew on to a branch close to my head, where she remained shaking sideways for some time. Recovering herself, she flew away and I lost her. Its habits near the nest were much more wary than those of the Fieldfare, as it never uttered a note either of alarm or otherwise, nor did I hear its mate cry at all during the whole of the time I lay concealed near the nest.

I saw a Green Woodpecker fly out of a fresh hole in a poplar-tree, which I chiselled into, but found nothing laid yet.

I also saw a Wood Pigeon, the first we had seen on the west side of the Fjeld.

I also saw Grey Hen and Woodcock near the lake, and Swifts about the church.

May 28.

Sunday, the 28th of May, was not so hot. We lay in bed till about 10 a.m., and otherwise took it easy. Madame Fleischer showed us a bride's crown, etc., which the servant girl here keeps and lets out on hire.

In conversation with Herr Fleischer we were told that there are no Rats at Vossévangen, nor Hedgehogs, and that Foxes come down from the hills in winter. There are Reindeer, of course, on the Fjelds. Capercaillie are much rarer than when he was a young man.

May 29.

On Monday, the 29th of May—a warm day, with a shower—we drove again nearly to Tvindé. At the top

of the lake we got the loan of a boat, and visited the islands at the mouth of the river, where we expected to find a Goldeneye's nest. In this, however, we were disappointed, though we saw two pairs. They evidently have no nests yet, and the eggs we took on the 26th must have been exceptionally early.

We then went again to the wood close to Tvindé, where I had taken the Redwing's nest on Saturday, and here we remained till evening. We took seven nests of Fieldfares, four nests and eggs of Bramblings, and one nest of Redwings, watching the last two species in every instance to their nests, except in such cases as where we revisited formerly-found nests. In two nests of Fieldfares we found no less than six eggs, which is surely unusual.* In one of these all the six were fertile, and in the other one egg was addled. In one Brambling's nest were seven eggs. Another Redwing's nest, building, was found.

The four nests of the Brambling we took contained seven, five, four, and four eggs respectively; and the nests were larger in size apparently than Chaffinches', certainly larger than a Chaffinch's nest taken the same day from which the bird was seen to fly. Some of these Bramblings' nests were placed at least a dozen feet from the ground in birch-trees, one in a tall fir against the trunk about 10 feet from the ground, and the fourth in a small, dead fir, and nearly concealed by the pendent sprays of long, dead lichen. Amongst the materials of the nests were many small pieces of the thin, white bark of the birch, which was entirely absent in the nests of the Chaffinch. The moss used by the Brambling also seems generally to be of a different species from that used by the Chaffinch. The Bramblings' nests are fully as neat and compact as those of the Chaffinch. The nests in the first

* We got eight eggs in a nest afterwards.

were infested with ants, by which we got bitten. The birds of two nests were shot—two on Saturday and one to-day.

The eggs—as before noted—were of a darker green shade of ground colour than those of the Chaffinch, which are more creamy tinted. All blew fresh except the nest of seven, one of which was an addled egg with imperfect shell. This egg I broke in blowing. They had been incubated about a week.

The nests of the Fieldfare we took to-day were situated in both fir, birch, and other trees at about 5 to 20 feet from the ground. In the colony there were about, say, twenty pairs of Fieldfares, and the nests were pretty wide apart, occupying a small wood of about $2\frac{1}{2}$ acres in area, and in which Redwings, Bramblings, and Chaffinches were also breeding. The Fieldfares' eggs were mostly fresh, or nearly so, though in one or two nests were about a week incubated. Other nests were found with nearly-hatched young, and others with only one or two eggs. In the first and third nests taken, by Alston and myself respectively, no less than six eggs were found, one of those in the latter being slightly rotten, the others quite fresh. The eggs show considerable variety.

From this wood we walked to T'vindé, where we had 'brod og smær og melk,' and hired a 'stol-kjære' (cart with chair on wooden springs) for our journey home.

We got a mount on Norsk ponies from two sons of the farmer from whom we had got the boat, and had a ride for an English mile or so. Alston's mount had a very peculiar amble, but they got along at a very good pace, especially downhill. They seemed, as Alston remarked, wonderfully short before the saddle when one is on them, and have no more mouth than a pig.

May 30.

Tuesday, the 30th of May, was a warm, showery day. Before breakfast Alston and I went to take the eggs from the Northern Tit's nest which he found on Saturday, and at which he had shot one of the birds (since either mislaid or stolen by the hotel cat). After about an hour's work with chisel and hammer, I succeeded in enlarging the hole sufficiently for Alston to take out both the nest and the nine eggs it contained. The nest, which was situated in a hole in an old birch in the open ground with no fir-trees very near the place, was composed of moss lined warmly with sheep's wool and goat's hair, but there was no appearance in it of alder-bark or any other kind of bark. The nine eggs were very hard set and one of them addled. Alston returned home with the eggs, and on his way found another nest in a birch in the middle of the fir-wood, which had young ones. The old birds were very bold, feeding them within 6 feet of where we were sitting. He did not disturb this nest.

I then proceeded to the Pied Flycatchers' nests found by us on the 24th. One of them was built on the top of an old nest, in which was a rotten egg which looked like that of a Nuthatch. In this nest there was no egg laid yet. The other nest contained a single egg—fresh—and was composed of dry grass, lined *neatly* with a minute kind of root which grows inside decayed birch and other trees. It was situated in a hole in a birch-tree, and I had to chisel for nearly an hour before I got to it. The ♂ bird was shot. The species appears to be plentiful here. Two other nests did not yet contain eggs.

There has not been so much snow melting the last two days, as the weather has been cooler, with occasional showers of rain.

Alston was not in good form, and was rather bilious, the long fasts and big feeds at night not agreeing with him.

May 31.

On Wednesday, the 31st of May, Alston was still seedy and out of sorts and stayed in the house. So I started alone to search the big wood for Bramblings' nests. I found none, but came across a second Goldeneye's nest in a tall, rotten fir-stump about fifty yards from the river. Seeing some *down* on the side of the stump, I began to climb up. The hole was about 12 feet from the ground. Just as I looked into it and put in my arm to take out the eggs, *crash* went the stump, breaking sharp off about a couple of feet from the ground. I landed on my feet and was not hurt, though in recovering myself slightly strained a muscle in my side, which was a little painful for a time. The eggs—five or six in number—were, of course, all smashed, save one, which had become rolled up in a portion of the down, and was fresh.

I found also a couple more nests with young of the Northern Marsh Tit, one in a rotten post of a fence in the wood, the other in a tree. I saw the side of the nest in the post, and it had pieces of *alder-bark* amongst other materials. We are too late now, I fear, for any more eggs of this species, at least in this locality.

Returning to the wood I found another Goldeneye's nest, but containing only one egg, which was buried at least a foot deep in a mass of lichen, moss, etc., in the stump of a pollard-birch.

I found also a Long-tailed Tit's nest, the entrance of which I could *not* find, so made one for myself. It had no eggs, but was warmly lined with feathers.

Alston saw a bridal procession in boats pass down the lake—not so picturesque a sight as that on horseback.

June 1.

On Thursday, the 1st of June, I went in the morning about three miles up the other river along the Hardanger

road, but got nothing and saw nothing in the bird way. The river, however, was fine, rushing through a narrow gorge with precipitous walls and cliff about a hundred feet in height. A collie dog accompanied me from Vossévangen and back, seeming to enjoy the outing. Alston, though better than he was, did not go out. The rest of the day was spent in packing and making final arrangements for leaving Vossévangen.

June 2.

Friday, the 2nd of June, a fine day, we started about nine or half-past, having first got a stirrup-cup from Herr Fleischer in home-brewed ale out of his old family peg-tankard, dated 1737, a big silver flagon which holds about four quarts. The home-brew was *vera gude* (meget godt), and we drank to 'gamle Norge' and to Herr Fleischer and his family. It was not without regret that we started on carioles at nine o'clock, and for the last time ascended the long hill to the East, on our route back to the Filléfeld.

At the head of the Nærödal we saw to advantage the fine Stalheimfoss and its companion fall, the Saloklevfoss, and in the far distance the 'smoke' of the thread-like Keelfoss, showing a lovely rainbow in the evening sun.

At Tvindé we were kept an hour and a quarter waiting for hesté, but we managed to amuse ourselves with luncheon, having brought with us beer and the knuckle of the ham. Near this place we saw a ♀ Blackbird and several Pied Flycatchers.

A large box 2 feet by $1\frac{1}{2}$ by 1 foot, full of nests, skins, etc., of Fieldfares and Bramblings, went in my cariole between my legs; and Alston took charge of a 'Tiné' half filled with Goldeneye's and Fieldfares' eggs. And all this was in addition to our former luggage. Truly the capacity of carioles for carrying luggage is wonderful.

We arrived at Gudvangen about five o'clock, too late in the afternoon to do anything to the Fieldfares, so we rested till the morrow.

June 3.

After breakfast on Saturday, the 3rd of June, we went to look for Fieldfares in the Nærödal. We first found a very neat nest and eggs very like those of a Green Linnet. We watched the bird to the nest, and found it was only a Chaffinch's. Both nest and eggs were remarkable. The former is built entirely of green moss without any lichen, and it assimilated in colour to the green leaves of the alder-tree it was built in. The eggs had a fine green tinge, and the markings were large blotches, gradually shading from darker to lilac. The green tinge is like that found in all eggs of the *Brambling* which we have yet found.

We searched the alder-wood in vain for Fieldfares, but only saw one or two pairs of birds, and as many nests built, but without eggs.

In a birch-wood, however, to which Alston did not go, being hardly game for the scramble yet, I found a colony of Fieldfares, but most of the nests contained nothing. I climbed to about twenty nests altogether, and only found five or six with eggs. Two others, again, had young, and many had *broken* eggs. I suspected the little boys of taking them, as such as were not destroyed were always in trees which little boys could not climb; and indeed, in one instance, I saw the marks of their feet on the branches. *Why* they do so I cannot undertake to say.

In two of the Fieldfares' nests I again got six eggs in each.

We saw Pied Flycatchers and a couple of Northern Titmice, but no nests.

I tried for Sea Trout in the Fjord, but it was of no avail.

In Nærödalen, about an English mile above Gudvangen, we were shown a huge block of rock (? gneiss) which had fallen from a cliff 3,000 feet high on the 6th of May, 1860, and leaped right across the river, a distance of at least 40 or 50 yards, and implanted itself on the opposite bank. We roughly estimated its size at about 15 feet each way, or about 3370 cubic feet, its shape being nearly cubic. The whole track left by its *débris* on its passage down the mountain-side could clearly be traced. Originally, no doubt, the mass must have been immensely larger.

June 4.

On Sunday morning, the 4th of June, we were awakened at 1.30 a.m. to go by the steamer *Fjalir* from Bergen, but it did not put in appearance till near four o'clock. We had a grand sail, first up the Aurland Fjord and back to the Sogn Fjord proper, calling at various 'water-stations.'

One of these in particular attracted our attention—its name was Aurlé—from its situation in a small semi-circular bay, surrounded on all sides by pine forest with birch intermingled. It had a most 'birdy' aspect, but as we had taken our tickets on to Lørdalsören, we could not stop to investigate it at closer quarters. We saw Black Guillemots in the Næröfjord and Aurland Fjord, and also a very large Tern (sp. ?).

We reached Lørdalsören about ten (having had a capital breakfast on board), and having seen about despatch of our box, aquavite, etc., and seen the first British tourist who had crossed the Filléfjeld by cariole the day before, we took 'to hesté' to Blaaflaten, where we put up for the night. We arrived at Blaaflaten about two o'clock, and found the population in holiday dress. After lunch, about half a dozen lads seeing that we wanted nests began bringing in Fieldfares, etc. In one little

wood we took, or had taken for us, in a short time, 54 eggs of Fieldfares. Eleven nests we took had four, five, three, five, four, five, five, five, three, five, and six eggs each.

The boys here were very intelligent (and understood our Norsk well!), and we were in luck to get their aid the only day in the week on which they do not work. They brought us a couple of nests (our first) of White Wagtails, taken from stone dykes, one of which with six eggs we saved. The nests were of cow's hair, and in all respects similar to that of our own variety. In one of them the eggs had been incubated about a week; in the other they were hard set, and we did not blow them.

They showed us a colony of Terns (Common or Arctic?) on an island in the river, but only one pair of eggs were found. A pair of Common Gulls are also going to breed there.

They told us that there are Eagles in the mountains above, and many Bears. By 'Eagles,' *i.e.*, Örné, Rough-legged Buzzards are usually meant.

The inn at Blaaflaten is small and not very refined, but pretty clean, and the people very civil.

The boys in the evening played on an accordion and danced on the grass—the Halling-dance—in which, after spinning round not ungracefully, they spring from the ground, describe a circle higher than their head with one foot, and land again exactly on the spot from whence they sprang.

We went early to roost, not having been to bed last night.

June 5.

Monday, the 5th of June—a very warm day—we went down to the river, and I shot one of the Terns, which turned out to be the Common Tern, and as we saw all the rest of the colony well, we came to the conclusion that it was a colony of that species. There were at the

time only four pairs, but one of the boys said 'mangé hundrédié,' so possibly all have not arrived at their breeding-quarters.

We found we could not get across the river in search of more Fieldfares, so we started about ten o'clock for Maristuen.

On the way we saw a couple of Swallow-tail Butterflies, one of which I succeeded in catching. The Skydsgut called it 'Marien-fugl' (Lady-bird).

We stopped at Sœltnaasen for Alston to take a sketch of the fine part of the valley, and again about an hour and a half at Borgund, where Alston sketched the old church. We also went into it; it is a 'most rummy and original concern,' as Alston described it in his diary.

Between Husum and Hœg we saw a lot of Reindeer horns on a cottage wall, but the sum asked was far too much, fully up to Christiania figures. They first wanted two dollars, then came down to one dollar each pair, but we would not give them more than three marks, and drove on.

On the last stage, coming up the hill to Maristuen, we saw our first Bluethroat, which I shot with the stick-gun, its note having first attracted our attention.

On this last stage also we met Knut Nystuen going to Lærdal with a cart, and we are to see him at Maristuen on Thursday.

The snow has gone in a wonderful way. On May 18th, nearly three weeks ago, we, on two occasions, passed through deep drifts of snow which overtopped our heads by fully $1\frac{1}{2}$ feet. Now there is scarcely any left, and the hills have a totally different appearance. But snow still lies in considerable patches, and at Maristuen the birch-trees are only just budding, and everything is considerably later.

On our arrival at Maristuen about 6 p.m., we had a

capital dinner, and nice bedrooms afterwards, and we went early to bed.

Among the birds we saw to-day were Fieldfares in great abundance, a few breeding; White Wagtail, a pair near the house; and Wheatears in great numbers.

June 6.

On Tuesday, the 6th of June—a warm but not hot day—we were out about 9 a.m., and walked about two English miles along the road up the valley, and returned along the river to the station. We saw a Dipper, Ring-ouzels, Fieldfares, Wheatears, two or three Redstarts, Willow Wrens very plentiful up to the deep snow-line, a couple of Tree Pipits, Reed Bunting common—and we heard the Cuckoo. I shot a male Blackcap, which had been feeding on cranberries—swallowed whole—which last year's fruit having been so completely preserved by the snow, even the flavour remained, as I personally verified.

We took a Fieldfare's nest with six eggs which had been sat about a couple of days, but few seem to be breeding yet, as we saw many going in a flock as we arrived near Maristuen yesterday.

The birch-woods are quite dark yet, and the ground around is wet and marshy from the melting of the snow. A very pretty lichen (? Reindeer Lichen) is growing here in some quantity.

Returning to lunch we separated afterwards, Alston taking the upper woods, where he fired at (and missed like a man!) a Skov Ryper. He saw three of them altogether.

My route was down the river about a mile and a half, and I returned through the willow and osier woods (Vidie-beltet). I wounded and lost a Bluethroat and put up a Great Snipe. The Bluethroat uttered a note like a Whitethroat at the beginning, ending with some short



OLÉ J. LYSNE (1871).

warbling notes. In flight it rises in the air, fluttering the wings, and descends again to its perch.

I found another Fieldfare's nest with six eggs pretty hard set, and another with only one egg, which I did not take.

Other birds seen to-day by one or other of us were Redstart, two or three; Twite, one shot, many seen; Brambling, a pair seen; and a pair of Magpies have a nest close to the station.

We dined at 5 p.m., and after we had skinned our birds, we had Olé Lysné—nephew of the house, and cousin to Olé Nystuen—for a long talk. He spoke good English, and we got much information from him. He had written to us that his cousin, Olé Nystuen, would not be able to work for us, and offering his own services, but we never got this letter. He said he had shot an Eagle Owl near the bridge, and that he thinks the Divers here are Red-throated and not Black-throated—a mistake, however [E.R.A.]. He told us that it had only taken three days' warm weather to clear away all the snow, and that during the rest of the time since we were here before, it was thoroughly wintry weather with snow and wind.

To-morrow we arranged to go with him to get specimens of Willow Grouse (Skov Ryper) about two miles from this, and to visit a marsh where Great Snipe are found.

June 7.

On Wednesday, the 7th of June, began our real Fjeld work. About nine o'clock we started, with Olé Nystuen as our assistant, to try and get a few specimens of Ptarmigans (Fjeld Ryper). We ascended the long sloping hill behind Maristuen—and after an hour's walk got to the Fjeld Ryper ground. The first pair we fired at—sitting (!)—got clean away, the hen going off her nest, in which we got four handsome eggs. Alston sat down near the nest to wait the return of the hen, and Olé and I took

a beat along the hillside, in which beat I killed two fine males. In many places the snow was very deep and soft, and we sank often up to our middles in it. We crossed a burn, Olé going first and feeling the way with a stick. We took another beat and I killed a pair—♂ and ♀—right and left. We searched in vain for the nest. We saw one Snow Bunting, but had not the small gun handy at the time.

The Ptarmigan's nest was at the root of a dwarf birch, a slight hollow sparingly lined with a few sprigs of lichen, and a few of the bird's own feathers. The eggs were quite fresh, dark, handsome specimens.

It is to be noted that the Ptarmigan breeding here about the same date as in Scotland, must begin to lay whenever the snow has sufficiently melted to leave bare patches of dwarf birch. The whole plateau of the Fjell-fjeld to-day was covered with snow, leaving 'islands,' so to speak, of birch-covered ground. In many of the snow patches, as already said, we sank often up to our middles, the sun being strong and having rapidly softened it since early morning.

In the present state of the Fjeld, Ptarmigan are much more easily *seen* than they are on our stormy Highland mountains; but Olé tells us that later, when the dwarf birch is out, it is far more difficult to see them. The most he has killed on the ground in a day to his own gun was eighteen, and several times seventeen. They are not so plentiful now, or anything like it, as they were some years ago.

We saw the fresh track of a herd of Reindeer on the side of a snowdrift at the foot of the mountain (Oddénaes) about $1\frac{1}{2}$ miles off. The herd must have been startled at the sound of our last shots. Olé 'believed' that there must have been over a hundred Reindeer in the herd, judging from the appearance of the track. Single tracks

on both sides of the main track were those made by the *calves*. We were sorry we had lost this opportunity of seeing them.

Olé pointed out a rock where Eagles* (Fjeld Örné) had bred, but we did not think of going, as Olé said it would be 'nasty work' on account of the snow.

After lunch (the first call upon Bennett's *ham*) Alston returned to Maristuen, and Olé and I took another beat further off—southward. On a small rock, nearly (according to Olé) 4,000 feet above the sea, we found a pair of Kestrels, and I shot one of them. The nest—or place for eggs—was scraped out, but no eggs had yet been laid.

Sulétinden—the high mountain to the south-east by south of Maristuen—is 5,300 (?) feet high. In the far distance to the northward we had a fine view of the fantastic peaks and rugged pinnacles of the Jotunfjelder, over 7,000 feet in height, and in all directions an extensive view of the Fjelds. On our return home I shot one more ♂ Ryper.

On arriving at the station, Alston told me that he had seen a pair of *Motacilla flava*—Yellow Wagtail—near a *Søeter* close to Maristuen.

Other birds seen by us during the day were abundance of Meadow Pipits and several Golden Plover.

Alston saw a Stoat in full summer coat, running and hunting over the snow close to where we found the Ptarmigan's nest—about 3,000 feet altitude.

In the evening we had a talk with Olé about the mammals of the district.

Ten years ago—in 1861—he fired at a Wolf close to Maristuen, but his rifle having been double-charged in his hurry, burst and cut him badly, of which cuts we saw the marks. He has heard of no wolves for several years, and believes them to be now quite extinct.

* Rough-legged Buzzards.

A Lynx was killed near Hæg about three years ago.

Gluttons are still numerous, but are very easily poisoned—in which way most of them are killed—it being very difficult to get a shot at them.

Bears are often troublesome with the cattle. The story in Murray is *true*, and the man is still alive though not living here now.

There are no Rats, and few Mice.

We bought a good pair of Reindeer horns from Olé for half a dollar. They have not ripe horns just now, and neither flesh nor pelt is worth taking.

Olé says there are no Moles, Hedgehogs, or Badgers on the Fjelds.

In this connection the following may be of interest :—

Local Norsk names used on the Fjelléjeld.

The following names are given on the authority of Olé J. Lysné and others—

Bat (<i>Vespertilis borealis</i> (? Hooslef)	Flager-mus.
Shrew (<i>Sorex vulgaris</i>)... ..	Spidts-mus.
Field Vole (<i>Arvicola agrestis</i>)	Vand-mus.
Lemming (<i>Lemmus norvegicus</i>)	Lom-huund (=pocket-dog).
[Rat (<i>Mus decumarnus</i>) absent... ..	Rotté.]
Mouse (<i>Mus domesticus</i>)	Mus.
Stoat (<i>Putorius ermineus</i>)	Röskat.
Marten (<i>Martes martes</i>)	Mörkat.
Glutton (<i>Gulo borealis</i>)... ..	Fjeld-fras.
Otter (<i>Lutra lutra</i>)	Otter.
[Wolf (<i>Canis lupus</i>) extinct	Ulv].
Fox (<i>Canis vulpes</i>)... ..	Ræv.
Arctic Fox (<i>Canis lagopus</i>)	{ Hoide Ræv. Blaa Ræv.
Bear (<i>Ursus arctos</i>)	Björn.
Reindeer (<i>Rangifer tarandus</i>)	Rensdyr.

June 8.

On Thursday, the 8th of June—a cold day—we had a day's skinning. Three Ptarmigan, the Tern, and the Kestrel have all turned out good skins.

Knut Nystuen came up to-day, bringing with him the box we left at Lœrdalsören to be sent to Christiania. By a mistake on the part of Butleson at Lœrdalsören, he sent up this box instead of one we expected from Christiania with small shot, etc.

Knut says that Bluethroats are common here, and are called Fuglés-Kong (King of the Birds).* He seems to be aware of its breeding habits, etc.

He is not sure of the Eagle (which Alston, in his diary, noted as 'evidently *A. albicilla*') breeding this year at Nystuen, but will investigate. He will also ascertain about a large Hawk on Sturganöset above Nystuen. Most ducks are on small lakes near Nystuen; but Knut does not appear to know much about Snipe, but that was hardly to be expected.

The Snow Buntings are on Sulétinden, not, he thinks, on Sturganöset.

A pair of tourists (♂ and ♀!) arrived from Nystuen to-day, bringing me letters and papers—from which we heard for the first time of the horrors of Paris.

June 9.

For Friday, the 9th of June, we planned overnight to try for Skov Ryper (Willow Grouse), and to start early before the snow gets soft. We were sorry to learn that we are not to have the services of Olé Nystuen, as he is working on his farm and cannot get away.

We were up about 4.30 a.m., and after a cold breakfast went out with Olé (Lysné) after Skov Ryper, but were

* This was a mistake, for the Fuglés-Kong is the Wren, a bird which was not found by us on the Filléfjeld.

unsuccessful. We saw several birds but got no shots. The snow was very deep and soft, and not firm, though there was a skin of ice on the puddles. We sank at times at every step up to our middles, and Olé came to the conclusion that on account of the snow the birds had shifted to some other quarters. The cock bird crowed just like our Red Grouse, and when settling from and after a long flight exactly copied our bird in spreading out its wings.

In the wood we saw lots of Redwings, which were singing, and Bramblings (which Alston had also noted on the 6th).

Alston also noted to-day an Eagle—query species?—which flew away round Oddénaes in the direction of the rock which Olé pointed out the day before yesterday as a breeding-place.

Olé does not know the particulars about its nesting, but is to try and get them out of an old poaching rascal yclept Lars, who takes the young often for the sake of the Government reward, and is rather particular about concealing them. Olé will, however, try and ‘work’ him.

Returning home about 9 a.m. we had a second breakfast, and then went off to try Smédalsvand for Black Duck. It is about three English miles on the road to Nystuen.

On our way we looked into the Fieldfare’s nest, which contained one egg on the 6th, and found there were now four. I fingered them, but we agreed to leave them till our return.

We saw a Dipper, which has—Olé says—lots of names in Norsk, of which he mentioned three, ‘Strandé Kongé,’ ‘Fossé Karl,’ and ‘Tys-fugl.’

On Smédalsvand we saw a Black-throated Diver, but no Ducks, the whole lake being still covered with ice, save

small portions where the river ran into and again out of it.

We next tried a chain of small pools on burn and marshy ground, where numbers of Redshanks were going in pairs but not yet breeding.

Alston waited at the lower end of the chain for the chance of Ducks passing, but without result. Meanwhile Olé and I walked along the road about a mile, and then crossed over to the top of the chain. We stalked—but unsuccessfully—a Blue Hare. We then saw four Teal on a small pond, at which I got right and left shots, killing two, ♂ and ♀. One fell on the ice, which, though rotten, was sufficiently strong to bear us. We saw a couple of Wild Ducks, but did not get a shot.

On the way home through some birch-woods we had a long chase after two or three wild Skov Ryper. I at last got a shot, but a long one, as he skimmed downhill close over the snow, which here was very soft, and we went often very deep into it. Going up the steep slopes, hands and knees were often—by me at least—usefully employed.

Coming home we went to the Fieldfare's nest, in which I had seen four eggs this morning. At the foot of the tree I found a broken egg, and on climbing to the nest found all four eggs gone. We could attribute this to nothing but the bird herself, and Olé assured us that he *had heard* that they did break their eggs if they were handled, but he did not believe it. A former story was related to me in Scotland of a similar practice in the habits of the Common Buzzard. We hope to test it as regards the Fieldfare later on.

Other birds seen by us to-day were a Great Tit, seen in front of the house, several Martins (Olé mentions they breed here), a pair of Ravens, a pair or two of Common Sandpipers at Smødalsvand, a Common Snipe (shot by

myself), and one or two Common Gulls (Olé says they breed here).

We tried on 'Skier,' or native snow skates, and though our efforts were rather ludicrous to the natives, we believed we should find little difficulty in learning to use them. Olé says he will take them up some day to the hill, so that we may have a try with them on the snow.

An English lady and her courier (a Swiss) are staying here in the rooms over ours. They came yesterday and remain for some days. The courier cannot speak Norsk, but the lady herself can, and it rather puzzles us to make out what use the fellow can be.

The sun sets to-night—as far as we could judge—behind the hills to the N.N.W., by compass.

In the evening we talked with Olé about legends, superstitions, etc., and he told us the story of 'Why the Bear has a stumpy tail,' with great gusto (*see* Dasent).

He also says that the superstition about seeing the Wheatear for the first time on a stone or on grass prevails here as in Scotland, which is curious, but the saying is more generally applied to the Wagtail.

We saw a Stoat in front of the house.

June 10.

Saturday, the 10th of June, a warm day. Alston stayed in the house to try to get rid of the nasty cold which is still hanging about him. He occupied himself with filling cartridges, working at sketches, and calculating expenses—one welcome result being that we find we shall be able to stay longer than we expected, which is *meget godt*.

He shot the Stoat with the stick-gun. It was a very small female, its measurements being: head, 1·90; head and body, 8·25; tail, 2·80; and ear, ·50. The tip of the tail was *dark brown*, not black.

I had a long day with Olé. We went up the hill again

to try for Skov Ryper, Black Duck, etc. The lake where we expected to see the latter is still frozen up.

Just above the birch belt, up got two ♀ Ptarmigan and a cock, one of the females off her nest of seven eggs. I shot her, and Olé killed the other two. The nest was a slight hollow, lined sparingly with juniper tops, leaves of dwarf birch, and a few of the bird's feathers. It was situated at the root of a juniper bush, overhung by a branch of juniper, which almost completely concealed it.

We now had a bad walk through about a mile of a field of snow, and in the centre we plunged through a bog up to our middles. The marsh water under two or three feet of snow was piercingly cold, but with snow water the cold does not last long, the reaction in this case soon putting our feet and legs in a glow of warmth.

We visited a rock where Eagles* are said to have bred on the side of a burn. A snowdrift at least 12 feet deep, hung on the edge of the cliff on both sides, and the whole rock was dripping with melting snow. A few more days of this kind of weather and the lakes will be clear of ice.

Olé tells me that the Berg-Ulf (or Eagle Owl) breeds, or used to breed, every year on the opposite side of the valley within sight of this house—and he will speak to 'Lars Porsena' to-night about trying to find it.

He pointed out to me also a Sœter upon the roof of which—or of another adjoining—a Fjeld Ryper (Ptarmigan) had its nest some years ago, and when the girl came up to the Sœter in summer, the birds became almost quite tame. This Sœter is the same which stands just above the pools where yesterday I killed the Teal, and where to-day Olé killed another.

From description the Snowy Owl has probably been seen here upon occasions.

* Rough-legged Buzzards.

Mrs. Whitehead, the lady with the Swiss courier staying here, reports having seen five or six Lemmings to-day. So there will be plenty soon. It is several years since they were here, and as it is now past their time we did not expect to get them.

June 11.

Sunday, the 11th of June, was a very warm day, and the birch-trees are fast becoming green. We had a stroll in the forenoon, and took a nest of Fieldfare's eggs, five, of very large size.

On the way back we encountered a Lemming in the road. He did not try to escape, but sat up on his hind-quarters, with his back against a rock, looking comically ferocious, and keeping up a continuous volley of sharp, angry barks. Alston had no difficulty in capturing him with his cap. Olé says they usually appear in May, and do not disappear till the following spring. In winter they principally burrow beneath the snow. He has *seen cows* catch them and eat them, and *believes* that Reindeer do the same. If there is no wind they can swim across Smédalsvand (about half an English mile). I identified the feet found in Kestrel's stomach as those of this species.

We saw a Northern Titmouse (*Parus borealis*) to-day.

We skinned the Rypé, the Stoat, and the Lemming, and saw and unsuccessfully pursued another Stoat, probably the mate of the one Alston killed, which was a female in milk.

Olé says there are 'Kat-ugle' Owls up here, but only in winter.

Also he says he saw a Bat the other evening.

Old 'Lars Porsena' is to go to-morrow in search of Eagles and Berg-ulfs. If unsuccessful he is to have 1 mark for his trouble. If lucky, *2 marks per egg*, which will not be dear. If the Eagle's nest is not too far away

he is to tell us, so that we can be present at the taking of them.

Knut Nystuen was over to-day, and says he can see nothing of the Eagles on Sturganöset.

June 12.

Monday, the 12th of June, a very warm day, we went up in birch-wood, where we separated, Alston taking the upper part and I the lower, he having the large gun for the chance of Skov Ryper.

Alston got only a few nests of Fieldfares and one of Redstart. The latter contained five eggs, but the nest, which was composed principally of feathers of Skov Ryper, with a little hair and shreds of alder-bark, and in a hole in a rotten tree, could not be got out in anything like a perfect state. He also got a Water Ouzel (Dipper) on his way home. Also he found a Redpoll's nest just begun. The nest of the Redpoll was lined entirely with small roots, *no willow catkins*.

I took the lower part, and during the day found four nests of Bramblings (three with eggs), two of Redwings (one with six eggs, the other with young and one egg), one with young of Redpoll (large-sized and light-coloured birds), and nest and four eggs of Song Thrush. I saw two Woodcocks, one of which I could have shot.

The Fieldfares' nests brought in by Alston had 6, 4, 4, 4, 3, 3, and 3 eggs respectively.

The nest of the Redwing with six eggs, off which I shot the ♂ bird, and the one with young, were like those we found at Tvindé, and were situated on the top of rotten stumps, one about 2½ feet from the ground, in an open part of the birch-belt, the other about a foot from the ground, and not 3 yards from a nest with young of a Redpoll.

The three nests of the Brambling which I took, and off

the first two of which I shot the ♀ birds, had 7, 7, and 4 eggs respectively; were in birch-trees as those at Tvindé, and the eggs, which were quite fresh, were not so well marked as those taken at Tvindé.

Lars found the Eagles, but not the nest. He saw seven or eight Reindeer. We paid him two marks for his long day's work, from early this morning till late at night. We ourselves think of going later on to this Eagle rock, which is about three miles north of Maristuen. Lars will try further for the Eagle Owls.

Olé took my gun—which has cut open my cheek, as it did two years ago—and went to a small lake near Nystuen. He saw sixteen Black Ducks,* and wounded one slightly. He saw one Lemming.

June 13.

On Tuesday, the 13th of June—a very hot day—we went with Olé to a birch-wood, about three miles down the valley from Maristuen, to search for Bramblings, Redwings, etc., but had poor luck, as we only found one nest of Fieldfare with five eggs, and two of Bramblings, only one of which had eggs—seven in number—in it. This one had a lot of bits of wasps' paper built into it. We saw no Redwings.

Four men have during the last few days been pursuing a Bear in the mountains below Maristuen, and it is now supposed that it is lying about the hillside opposite to that on which is the birch-wood we were at to-day.

June 14.

On Wednesday, the 14th of June—a very hot day—we were out about 7 a.m., and had a long day in the big birch-wood of Maristuen.

Alston was unsuccessful, being disappointed of shots

* These turned out to be Wild Duck, not Scoters.

by two fine ♂ Skov Ryper, and finding absolutely nothing but a nest of Fieldfare with five eggs after we separated.

I did much better in the upper part of the wood. I took eight nests of Fieldfares, containing respectively 4, 5, 4, 5, 7, 4, 4, and 2 eggs each. One or two eggs of the nest of seven were about three days' incubated, the rest quite fresh. Many of the nests were on old tree-stumps, and most within reach of the ground. Some of the birds were very bold, swooping down to within a foot or two of my head.

I found a nest with six eggs of the Redwing. It was in the low fork of a birch-tree about $2\frac{1}{2}$ feet or 3 feet from the ground. The parent birds were both seen, and the ♀ was seen to go to the nest and afterwards was put off it.

I found two nests of Bramblings, one with eight eggs and one with four. The former was the first nest we have obtained built in an alder-tree. I shot both the ♂ and ♀ of this nest. The ♂ bird of the eight nest was very bold, perching within a yard of my head when I was at the nest. These and two others without eggs were in birch and alder-trees (the eight nest in an alder), about 10 feet or 12 feet from the ground. The nests were composed of lichens, catkins, moss, wasp-paper, lined with feathers of Skov Ryper and down of some plant, possibly thistle, as, indeed, are most of the nests we have seen. In some the thin outer bark of birch-trees is also used.

I shot also a Northern Marsh Tit and one very handsome Lesser Redpoll. This last bird is not the same species as the birds observed by me at the nest with young on the 12th. These latter were, as already stated, large birds, light-coloured, more robustly made, and I did not discern the slightest tint of rose-colour in the breast,—the ♀.

We saw a couple of Skov Ryper (Willow Grouse) before

Alston and I separated in the morning, but we had no gun, and he went back for his. I tried to catch the ♀ as she sat in the grass, and got to within a couple of feet of her. Alston afterwards saw another ♂.

I saw another Woodcock to-day, and Tree Pipits were quite plentiful.

Alston found Ring Ouzels apparently about to breed in a low rock close to the house, the species being common in this glen.

The Great Titmouse is building under the eaves of the house.

To-night we completed the filling of the 'Tiné,' which now contains 233 Fieldfares' eggs (in addition to the six nests and eggs in our big box), six Goldeneyes, two nests of seven and four eggs of Fjeld Ryper, and one nest of Redwings.

June 15.

On Thursday, the 15th of June, a very hot day, we were up at 4.30 a.m., and started with Olé and Lars after the 'Eagles.' We drove in the carioles as far as the top of Smédalsvand, about four miles (English), and then sent the carioles back.

Having first cachèed some beer, we started at six o'clock. Thence, having crossed the bridge, we walked some five miles further over a pass leading into Valdersdal. Nearly all our way was over deep snow, which was, luckily, pretty hard, a sharp night's frost having thus rendered the walking on these high fjelds not so bad as usual.

On attaining the ridge and getting into the valley we had our first taste of the day's bad luck. Olé saw a Ryper (Ptarmigan), and asked to be allowed a shot, to which we consented, and he shot two.

Then from behind a knoll in front of us, by the side of a little frozen lake, away went five splendid Reindeer. The shot must have startled them. They first walked

away slowly, and soon stopped to look back, as they could not go very fast over the frozen snow.

We had a capital view of them through the glasses. Two were old stags, one with a grand head, the other three young ones. They are certainly very fine animals, but want the stately carriage of the head of our Red Deer.

They walked away slowly, halting and looking back every now and then, leaped the river, which ran between high banks of frozen snow, and went away up the hill at a leisurely pace. The old stag with the finest head and horns was last, doubtless fat and lazy. The young stags of two and three years old led the way.

When they were out of sight we went on to the Fjeld Örn's rock, where Lars saw the 'Eagles' on the 12th, about five miles from the bridge at Smødalsvand. We soon saw the male bird, a magnificent Fjeld Örn, extremely pale, almost white-looking below, with a well-marked dark band on his tail and a dark spot under each wing. At the distance, which was great, the bird even then looked small to me for an Eagle, and had a peculiar, something, about the light cast of its plumage. On a nearer view being obtained this peculiar light colour in both this bird and its mate was seen, and the white tail with dark band across, and two dark markings on the under side of the wings.

But here we have the Fjeld Örn, whose young, Lars has taken over and over again, and received for them the Government reward of half a dollar. It is shown to the Lansman of the district, who cuts off its feet and then gives a certificate to the person who produces them, and who can then claim the reward. This reward is given for the Fjeld Örn only in Christianstift,* and not in Bergenstift, but the birds are just carried across from the one stift to the other. And here was the bird in

* Stift = County.

question, so how could *we* doubt the authenticity of his royalty?

It took us a very long time before the nest was found. At last the hen bird rose from it as pale as the male, and with exactly similar markings, which puzzled us not a little, but not for long (see *infra*).

Both birds returned and flew close overhead when Olé and I scrambled up the steep place below the nest. We got to within 10 or 12 feet of it, but could not go further. I fired at and, as I thought, slightly wounded one of the birds. We came down, which was not quite so easy as going up, and when we were about halfway down the hen returned to the nest, sat for a little while on the edge, and then hopped gently in. Deucedly rum-looking 'eagle,' I thought.

After lunch we scrambled up a steep bank and got above the nest. Lars was lowered down by a rope whilst I stood ready to shoot as the bird came off. But off she would *not* come, and Lars could not get to the nest, as the rope was too short. Nor, I thought, could he have got to it even with a long one, as the cliff overhung very much. We now rolled down big stones, which went crashing down close past the nest, but the hen bird would not move.

For two hours at least we tried to get her to move, lowering Lars down at three or four different places, firing shots at a point of rock not far from the nest, but all was useless.

As a *dernier resort* Lars and Olé again went to the foot, and climbed up close to the nest. Shouting and stones again failed, but when at last Lars fired first a shot close to the nest, then a bullet through the edge of the nest, and still the bird would not come off, we came to the conclusion that it was the wounded or dead bird that was in the nest, though I could hardly reconcile this

with the fact that I had watched the bird I had fired at fly off with a broken quill-feather in his wing, and afterwards saw him flying about whilst the other was in the nest.

So we turned homewards, disconsolate, but I determined to come back next day with a longer rope and solve the mystery.

On our way home we caught a female Lemming among big stones with some difficulty, and we had a 'glissade' down a steep snow slope. (N.B.—We would not have been the worse of leather!)

We were right glad of the beer we had cachèed, and about 8 or 9 p.m. we reached home very tired.

June 16.

On Friday, the 16th of June, which was a warm day, but not so hot as the previous day, starting at 10 a.m., we carioled up again to Smèdalsvand, having packed up first some things we want at Nystuen. On the way we met Knut Nystuen with a party of tourists.

Alston drove on to Nystuen, and I, accompanied by Olé and Lars, went again to Valdersdal. Again we saw the same Reindeer.

This time we went to the top of the rock and at once lowered Lars down. This time off came the bird—not dead or wounded, as we had supposed, but all right. She soon turned and came flying straight towards us. When I raised my gun she turned up her breast and deviated to the left, and I gave her one barrel. She was hit in the head, and fell down far below on a patch of dwarf birch and juniper, quite dead this time. And now I knew my bird to be—what I had all along suspected—a fine specimen, light-coloured, and old, of *Archibuteo lagopus*. In vain Lars tried to get to the nest, which contained three eggs; from the top and from the bottom, at least half a

dozen different ways, but it could not be done. However, I was well pleased at getting the bird, though to have the eggs lying within a few feet of Lars' hand was somewhat tantalising too.

We heard, however, of two more nests near Nystuen. Olé and I arrived at Nystuen about 9 p.m. I felt really tired to-night, having done a good fifteen miles' walking through snow and marsh and hard road.

Meanwhile Alston, after parting with me at the Smédalsvand, went on to Nystuen in the forenoon. On the way he saw a Grey Crow near the Søeter, the same place where they bred last year (according to author's MS. here [Nystuen]) which, by the way, was *not* written by Herr Westren, but by Herr Candidat Hooslef, who was here with him).

After dinner, Knut not being to the fore, Alston took a turn through the birch-wood. He only heard two or three Bramblings and shot one. He took a lot of Fieldfares' eggs, in nests with six, five, four, four, and one, respectively; and he found a nest in a solitary stunted fir-tree, which was either a Siskin's or a Redpoll's with two eggs, but not seeing the old birds he left them. He saw several Skov Ryper (Willow Grouse), but had only the stick-gun with him. Afterwards he skinned the Lemming caught yesterday. It contained six fœtuses, which he preserved in aquavite.

To-morrow Olé is to take us to another place, near Nystuen, where the Fjeld Örn breeds. Some years they say there are almost none on the Fjeld, in others plenty. Lars returned to Maristuen, and is to-morrow to go in search of Eagle Owls and more Buzzards.

On my way home I saw a pair of Scaup below the bridge, and also a pair of Common Scoter; of the latter I shot the ♀, but lost it in the river.

June 17.

Saturday, the 17th of June, a cloudy day with heavy rain in the afternoon, we went with Olé in search of another Fjeld Örn's nest. We started about 10.30 a.m., and began with a stiff climb up the shoulder of Sturganöset behind Nystuén. From the plateau above we had another fine view of the grand chain of the Jotun-Fjeld. We crossed over this high Fjeld about $1\frac{1}{2}$ miles, and waded through snow and water—about ankle deep and desperately cold—across the end of a large lake, the Slettningsvand. I fired at, killed, and lost a Snow Bunting, of which bird we afterwards saw a good many.

Going round the lake we came to the first rock where Lars had directed Olé—a good-looking rock. We fired a shot underneath, but no Fjeld Örn appeared.

But again we had the mortification of finding that our shot had startled Reindeer, a small herd of ten stags, for we saw them go far out upon the frozen lake, where they lay down, knowing themselves to be perfectly safe. We afterwards came across their tracks and lairs on the snow slopes.

We now had a long trudge through snow and along steep boulder-bestrewed hillsides to the second and third rocks indicated to Olé by Lars, but all our long tramp was in vain. The sky had become clouded and about two o'clock began heavy rain, which continued all day with little intermission.

The second rock, just above the lower end of the lake, was a round grass-grown rock, and had the nest been in any part of it, it would have been easily reached by a man carrying a load on his back.

We had now to cross the river which runs out of the Slettningsvand into the lower lake—Grönévand. This we did knee-deep and with the snow water sucking hard at our legs but without any feeling of insecurity, though

had the rain commenced a few hours sooner doubtless we could not have crossed at all. We got down to the road about three miles from Nystuen and reached the station about seven o'clock, after perhaps fifteen or sixteen miles of very nasty soft walking, but we were not very tired after all.

About half a mile before reaching Nystuen I found a Fieldfare's nest with six eggs, on the top of a post in an outhouse or turf shed (house for keeping peat dry in).

We saw two Hooded Crows near Kirkésœterné, one of which birds Alston had previously noted yesterday.

Alston having omitted to bring spare clothing, had to wear in the evening a most original pair of old trousers borrowed from Knut Nystuen, and his own waterproof.

June 18.

On Sunday, the 18th of June, rainy and stormy all day, we did not go out, but wrote letters to Feilden and Dresser, sorted eggs, skinned birds, etc. Alston found the Rough-legged Buzzard's stomach contained remains of at least five Lemmings.

June 19.

On Monday, the 19th of June, a fine but not warm day, we went through the birch-wood to look for Skov Ryper, Ducks, etc. Of the former we saw none where last Friday Alston had seen several. The wet weather of Saturday and Sunday must have caused them to shift their quarters.

We visited the nest found by Alston on Friday, but could not shoot the old bird, nor could we identify her in the bad light—so we left her. The only birds seen in the vicinity were Redpolls, to which species we had little doubt the nest belonged.

Going down the Lœrdal, below the bridge, I shot ♂ and ♀ Scoters, but lost the ♂.

Thence to Osévand; Olé Lysné found on a promontory (at present an island) two Scoter's eggs, cold and rather dirty, probably belonging to the ♀ which I shot and lost on Friday. These eggs were among dwarf birch, but there was no nest, only a small particle of down. On the same peninsula Alston found an old nest of the same species, and a Redshank's with four eggs.

Alston also found a Reed Bunting's nest with five eggs, from which the *male* bird was flushed.

This day we saw two pairs of Bluethroated Warblers, but could not find the nests. They were frequenting low scrub, a mixture of dwarf birch and juniper, which fringes the shores of the Osévand.

Near Nystuen we took a nest of Fieldfare with five eggs.

Coming home, Olé spoke to a little lad at Kirkésœterné to look for eggs, and in the evening he brought to us at Nystuen four nests of Wheatears, containing 7, 5, 4 and 3 eggs, and one nest of six White Wagtails, for which he received skillings, and is to look for more.

Alston re-inspected this evening the foxes' skins—they were all *Vulpes lagopus*—but he could not understand why the two should still be in *grey winter coat*.

June 20.

On Tuesday, the 20th of June—a fine, cloudy day—Olé came in about 6 a.m. with news of another pair of Fjeld Örn which a man from Aårdal had seen on Saturday when crossing over the Fjeld. We were soon up, dressed, and ready—and after a hurried breakfast we started in two carts for the bridge at Smédalsvand, the Aårdal man going with us on his return home. But at the Sœter, below Storé Frostdal, he went to pick up his rifle which he had left there on Saturday, and found he could not cross the river. So we had to leave him. Olé got instructions as to the locality.

At the head of the Smédalsvand we crossed the bridge, the water being so high that we had to wade nearly knee-deep. We also had to wade a smaller stream below Lillé Frostdal, and went up that valley to a large rock at its head. We saw the ♂ fly away across the valley, and then it was joined by another bird at another rock about half a mile off. Olé had crossed to the other side to look at some smaller rocks—Alston and I keeping up the side opposite to him. Coming under the big rock I fired off a shot, and, to our delight, off came the ♀ from the nest.

It looked easy, and we climbed round the end of the rock to the top. After lunching, Olé and I began the descent. We found it easy, I going first with the rope round me. A steep slope led to within 8 feet of the nest, and on looking over I saw two nearly white eggs, lying in a slight depression, which was lined with dry grass. Only a very few sticks formed the rim of the nest. I was not now quite above the nest, but rather to one side, nor did I feel confident that I could reach it, or, if I did, that Olé could pull me up again, as the purchase was bad, and the rope from being led round a corner would have had too much friction.

Also, there being only two eggs in the nest, and the birds shy, and evidently not sitting, both Olé and myself thought it better to wait another day or two until a lad comes up from Lœrdal who is a capital cragsman, and to whom Olé had written last night, offering in our name two dollars to come and take the Valdærsdal eggs. We shall be able to take the eggs from both these nests when he comes.

We left the rope under a rock, and now proceeded across by a pass to Slutédal, where we thought it possible that another nest might be, as a third bird had been seen, but in this we were disappointed. The third bird

is in all probability the Valdersdal widower, as Valdersdal is only about four miles from Lillé Frostdal.

And so we went down Slutédal to the bridge, where our carioles met us at seven o'clock by previous arrangement, and where—at the bridge—we had again cachèed some beer. We had a very cold drive home to Nystuen, and on our arrival ate an *astounding* dinner.

In the evening Olé saw another lad from Bjöberg on the Hallingdal side of the Fjeld, who knew Fjeld Örn's nests—and arranged with him to deliver to us at Maristuen any eggs he could get, also birds, on Sunday or Monday next, for half a dollar each—just the Government reward for their destruction.

It may be of interest here to note that between Maristuen and Nystuen, on the north of the road, there are seven valleys running at right angles to, and connected with, the main valley of Smèdal—the upper part of Løerdal.

1. Valdersdalen—so called because the old road to Valders runs through it.

2. Slutédalen—the sleety valley, or valley of sleet.

3. Lillé Frostdalen—the little frost valley.

4. Storé Frostdalen—the great frost valley.

5. Grönné-Vand—the green lake.

6. Slettnings-Vand—the lake of the level ground.

The 7th is Smèdalen itself—the valley of the smith, ashes having been found below ground in some places.

The valley where I shot the Kestrel above Maristuen on the south side of the road is Oddédal—the mountain above it, Oddéberg.

In Slutédal to-day we took a nest and six eggs of the Wheatear.

June 21.

On Wednesday, the 21st of June, a fine day though stormy in the morning, the lad from Løerdal—Peder Hougen by name—arrived early in the morning, and

must have started immediately after receiving Olé's letter about five o'clock the night before, and we arranged to go after the 'Eagle's nest' to-morrow. To-day he would have been too tired, and the morning was too stormy.

We had a lazy day, there being nothing much to do outside, and we packed up this night, as we are to return direct to Maristuen to-morrow after taking the Eagles' nests.

We took and identified the nest in the fir-tree, a Red-poll's with five eggs, and we shot the female. Had we looked into the nest we could have identified it without, but having heard that Siskins bred in birch-wood on the Fjelds we did not wish to disturb the birds too much. The nest was composed of small twigs of the tree it was built in—a spruce-fir, the only one we have seen around Nystuen—and it was lined with willow catkins, Skov Ryper's feathers, etc.

In the evening Olé Lysné went out to look for nests, and came in with our first nest of the Blue-throated Warbler, with six eggs. The nest was on the ground under a juniper bush, and quite exposed. The bird was not seen. It was within two yards of a nest and six eggs of the Meadow Pipit, these latter eggs being long-shaped and dark.

When Olé heard how good his capture of the Blue-throat's nest was, he was very glad, and made most earnest and tender inquiries after the freshness of the eggs and after their safety. He is getting really keen now, and I shall be much mistaken if he do not prove a valuable correspondent in after-years.

A lad brought us in to-day a nest and six eggs of the Wheatear.

June 22.

On Thursday, the 22nd of June, a warm day, we started from Nystuen about six o'clock, and drove down to the

Smédalsvand Bridge by seven o'clock. We then sent on our carioles to Maristuen.

We got to the Lillé Frostdal nest at about half-past nine. I got within shot of the nest and shot the female as she left it. Then Peder Hougen went down. He simply gave the rope a twist round the projecting rock above the nest and went down hand under hand, and in a few minutes he brought up the two eggs, which were pretty hard set. One is very long-shaped, and not *well* marked. We then retrieved the dead bird. She had fallen at least 250 feet, and smashed her skull badly against the rock.

We then proceeded towards the old nest in Valdersdal. We went a little out of the direct line, which made the distance fully five miles between the two nests. The snow on the plateau of the Fjeld was very firm and good walking—the best, indeed, we have yet had—but in Slutédal it was very soft.

We reached the top of the rock in Valdersdal about two o'clock. As before, Peder simply took the rope in his hand, and we saw him literally *running* down the rock, bearing hardly at all upon the rope which Olé and I held at the top.

The male bird showed, and I fired a long shot without effect. Then to our surprise off came a second ♀ from the nest, which he must have picked up since the first ♀ was shot on the 16th. Both birds got clear away, and we were not altogether sorry for it.

In about five or ten minutes from the time we saw Peder's head disappear we heard a shout far below, and on looking over we saw him right down at the foot of the cliff, and he shouted up that he had the three eggs safe in Alston's collecting-box. From the time he left us at the top till we heard his shout, he had not so much as given a single direction, or, indeed, spoken at all. He simply—to

us—seemed to run down into the nest, take the eggs, and appear again 300 feet below us. He was certainly a wonderful cragsman.

The Lillé Frostdal nest was situated on a cliff, about 250 feet from the base, with a steep green slope above to within three feet of the nest. Of nest there was scarcely any, a slight hollow lined with dry grass, no wool or feathers, and only about half a dozen dry juniper sticks on the extreme outer edge. The two eggs were nearly white, much longer shaped than type specimens, and had been incubated about twelve days.

The Valdersdal nest—according to Lars Eráker's description on the 16th—was a large structure, formed of juniper branches. Its getting took about 50 feet of rope. The eggs were rounder and better marked than those in Lillé Frostdal, and had been incubated by two females, the first having been shot by me on the 16th.

We now came down and met at the foot Old Lars, who was after Reindeer no doubt. He had seen nothing of Eagles on Saturday, but told us he had a nest and five fresh eggs of the Snow Bunting, which he had found placed under a stone on the slope of the hill at Sulétinden, and had taken to Maristuen for us. Truly our luck is good. He had shot the ♀ bird and brought her also.

We now rested, and had an hour's snooze in the sunshine, which was very warm to-day. Meanwhile Lars started for home by a near cut. After this we returned to the bridge, where, about 5.30 p.m., we had our beer and a pipe. We tried Skiddor.

Here Olé found another Redshank's nest with four eggs close to the bridge.

Our carioles came about seven o'clock, and we drove on to Maristuen.

Before we had got dinner Lars came in with *another* Rough-legged Buzzard, a fine ♀, which he had killed

close to or at Smèdalsbjerg, the mountain just above the søeter at Smèdalsvand. He saw both birds and knows the nest is in Smèdalsbjerg. To-morrow I shall go and take, or see it taken, while Alston will have a hard day's work at home skinning and blowing.

Both the Rough-legs shot to-day are sadly mauled; mine by the concussion against the rock, and Lar's by a huge *bullet* wound from his rifle.

We also received from Lars the Snow Bunting's nest and eggs, and the bird, which has the appearance of having been shot with a bullet also!! The nest is perfect and the eggs lovely.

He also brought us eleven eggs of Ptarmigan which he found to-day on [place not named]. These eggs were wonderfully packed by Lars in his spare stockings, gloves, etc.

June 23.

On Friday, the 23rd of June, a fine day, we breakfasted at 8.30 a.m., and then I started, in company with Olé, Lars, and Peder, for the rock where Lars shot the Rough-legged Buzzard yesterday, Smèdalsbjerg, above the lower end of Smèdalsvand. We rowed across the foot of the lake, which is now *almost* clear of ice, in a horridly leaky boat, which kept us baling all the way over.

We climbed up the slope to the nest and saw the ♂ bird flying about and crying loudly. We found the nest. I climbed up by a green slope to above the nest, Peder giving me a helping hand with the rope, and I taking my gun for the chance of a shot, but the bird was too wild and would not come near us at all. Olé now came up, and Peder went with his usual jaunty step down into the nest, having, however, this time the rope round him.

The nest was about 10 feet below the edge of the rock, and Peder let himself over by doubling the rope as before. He was soon up again with two eggs. The nest was not

large, and had no fur or feathers for lining, which is different from the habit of our Common Buzzard in Scotland. The lining was grass.

A pair of Ravens have a nest in a large rock close to this one with the Buzzard's nest. Both rocks are visible from the rock.

We returned across the lake and home. On the way home I heard from Olé that the 'Bjerg-ulf' (Eagle Owl) had been heard *booming* on the hill—within a couple of miles of the house—on Friday night, and again on Monday (after the rain). He has no doubt they have a nest, and as he knows the place, we shall go to-morrow in search. Lars also had heard it, but for reasons best known to himself, has not yet said anything about it to Olé.

Peder left to-day for Lørdal. *Then* Lars said he knew two more Fjeld Örn's nests, one in Oddédal and one near Sulétind. We know what he is up to, so we have made a distinct agreement, through Olé, that we pay him so much each for the eggs, and no pay at all if he does not get them. He will, he says, take another man with him to-morrow.

Should the Hallingdal lad get a nest or two by Sunday we should not be badly off for Rough-legs!

Alston had his hands full in the house to-day while we were out, skinning the Rough-legged Buzzards—a proper job—and other birds, blowing eggs, etc. He succeeded in making very good skins of the two, despite their being so damaged by the rock-concussion and by Lars' bullet. Of the two eggs in the first nest, he found one was addled.

June 24.

Saturday, the 24th of June, was not a warm day, and there were showers of hail. Both of us had internal troubles last night, and Alston was very sick. We

attributed it to the ham—rather ‘french’—on which we are principally fed here.

In the forenoon we had a search amongst a number of small sloping rocks for the Bjerg-ulf, but in vain, as we saw nothing of them, but we found the remains of a Blue Hare which had probably been killed by one of them.

In the evening we went to the birch-wood. I returned to the nest of (? Mealy) Redpoll which I found with young on the 12th, also the Redwings and Bramblings close to it. In the former I found a dead young one, which we are preserving in spirit; the rest must have been destroyed by some bird or beast, and the old birds are not to be seen.

The Redwings had quitted the nest, but in the Brambling’s I got six eggs. We found also a couple of nests of four eggs each of Fieldfares. One nest of eggs is the handsomest and extremest variety we have yet procured, and is probably a second laying, as the shells were thin and light-coloured.

Alston saw a Mountain Hare in the wood, the first he had himself seen.

We ordered another box for our skins, as the Rough-legged Buzzards will not go in our present one.

According to Olé, this Fjeld may be spelt either ‘Fillé-fjeld’ (fille = a file) or ‘File-fjeld’ (file = a rag). The former is the oldest mode of spelling. It is about 22 miles by 16 miles English, is bounded by Aårdal on the north, by Hallingdal on the south, and joins on to the Sognefjeld on the west, and the Valdarsfjeld on the east.

It is doubtful if Mr. Godman was on the Filléfjeld at all, as he only spoke of ‘working the Fjeld (Valdersfjeld?) from Thuné.’

June 25.

Sunday, the 25th of June, was showery. Olé went down the road and brought back the Wagtail’s nest—

now with six eggs—which we had found empty on the 13th.

In the afternoon we went to the wood, found the Mealy Redpoll's nest with five eggs, which we found on the 12th, and also a Redstart's nest with six, but in both the eggs were so hard set that we could not blow them. Also a Fieldfare's, with fledged young, of which we brought four home, and somebody brought in three nests of Meadow Pipit, of which two contained six eggs each.

We saw native dances in the kitchen. They waltzed very slowly for about half an hour at a stretch, and some of the men performed the 'Halling dance,' a series of most extraordinary capers, including a pirouette in the air and kicking the roof!

June 26.

On Monday, the 26th of June—a hot day—we meant to have gone up Sulétinden, but my *inside* being still out of order we put it off.

We went instead along the Nystuen Road, searching the side of Smødalsvand for Ducks and Blue-throated Warblers.

Below the bridge at Grönlien Sæter one of the Nystuen men gave us eight Teal eggs (incubated about four days) and the down out of the nest, also a White Wagtail's, with five, only one of which, however, we could blow. We got also a couple of nests of four each of Redshank's eggs, one at Nystuen, incubated about a week, and one at Osévand, incubated about four days, and at Nystuen a nest of Willow Warblers.

Our search for Ducks' nests was in vain, and we believe that the heavy floods, and consequent extension of the surface of the lakes, have destroyed most of the nests, as scarcely any birds were seen except two Scaup on the lake near Kirkésæterné and one ♀ of the same species on the lake at Nystuen. We had a long search at

Osévand for Bluethroats; we saw birds, but could find no nests.

We had dinner at Nystuen, and drove home to Maristuen in a Stohl-kjøere, arriving at 11 p.m., too late to hear what Lars had done when out over the hills to-day.

June 27.

Tuesday, the 27th of June—a hot day—I was all right again, and the Sulétind expedition came off. This morning on the plate along with our breakfast eggs were two fine eggs of Rough-legged Buzzards obtained by Lars yesterday on Söré Sul, behind Sulétind. He reported that the nest was in a bad place. The eggs, handsome specimens, were fresh, or with faint blood-streaks in one.

About eight o'clock we started for Sulétind, going up the old road (Norsk, *gamle vei*), at the side of which we saw two Bluethroats, and, after a short search, found the nest, the ♀ flying off. The nest only contained a couple of eggs, so we left it for the present.

Then we had a long and unsuccessful hunt for Snøfugle, only seeing one pair.

Ascending a slope near the base of Sulétinden we had a good view at last of Bjerg-ulf. It rose from a stone in front of us, and had our guns been unslung, it is possible we might have killed it at long range. As it flapped slowly away the round appearance of the head, neck, and body appeared very distinctly. It took the direction of the rocky hills above Maristuen, where we had been searching for the nest on the 24th.

We found excreta containing undigested bits of Reindeer skin and hair; which Olé said was Glutton's doing.

We had a long vain search for Snow Buntings' nests, trying every way we could think of to discover them, but we only saw four birds altogether, one of which, a ♂, we shot.

On a bare ledge of a rock close to the old road—a somewhat peculiar situation—we found a Fieldfare's nest.

The view from the top of Sulétind is very fine. The grand range of the rugged-peaked Jotunfjelds, Gallopøegen towering in their midst, and innumerable small glaciers sloping down the dark ravines. Though at a distance of thirty-six miles, we could distinctly make out the crevasses in the green ice, which peeped out here and there through the snow. To the left, or west, and fifty-six miles distant, visible past the western shoulder of the Jotunfjelds, a peculiarly-shaped peak—Lodals-Kauben—rises over 6,000 feet from the centre of a sea of ice, the Justedal glacier. Other smaller glaciers appear on other ranges, both to the to the north-west and north-east. East of us rises a mountain which is immediately above Blaaflaten, and south-west, or nearly west, the mountains above Thuné are seen.

Between us and the Jotun mountains lie the valleys I have before mentioned, which we searched for Buzzards' nests, each with its frozen lake, and, further off, the still larger and still ice-bound lakes of the Tuen Vand, etc.

For half an hour we remained on the top, having lunch, a pipe, and a snooze, and then we descended the opposite side of the mountain.

We saw two more Snow Buntings, of which I shot one, a male; nests no go; and we caught a couple of young Lemmings, about half-grown, after a hard dig under big stones, for which we had what Rab—my keeper at Dunipace, when digging out a dead rabbit—would call a 'royal hawk.' These animals have not increased as was expected, and the people now think they must have been on the Fjelds all winter, and are now disappearing.

We found quantities of Rens-dyr Bloomst growing on the sides of Sulétind, and during the day specimens of the Iceland Moss (Svin-moss) were pointed out by Olé.

About 7 p.m. we got home, after some eighteen miles' walking, and had a very satisfactory dinner and so to bed.

We heard this evening of another Buzzard's nest down the valley, and Lars is to look after it to-morrow.

June 28.

Wednesday, the 28th of June—when we had showers in the afternoon—was devoted to indoor work, egg-blowing, letter-writing, carbolising young Fieldfares, and giving Olé a lesson in skinning, at his own request, and Alston worked at his sketch made yesterday.

Olé brought in this morning a nest of five Ring Ouzels' eggs, taken below the house in the stump of a birch-tree in a rock. He fired at one of the birds.

Two Wheatears' eggs from a nest brought in have distinct but minute black dots at the larger end.

June 29.

Thursday, the 29th of June, was dull and warm. In the morning a ♂ Black Duck—Common Scoter, or 'Skjer Auch'—was brought to us, which a man had shot last night on Osévand, and which is doubtless the ♂ of the first ♀ I shot and lost on the 16th, and of which we got the nest and two eggs on the 19th.

To-day Olé and I went over to the birch-woods on the opposite side of the river above Maristuen in vain search for Skov Ryper. Though we passed through a stretch of capital ground, dwarf willow interspersed with juniper and marshy ground, no signs of birds were seen.

Lower down in the wood we came upon the *rejecta* of Bear only a few days old, composed of vegetable matter. Few small birds of any kind were seen.

In the evening Olé heard of yet another Rough-legged Buzzard's nest near Thuné, which we hope to visit next

week and get either eggs or young. He heard also that no less than four Bears have been seen there lately.

Two travellers of the name of Salvésen passed Maristuen this morning. Curiously enough, they live at Polmont, and have shot often along the coast at Grangemouth, and know it well. The Danish Consul at Leith is their father.

June 30.

On Friday, the 30th of June—a warm day—we occupied ourselves in packing our traps and three large boxes of specimens, into one of which we also put a couple of ‘Gedé-öst,’ or goat-milk cheeses, and a pile of Fladbröd. These boxes Olé will manage to forward to Lærdalsören, to be shipped thence to Bergen.

Alston also made out a list of the birds of the Fillé-fjeld, with the local Norsk names, and put crosses opposite those we wish Olé to collect for us another season.

About eight o’clock in the evening in came old Lars Eråker, looking rather tired and hot. A conversation ensued between him and Olé, and we heard ‘firé eig,’ and shortly after old Lars began fumbling and diving his hands into every corner of his old knapsack. He produced three Rough-legged Buzzard’s eggs, and then seemed at a loss. At last he pulled out a whole sack, and from its furthest and deepest depths produced the fourth egg.

Alston noted that his actions reminded him for all the world of the wizard of the north and his wonderful bag of eggs.

These four eggs are very handsome, and were taken yesterday from a nest in a rock on the Hemsédal Fjeld. Lars said the rock was bad, and that the nest was ‘meget stort.’ The eggs were all fertile, being pretty hard set.

This, with the Bluethroat’s nest, which we plan to get

to-morrow, will make rather a good wind-up to our work at Maristuen, and we hope to have an equally good week at Thuné.

July 1.

On Saturday, the 1st of July—a warm day—after breakfast we went up the old wood to the Blue-throated Warbler's nest which we found on the 27th of June. We got five eggs and the nest, and after waiting some little time, Alston shot the ♀ bird. We could not get the ♂. The nest was of grass and moss, lined with fine grass, and was placed under a single branch of juniper. The eggs were fresh.

Soon after we finally left Maristuen with all our belongings, which we were sorry to do.

At the head of Smédalsvand we stopped the carioles and went along the hillsides for Skov Ryper, but in vain, never seeing a bird.

We stopped again at the head of Osévand, and had another vain search for a Bluethroat's nest on the promontory. We saw the ♀ bird go off again from the same place as before, but our search, though careful, was all in vain. Alston again found a Redshank's nest with four eggs on this promontory.

Two boatmen came across the lake, and from them Olé heard of another Fjeld Örn's nest on Grönnénöset, the hill above the Sæter at Grienlien.

We then went on to Nystuen, and dined off a fine Reindeer which Andreas Nystuen had killed at Slettningsvand last night—*verrie goode meate*.

We then got ropes and started about 5 p.m. for Grönnénöset, where we found the nest was in a very bad place. The ♀ screamed for some time before leaving the nest, and we think she must have young ones. Alston had a long shot and knocked some feathers out of her, but without doing her much harm. The ♂ did not show. As

the nest is apparently in a very bad place, we resolved to get up Peder Hougen to-morrow. Olé is to write him to-night, and he will be able to take the nest about one o'clock. We left the ropes, our guns, etc., in the Sœter till to-morrow, that being the only day we can now spare from Thuné and the Broadbills (*Tringa platyryncha*).

We got a White Wagtail's nest and two eggs from the lad at Kirkésœterné.

The first *swells* we have met—a dowager countess and party—dined here and passed on to their salmon river.

July 2.

On Sunday, the 2nd of July we had thunder at midday, followed by a fine afternoon.

Peder did not come. He was to have met us at the bridge at one o'clock. We concluded that he was not at home and had not got Olé's letter. We then went up to the rock, and Olé let me down above the nest with the rope to within 40 feet of it. I shouted, and shot the hen as she came off. Alston tried for the ♂ by lying behind a rock after we went down, but it was of no use. We could not see into the nest, and it is certainly the *worst* rock we have seen yet. There was no help for it, so we returned to Nystuen.

Alston found little hills made by Lemmings, quite circular and nearly flat.

We dined off Reindeer—excellent venison—and after dinner I went with Olé to the top of Sturganöset to see the sun set, a pretty quick stiff pull of about 1,200 feet. But we were half an hour too late to see all the glories of the sunset. We saw the *set* without the sun, but that was worth the walk too. We got down about ten minutes past ten, the sun setting about nine o'clock.

At the top of Sturganöset we saw tracks of Fox.

We came down a deep cleft in the mountain, which

reminded me of the Geö opposite the Stack in Handa, Sutherlandshire. The height of Sturganöset above sea-level is 4,400 feet.

We heard of a nest of *real* Eagles (probably white-tailed) in Lœrdal, about two or three miles below Blaaflaten. The young are already flown, but we may have a chance of eggs another year.

July 3.

Monday, the 3rd of July, was fine, warm, and breezy. This morning our plans were somewhat disarranged. We first heard that Peder had come, and afterwards that there was no man to go with him to take the Rough-legged Buzzard's nest at Grönnénöset. I was then preparing after a hurried breakfast to start with him, leaving Alston and Olé to go on to Thuné, when at last all was arranged by Andreas Nystuen, who promised to let a man go to-morrow. We paid Peder one dollar in advance, and the man half a dollar, and about eight o'clock we said 'farvel' and started for Thuné.

We had scarcely any remembrance of the country. What, on the 17th of May was one almost unbroken field of snow, seven, eight, and ten feet deep, was to-day a well-wooded valley, the birch-trees swaying in a gentle breeze, and the river rushing where before we knew not that a river existed. In fact, the scenery was as new to us as if we had never seen the place before. Our drive after Skogstad along the Lillé Miösen was very fine. Scenery that we scarcely noticed when, cold and shivering, we drove up the road, was now seen and appreciated. The lake, whose waves broke angrily on the shore on the former occasion, and froze on the stones as they fell, now shone in the warm sun, and a few hungry Trout were rising greedily at the fly.

We saw, too, to-day, near Skogstad, the first Swallow

we have seen in Norway, and flying against and under a tremendous precipice near the head of the Lillé Miösen, a grand Black Eagle. There was no doubt about the Eagle this time, as it was hunting backwards and forwards over the sloping birch-wood under a stupendous cliff to the south-west of the lake.

We also saw a Yellow (grey-headed) Wagtail.

We arrived at Thuné about 1 p.m., and put up at the Station (Neils Thunés'). We had a bite, after which I skinned the Rough-legged Buzzard, while Alston took a sleep, not having had much the previous night, owing to noisy travellers, etc. Olé arranged about a horse and boy (at 8 sk. a day!), and in the evening we packed, cut baccy, etc.

To-morrow we are to start for the Sœters, fourteen miles over the hills, intending to remain some days, and work the marshes for Broad-billed Sandpipers, etc.

July 4.

On Tuesday, the 4th of July, there had been heavy rain all night and in the forenoon, with distant thunder, so we did not think of starting, as there are two rivers which must be forded *en route*, and which will be too much swollen.

The afternoon was fine, and Alston sketched, while I, with Olé, tried fishing at the mouth of a river about a mile west of the station. I caught one Trout about $1\frac{1}{2}$ lb., and Olé two, each about $\frac{3}{4}$ lb. These Trout are in splendid condition, hard, curdy, red as any salmon, and infinitely better fish to eat than Salmon, to my taste.

We saw Swallows, and Swifts, and young White Wag-tails flying. A pair of Magpies have their nest at the end of the barn under the eaves at the Station-house, and one pair of Swifts under the flooring.

Our provisions for our Sœter-life consist of bread,

Liebig, portable soup, some of Andreas Nystuen's Reindeer, a bit of ham, coffee, and Brandtvin (Throntheims' Aquavite), tobacco, etc.; also as *relishes*, arsenical soap, Worcester sauce, and carbolic acid! Medicines: Seidlitz powders, *saltpetre* (in the shape of gunpowder), and blue *pills* (in the shape of dust and large shot)!

Alston made a full list, as follows, of the *Articles de nécessité et de luxe* which we are taking up to the Sœters. It looks lengthy, but Olé tells us that the two panniers on the pony's back would hold twice the quantity.

Reindeer venison.	Liebig (2 pots).
Potatoes.	Portable soup.
Bread.	Preserved vegetables.
Pepper and salt.	Ham.
Eggs.	Coffee.
Kettle and frying-pan.	Biscuits.
Knives and forks, etc.	Aquavite (2 bottles).
Plates.	Worcester sauce.
Towels.	Candles.

Changes of clothes.	Keating's powder.
Changes of underclothes.	'Medicine bag.'
Boots, slippers, stockings.	Guns and ammunition.
Brush, sponges, etc.	Fishing-rod and tackle.
Tobacco, lights, spare pipes.	Flasks, etc., etc.
Journals, pens and ink.	Telescopes.
Skinning and blowing instruments.	Box for eggs.
Arsen. soap and carb. acid.	Collecting boxes.
Tow and cotton.	Small sketch-book.
Plaids and waterproofs.	
Big cloak.	

No fear of starvation, anyway!

We went to bed early, so as to have an early start to-morrow.

July 5.

On Wednesday, the 5th of July—a fine day, very warm in the forenoon—our Sœter life began. We started about a quarter or half-past seven with Olé Lysné, Trond Thuné (a small boy), and the horse, which was equipped with a pack-saddle and a pair of huge panniers, over which our luggage was piled in a most imposing form. Our destination was the Sœter belonging to Neils Thuné (M.P., as we call him; member of the Storthing), about fourteen miles across the fields and valleys.

After the first three miles through an extensive birch-wood, in which four Bears are said to be lurking, we arrived at a Sœter prettily situated at the side of a considerable-sized lake—Helin—in Helléstrand. Upon this lake we saw two or three Scoters, and once, two males swimming together.

We now ascended, accompanied by a herd of cows and calves, which were being taken up to the Sœters, over a low field, then down on the other side to another Sœter in Smaadal. This was about ten miles. Here we saw a Field Örn and lots of Golden Plover, of which Olé shot one for the pot. Here also we lunched on biscuits and the remains of a bottle of claret and water, rested the horse, and then went on.

We passed several Sœters most of which, however, were not yet inhabited. At one—an inhabited one—we saw a flock of goats, two of which had very fine horns. The hills were very fine in form, one with a remarkable pinnacle of rock, and we noted that the birch-wood was gradually increasing.

We saw a Bluethroat amongst the willow and dwarf birch and juniper, which sort of vegetation extends all along our route to-day after we left the birch-woods, except just on the top of the Fjeld. Golden Plover are decidedly more plentiful here than on the Filléfjeld.

Many pretty little flowers grow on the Fjeld now, some of which I propose to gather one of these days when I have the blot-book with me.

At last we turned down through the birch-wood, and reached this Sæter—the Sæter Hestéörné—about two o'clock. It is prettily situated near the river, with the big marsh at the head of the Lake just below.

The girls in charge were not at home, but we soon made ourselves comfortable, and converted the half of the house into very cosy-looking quarters—driving in nails and hanging up our things.

Then Olé proved himself an excellent cook, and we had a grand dinner of fried venison, potatoes, bread, etc., with a huge wooden bowl of milk, to which we helped ourselves from the milk-house. After dinner the ladies of the house returned and seemed glad to see us—though one would think it would be rather a bore to be thus turned out of house and home.

We then went out, Alston to try for a Bluethroat, and Olé and I and Trond, our boy, to try for a Trout or two, but none of us were successful.

Alston saw lots of Bramblings, Fieldfares, and Redwings in the woods, but could see no Bluethroats, and came to suspect that they do not come down into the valley.

As Olé and I walked along through the willow scrub, Olé said, 'What bird was that?' but I did not see it, as it pitched past as he spoke. We hunted high and low in vain, but we could not put it up. He said it was white underneath, with some red about the neck and shoulders, and was a good deal smaller than a Redshank (?).

Soon after, Trond, a sharp-eyed, active little fellow, son of Neils Thuné, held up his hands and showed us an egg lying on the bare ground. It was rather bleached with the sun, and quite rotten. It could be nothing else

but the egg of the Great Snipe—a dropped egg, we thought at the time. But on trying to blow it afterwards we found it had been sat upon some days. Our deductions from this circumstance were not pleasant. The river was higher than Trond ever remembered to have seen it before, and had evidently been all over the island. Two rivers join here, the larger one from Smaadal, the valley we came down to-day, and the other the Hydals Elv, which is the best fishing stream. We fear that the birds' nests have been destroyed as at Nystuen, and that the great marsh will be in a similar condition. We hope, however, to try it to-morrow.

July 6.

Thursday, the 6th of July, was a day of heavy showers, but we had previously had a night's experience.

How jolly we were last night, and how we scoffed at the idea of the discomforts of Sœter life, and how we tumbled into the deal-floored beds on the top of cosy sheep- and calf-skins and hay, Olé and Trond in the one bed, Alston and I in the other. But O ye gods! now came the discomforts of Sœter life. If one flea *bit* me, a hundred scampered and played leap-frog all over my body, and as many more upon Alston and Olé. Trond was either flea-proof or not good to eat, as he slept from ten till eight or nine next morning.

As for me, first I snoozed, then awoke and saw Olé stooping over his bed and plentifully besprinkling it with Keating, which, though I was only newly awakened, put me off in convulsions. Smoked a pipe, had a dram, and did likewise as regarded the Keating, which 'I guess' made the little scoundrels 'make a mistake that journey.' The two Sœter girls, who had come up but four days ago, slept at an adjoining Sœter.

In the morning, at 7 a.m., we tubbed in the burn, and I shot a male *Budytes flava* (var. *melanocephala*).

Alston afterwards shot the ♀. The young are still flying, and we hope to secure them at our leisure.

We had an excellent breakfast of Reindeer liver and eggs, after which we went to the big marsh, but it did not fulfil our expectations. Moreover, as we had suspected, it had a very short time ago been entirely under water, and not a single bird of any description was seen in it. It is covered with a thick growth of scrub or dwarf-willow and *ikke godt* for waders.

We now rowed down the river and landed near a Sæter, where we heard of Bjerg-ulf from an old squatter, who rowed us across the lake—a nameless one—and we searched about three-quarters of a mile of low round rocks in vain. Then to another rock on the opposite side again, while Olé rowed the boat back—a hard pull. Here we saw plenty of signs of the birds, but no birds or nest, though the old man found the nest here twice before, and this year saw two eggs, which he left, but which had been removed by the birds when he returned. He will have yet another search for the nest for us. The bird is heard often on the south side of the river and lake.

This man, Olé says, will be a useful fellow. He took down his name and address in his pocket-book along with a list of the birds he may get next year. His name is Lars Larsen, of Laargaard, and is a wealthy old rascal, who has coolly taken possession of a piece of land, and having kept it for so many years, cannot now be turned out by the rightful owner. It seems to me that men in Norway blessed with the name of Lars are often rascals, and as often the best bird-nesters. Olé will make use of him next year.

Alston shot another *Budytes melanocephala*, a fine ♂. These birds are quite common here. The ♀ has the cap quite grey without any appearance of black. We saw

and heard numbers throughout the day, and in some cases the old birds were accompanied by the young flying, as with those of this morning.

From Lars Larsen we got an egg of the Black Scoter, which was the last of a nest of nine, which he had found near Sæter Hestéörné some time ago—one month—the egg was quite fresh. He had eaten the other eight, the old rascal.

To-day was a day of disappointments and small misfortunes. I lost my ramrod and Alston his 'tollé knivé,' both of which articles must have slipped out of their cases. Also in the morning we found that the ramrod of the little gun must have likewise dropped *en route* yesterday. Luckily the ramrod of the big gun can be replaced by the washing-rod, which unscrews and goes into the bag.

When searching for the Bjerg-ulf we saw tracks and excreta of Bear in profusion. Lemmings were here last autumn in small numbers, which agrees with there being so few on the Filléfjeld this year. Adders are *said* to be common here, and Frogs *are* so.

After dinner we skinned the three Wagtails, and then about 10.30 or 11 p.m., we went up to the last mentioned Bjerg-ulf rock to watch for the chance of a shot at the birds. But they came not, and we got back about twelve.

We went to bed about 1 a.m., having first vanquished the fleas completely by means of Keating.

July 7.

Friday, the 7th of July, was wet until twelve o'clock, after which we went in search of Wagtails, Bluethroats, etc. We found two young *Budytes melanocephala* sitting on the grass, which we caught and carbolised. We also shot two young White Wagtails; but one of them was badly spoilt. We skinned a Bluethroat which Olé shot last night.

At about 2 p.m. we had a most luxurious dinner of Olé's cooking—soup with tinned vegetables in it, Teal and Golden Plover done to a turn, and pancake of Scoter's eggs.

After dinner we started to go to a large lake about three miles down the valley, but at Lars Larsen's house we heard that there were no boats upon this end of it, the Søeter people having left for a time. We sent Trond down to inquire of those who remained when they expected them back.

Meanwhile Olé went after Bluethroats, and Alston and I with the stick-gun after Wagtails. We fired at least a dozen shots, but could *not* kill, the trigger being very stiff. We saw lots of Whinchats and some Redpolls.

We came in at last, and Olé soon after. He had been more successful, and produced a fine ♂ Bluethroat and—hurrah!—a Great Snipe. The latter had risen from a dry place in an open part of the birch-wood, but he could find no nest. In the evening Olé showed us the place, and we hunted high and low through a whole series of likely-looking marshes which lie among the birch-woods. It was getting late, and we were returning to the house, when Trond flushed a bird. From his description it was in all probability a Great Snipe. It was too dark for us to see it as it flew away low along the ground. Again in vain we searched, but as it is close to the house we soon determined on leaving the spot for the present.

Old Lars Larsen says there are lots of Lynxes and Gluttons about here. Lemmings are here called 'Lomhund' (*i.e.*, pocket-dog), which is probably the original form of the word.

Trond came back and reported that there is an old boat, though not a very good one, at the lake. Also that an old woman knew of a nest of some sort of duck.

To-night Keating was—as before—perfectly effective, but through the day the mosquitoes, which have appeared

lately, were very bad, at least to me. They stabbed my legs right through my thick stockings, and each bite swells up, sometimes as big as a nut. My legs are positively painful with these hard red swellings, which last for two or three days. The swelling is visible through the stockings.*

July 8.

Saturday, the 8th of July, was one of heavy rain. We were up at six o'clock and had a most uncomfortable wash in the burn. Washing in a waterproof sounds somewhat strange, but the rain and wind were miserably cold.

We skinned birds—the Great Snipe and Bluethroat—and when the weather cleared a little we started for the lake—Kvœvlin Vand—but the rain came on again and it poured all day and night.

We drove a hard bargain with an old girl at a Sœter for a nest of six Teal eggs. She wanted three skillings apiece for them, but we would only give her two. She was as like an old Lapp—Olé said—as she could stare.

We found the boat was of no use. We saw lots of Ducks flying about the islands, and one bird, which we could not make out through the mist and rain, had a nest on a point on the big island. We believed it to be a Goose. We saw it stand up first, and then gradually settle down till its head disappeared. Nothing for it but to return again when the people are here with the boats. They come to-night and return on Monday.

We shot two more Black-headed Wagtails, and Olé fished for a time in the river. He caught one nice Trout of $\frac{3}{4}$ lbs., rising several more.

We got back to the Sœter, and changed to the skin, which was done under difficulties not experienced at

* This thorough inoculation served me well in after-years. I scarcely ever got swellings again from their bites (H.B., 1902).

home, the female portion of the population of the Sœters being very simple-minded.

The rain continued pelting down, and—horror!—we found the roof began to leak. Drip! drip! Our bed was quite dry when we went to sleep, about ten, but at twelve Alston had to turn out, when it began to splish-splash! on our faces. He retired below the table, where he made a shake-down with a little hay and an old rug on the earthen floor, and slept quite comfortably. Olé slept on a bench with Alston's big cloak under him. I tried a bench bare of bedding, and then got into the bed again with my head turned the other way. Then the fleas scampered over me for half an hour or so, and I got considerably bitten, but I dropped off to sleep at last. Trond slept through rain and fleas enveloped in his sheep-skin, and never winked till morning.

July 9.

Sunday, the 9th of July, was fine, but with a heavy shower in the afternoon.

We were up at seven, and sent Trond and the horse to Thuné for supplies.

We went down to the large lake—Kvœvlin Vand—got a boat and a man and two boys, and went out to the islands. We went first to the point of the large island—Sedsœe—at the head of the lake where we had seen the birds yesterday. We put them both up, and found our *goose* to be a *Scoter*. I knocked one of them over, and wounded the other, Alston also putting one barrel into it. But the first dived and was lost, and the other went far down the lake. We then found the nest, with eight eggs, which were quite fresh.

Then we landed at a point on the other side. The boys *would* talk, and the consequence was that another Duck got off its nest and out on to the lake before we

twigged it. I killed it with the first barrel—a ♀ Long-tailed Duck. We searched in vain for the nest. Olé saw the Drake fly off near where I shot the female.

We went about three miles further down the lake, and there saw three or four pairs of Scoters. I killed three birds—one pair right and left—and Olé and Alston another. The Scoters were flying as many as four together, but did not appear to be breeding, nor could we find any nests, having doubtless been forestalled by the people from the surrounding Sœters, who gather the eggs for eating. A pair of Divers were also upon the lake. Also on a large island, on a gravelly point, I killed a Ring Dotterel, but we searched in vain for the nest.

The man and two boys seemed well pleased with the payment we gave them—two and a half marks altogether. The boys got half a mark each, and were very anxious to get it *changed*. They are to look for more nests.

July 10.

Monday, the 10th of July, was a wet, windy, nasty day of rain, and as we had plenty of birds to skin, we made a day of it in the house. We skinned the three Scoters, all females, the ♀ Long-tailed Duck, and one Black-headed Wagtail, and we blew the Scoter's eggs, but found we could not make omelette or pancake of them. Olé skinned one of the Scoters, and did it very well indeed, though it was a bloody specimen.

Trond returned from Thuné, bringing coffee, eggs, bread, etc., and letters. He brought word that there are no eggs or birds from Nystuen, but a letter to Olé from his cousin at Maristuen saying that old Lars Eråker had two more nests, one of four eggs, and one of four young birds, of Rough-legged Buzzards. These he will bring to Thuné any day, so Olé has written, as he

will have a chance of sending a letter by a girl to-morrow. This will be not a bad wind-up for the Filléfeld. We shall get them by twelve o'clock noon on Saturday.

July 11.

Tuesday, the 11th of July, was a fine warm day, followed by rain at night. There had been a keen frost through the night, followed by a bright beautiful morning with not a cloud in the sky. We found the burn very cold for our tub.

About five o'clock we got up, and after breakfast we started about seven to row down the Kvœvlin Vand to some islands further down than we had yet been. While the man was getting ready, Alston and I went out to the large island, where we found the Scoter's nest—Gèdéoë—and shot a pair of Bluethroats, one each, the ♂ falling to Alston and the ♀ to me.

When about a mile down, the man (another Olé) took us to a place where he had seen a Marten (Mörkat) the day before, in a large heap of *débris* at the foot of a low cliff in the thick birch-wood. The beast had come out and *barked* at him, and he had pitched stones at it.

But, of course, though we waited a considerable time, it was in vain. There were plenty of droppings to be seen on the stones round about, and there is little doubt it had a litter of young somewhere among the stones.

Then we went on to the furthest islands, about seven miles from the head of the loch, where I shot a ♀ Wild Duck, and Alston a Teal. We saw for the first time a Velvet Scoter—a fine ♂—but we found no new nests. The Sœter people have made a clean sweep of them. One woman, we were told, had found ten nests, all with fresh eggs. We were just a week or so too late in coming here.

Olé and I tried fishing on our return in the river, but it

was 'ikke gaae' (*i.e.*, in dog-Norsk, 'no go.'). Meanwhile Aston saw a ♀ Blackbird near Old Lars' place.

We made up our mind to return soon to Thuné, probably on Thursday, and try for some fishing, as the egg-collecting season is evidently about over here now.

I give here a list of rocks containing nests of Rough-legged Buzzards in the Fillé fjeld and other situations:—

1 *	Smédalsbjerg	Fillé fjeld, 2
2 *	Valdersdalen	„ 3
3 *	Lillé Frostdalen	„ 2
4	Storé Frostdalen	„
5	Grönnénöset	„
6	Følléstol gièlen	„
7 *	Soré Sul	„ 2
8	Sortéberg	„
9	Oddéberg	„
10 *	Droughellernöset	Hemsédalfjeld, 4.
11	Skakadalen	Vang
12	Larsgaard	Grüнкé
13	Eggestölnöset	Hemsédalfjeld
14	Slettningsnöset	Fillé fjeld

Köng Örn.

1	Blaae Kampen	Grüнкé
2	Ehrisaasen	Lördal

Bjerg Uls.

1	Honingsberget	Fillé fjeld
2	Eggestölnöset	Hemsédalfjeld
3	Brüsestölnöset	„
4	Larsgaard	Grüнкé

Blaae-Hög.

1	Eggestölnöset	Hemsédalfjeld
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Eggs of Rough-legged Buzzard we have procured from those stations we have marked with an asterisk (*)

through Olé Lysné and Lars Eráker, with, in some cases, the assistance of Peder Hougen as cragsman. Those taken in Smédalsbjerg, Lillé Frostdal, and Valdersdal we ourselves saw taken out. Birds were shot from the two latter and from Grönnénöset by myself, and from Smédalsbjerg by Lars Eráker.

July 12.

On Wednesday, the 12th of July, it rained all day. We began to skin birds, etc., but soon after breakfast the roof began to leak in the most diabolical manner, much worse than on the night of the 8th, and the Sæter was fast becoming uninhabitable, so we resolved to push on through the wet to Thuné, instead of waiting till to-morrow. We skinned one Bluethroat, then packed up as quickly as possible. Olé cooked some dinner, and at half-past two we took leave of our Sæter-life in the midst of heavy rain.

The two girls were overwhelmed with the three dollars Olé gave them for us for the milk, cream, and cheese and tip to themselves. Thus three people lived at a Sæter for 13s. 6d. (English). Another dollar and a half or so will probably cover the cost of the provisions brought and sent from Thuné.

We walked over to Thuné at a good pace, and were accompanied by another party—an old man and his two sons and a pony with birch-bark. We concluded through Olé a bargain with the elder son to drive us all the way to Gjövik at the regular posting charges. This will save us an infinity of trouble and probably delay. He will supply both carioles with horses.

The same lad knows a Scoter's nest, and will take the eggs on his return and send them to Olé at Maristuen. From him in the evening we purchased a good skin of *Vulpes lagopus* ♂ in winter fur for one and a half dollars,

which is not dear. A very different price from the six dollars we were asked at Nystuen.

After a wet walk of between fourteen and fifteen miles, fording two burns, one of them twice, and with only one rest by the way of two or three minutes, we arrived at Thuné at half-past seven, thus doing the whole distance in five hours, which we flattered ourselves was pretty fair going.

On the hill, coming over, we heard a peculiar plaintive note from some bird. It may only have been a Golden Plover, but the note was of three syllables 'tu-whi-ew.'* The nature of the ground was suggestive to me of Dotterel.

Olé has agreed to go with us as far as Reién, and will there see Dr. Printz with us. We shall try and get some particulars and information from him about Broadbilled Sandpipers, etc., in the hope that next year we may perhaps get a good haul—a hope which was never accomplished.

We were not very tired when we arrived in the evening, but we were quite ready for bed and the unwonted luxuries of night-shirts and sheets, and I rather 'reckon' we slept well this night.

July 13.

Thursday, the 13th of July, was a day of showers. We slept till near 9 a.m., and then did a *tolerable* breakfast, Alston managing four eggs, besides, ham, cheese, beer, etc.! He skinned the remaining Bluethroat and the young Duck, worked on his sketches, etc.

After dinner, about half-past three, Olé and I went fishing. We tried only the two pools below the bridge and the mouth of the river. I killed four

* Accent on the 'i' in whi-ew = whí-ew. See remarks on the notes of Golden and Grey Plover, under Part III. of Vol. II. There is little doubt the above *was* just a Golden Plover's note.

nice Trout, two of them about three-quarters of a pound, or between that and a pound, and two about half a pound each. They gave capital sport, especially one of the smaller ones, which I hooked in the bridge pool and which kept boring up the stream under the bridge. Olé had one of his about a pound and a half. The wind was very strong and blowing across the stream at the mouth of the river, the sky dark and thundery, but the water much warmer. We were told that fishing in the lake is now prohibited by the peasants, as interfering with the netting; but next day we learnt that this was all nonsense.

July 14.

Friday, the 14th of July, was a dull, rainy-looking day. The river was low. In the morning I caught a couple of small Trout, and in the evening I caught one about a pound and Olé two, each $2\frac{1}{4}$ lbs. or thereabouts.

We heard to-day that the road is now crammed with 'travelling critters'—one hundred and fifty English landing at Christiania from one steamer—so that it is just as well that we had made arrangements for horses all the way from here to Gjøvik.

I bought two carved spoons with very pretty patterns. Silver articles—a snuff-box and two rings—were offered us for eleven dollars, but we declined, though Olé says the rings are now very rare and were cheap.

An old monument at the church gate was erected by King Hacon in the year A.D. 980, in memory of the death of Geislùr, who went with the king to fight at Thronheim and was killed, having been mistaken for the king himself. The stone is a large sheet of slate with curious carving near the bottom. The church here (parish church of Vang) occupies the place of the ancient one sold to the King of Prussia, which is said by Murray to have stood near Lørdalsören!

July 15.

Saturday, the 15th of July, a rainy day, was mainly devoted to packing, settling up with Olé, etc. I caught a few Trout. We have no word of Lars and his eggs.

July 16.

Sunday, the 16th of July, a fine day, we started from Thuné about 9.15 a.m., with Iver Ellingbö and Olé, the latter accompanying us as far as Reién. At twelve o'clock we had lunch at Stè, which rather interfered with the gorgeous feed we got later on at Dr. Printz's.

We reached Dr. Printz's house at two o'clock in time for dinner ('middags-mal'),—which was eating with a vengeance. We succeeded, however, in packing away a good deal, which we had likewise done at Stè.

Dr. Printz was very kind to us, and had got us a grand haul of eggs, and would accept nothing for them but what they had cost him, viz., Sp. 2.60, as he had given up collecting for himself. We packed them up hurriedly, but the following list will give a partial idea of what they are:—

Pied Flycatcher
 8 Green Woodpecker, 1870
 5 Greyhead G. Woodpecker, 1870
 1 Goshawk, 1870
 Velvet Scoter, 1870 and 1871
 Goosanders and down
 4 Woodcocks, 1870
 2 Great Snipe
 2 Common Snipe (very large)
 2 Black-throated Diver

This was not a bad lot. The Ducks, the Great Snipe, Goosanders, etc., were from Syndenvand, which must be a good place. It was there that he and Godman

took two nests (three and two eggs) of Broad-billed Sandpiper in 1861, but he has never met with this species since. Crane has occurred once near Slidré, but breeds inland, and he has taken them 'mangé gangé.' The Long-tailed Duck's eggs he has only taken once, and he seemed much interested in our having shot a ♀. The Snowy Owl bred last year on Valdersfeldé, and the Hawk Owl has been shot—and probably bred—in Ostré Slidré. Altogether we got a good deal of information, including lists of birds of Filléfeld and Valdersfeld.

By the way, Alston saw a Great Black Woodpecker just before arriving at Dr. Printz's.

At Reién we bade 'farvel' to Olé, and then posted on to Fagernaes, where we stopped for the night, and which we liked no better than on the last occasion.

Four Englishmen are fishing at Fagernaes, but the Trout are all smaller than Miösen Trout. One of them recommends Tomlévold or Sköiön.

July 17.

Monday, the 17th of July, a very warm but cloudy day, we were up at six and had a plunge in the lake—pretty cold. We were to have started at seven and did get away at eight.

We don't like Fagernaes much. Too much pretension, and the son of the landlord wears a 'chimney-pot' on his head and a perpetual smirk on his countenance suggestive of sour cream. He knows about two more words of English besides what he knew when we last saw him, and we had to fall back upon Norsk (he also).

At Gravedalen we had an excellent AI lunch of cold veal, bread, butter and 'Gedé-öst,' and two 'flasker öl,' all for 1 mark 20 sk. Of this the beer cost 1 mark, so that we had as much as we could eat for 5d. each.

Coming down the long hill to Tomlévold we met with our first regular accident. Alston's horse in trotting slowly down a very gentle incline, suddenly fell heavily, breaking both shafts and grazing one of its knees. The horse fell suddenly over on its side, its feet flying out sideways. Of course one shaft was completely broken, snapping off close to the splinter bar. The other was twisted up and cracked.

The horse was not much hurt, the right knee being slightly cut, and a piece of skin rubbed off the right shoulder, and another above the right eye. Its whole side was covered with dust.

The whole thing occurred in a most unaccountable way. The horse did not *roll* over the shaft, but *fell* clean over. It seemed hardly a stumble, but a heavy lurching fall on its side and shoulder. The place where it happened was a gentle incline, *almost level*, and we were going quite slowly at the time. It is a good thing this did not occur near the beginning of our tour.

However, Iver, our lad, soon got the one shaft spliced with cord and the other 'fished' with a rail from the fence secured with cord and wedged, and we were able to go on.

Below Tomlévold we saw a Lesser Whitethroat in the fence; it was tame, and we saw it well.

We received a hearty welcome at Sköién, which we reached about five o'clock.

We were now able to hold a considerable conversation in Norsk with the old gentleman, which we were unable to do before—and we were *highly complimented* by him on our great knowledge of the Norsk tongue. Hem!

At 'aftensmal' we had salad, and the first strawberries we have seen in Norway—and delicious they were. I had them all to myself, as Alston cannot eat fruit. 'Oh!

bully for I!' He wired in, however, to salad and 'gedé öst' and 'fladbrod.'

Mosquitoes are here, too. I have huge lumps all over my arms and forehead from their venomous bites. *Oh!* the 'slarve!' how I hate 'em.

We incidentally noted in passing that Gravdalen would be excellent quarters for Hjerper and Capercaillie shooting.

July 18.

Tuesday, the 18th of July—a fine windy day—we got Alston's cariole neatly mended by a smith.

I went with a guide to try fishing about four miles over the hill south of Sköién, but soon returned, as the Trout were small, black burn Trout. The walk, or scramble, amongst the thick fir-wood and steep banks of the burn was very hot work.

I saw a Great Black Woodpecker for an instant as it flew away into the forest. The centre of its back had a bronze-brown appearance.

I came to a fine waterfall—the Hög Foss—about four English miles from Sköién; a large body of water shooting outwards from a shelving rock, and descending at one bound at least 200 feet—I think more—certainly as fine a fall as we have seen in Norway. The waterfall is well worthy of the attention of tourists, though not mentioned in the guide-book.

I tried the river at Sköién, which is said to contain large trout, but I only caught a few small ones in it. A very strong wind was blowing, and great quantities of timber logs were floating down the stream.

On returning to the station I found that Alston had not been idle. He had purchased for *half a dollar* a fine, healthy, tame young Bjerg-ulf (Eagle Owl) from a lad named Andreas Larsen Mosvand, son of Lars Mosvand. It was taken at Mosveen, and about three-quarters

of a Norsk mile from here. We made a note to write to Olé Lysné to communicate with this lad concerning eggs next year. I also saw a Dipper on the Hög Elv.

We left Sköiën with regret about seven o'clock* for Möstád or Mustád. 'Lars' (as we have named the Bjergulf) was put in a roomy box lashed to the top of Alston's portmanteau. He did not seem, however, to enjoy carioling—indeed, he was anything but 'meget bequent' (very comfortable). We are to feed him on raw meat three or four times a day.

Iver, our boy, was 'ikké bequent ogsaa,' as he had to sit perched on high, on top of the box of skins etc., which was lashed on top of *my* portmanteau.

We arrived at Mustád about half-past nine o'clock.

July 19.

Wednesday, the 19th of July—a very hot day—we left Mustád about seven o'clock, and arrived at Gjøvik about 8.30. I occupied the time to the starting of the steamer at 10.30 by writing up my journal.

On board the steamer on the *Miösen*, a couple of Englishmen (one of them a Lord), were returning from their Salmon river, north of Thronnheim, dissatisfied with their sport, saying it was such a bad season. Yet they had killed 140 Salmon in one month. They came on to Christiania in our railway carriage. They did not admire the scenery at all, and said it was not worth the trouble and *discomfort* of the travelling. We wondered how his lordship would like living in a *Søeter*!

We also came across on the steamer an American—a Southerner—a 'rum old chap,' who had been all over the world, and is going to the North Cape before returning *via* China and Japan. He has been all through

* Somebody's watch gone mad.

Russia and from Finmark to the Caucasus, in Asia Minor and Palestine, and once started to go to Timbuctoo, but had to turn back as the country was dangerous. He has now been travelling about Europe for six and a half years. He is an oldish man, very gentlemanly and pleasant, and we were all very jolly together. The old Yank paid Alston the compliment of saying that he was liker 'one of our Western boys' than any one he had ever seen in Europe, and that if he went to Texas he might go 'all round' without being taken for a 'Britisher.' Whereat Alston felt muchly flattered!

'Herr Bjerg-ulf' is quite well and much quieter now. He feeds greedily on raw meat. He can scarcely be (like many pets) killed by 'over-kindness' and good living, his capacity for gulping down meat being *considerable*.

On arriving in Christiania we went *to the hospital* and had warm baths, after which Bennett called, and we turned into bed about 10 p.m.

July 20.

Thursday, the 20th of July, we settled everything with Bennett to our mutual satisfaction. It cost us just 27sp. 40sk. each for carioles, provisions, etc. Subjoined is a list of what we got from him:—

2	Carioles-hire	...	...	...	Sp. 30.0
2	Harnesses	,,	...	...	6.0
1	Greasepot	,,	...	...	0.20
1-4	Bottle-case	,,	...	...	1.30
2	Whipholders	,,	...	...	0.30
4	Straps No. 1	,,	...	...	0.96
3	„ No. 2	,,	...	...	0.48
2	Whips at 3 m.	...	...	...	1.24
1	Rope	...	...	...	0.24
1	Cord	...	...	...	0.24

2	Phrase books	...	...	...	0.72
1	Steamer table	...	...	...	0.6
2	Bottles Brandy	...	...	...	2.0
2	„ Whiskey	...	...	...	1.24
1	Box Biscuits	...	...	...	1.0
1	Ham	...	...	...	2.75
2	Reindeer Tongues...	...	...	...	0.72
	Postage Stamps 24/12	...	...	...	2.48
1	Bottle Worcestershire Sauce	...	...	...	0.36
1	Mackintosh Bag	...	...	...	1.60
1	Sailcloth Guncase...	...	...	...	1.0
2	Tollé Knives	...	...	...	0.96

Sp. 54.85

For the two of us about £12 5s. in English money.

We bought a few articles, got back our money lying in Bennett's hands, called at the University, and found our boxes from Bergen all safe, and bought various other things in Christiania, and the evening we spent at the Tea-Gardens, Theatre, and Café. We did not understand the language in the Theatre, but could make out the general meaning of the piece; and the acting, by Danish actors, seemed very good. In the Café there was singing, and we could have our glass of beer, and smoke our pipes in comfort, as it was raining heavily outside. The Gardens themselves were consequently deserted.

July 21.

On Friday, the 21st of July, we made more purchases, photographs, etc., and met friends who are starting up-country to-morrow.

The first Bat was observed, at Klingenberg, near Christiania.

July 22.

On Saturday, the 22nd of July, in the afternoon, we went on board the *Scotia*, which left at 5 p.m. in fine weather.

They fed us well on board, giving four substantial meals a day, all included in the three guineas passage money. We never sailed in a more comfortable, better-found vessel, both as regards accommodation, food, and people.

We got the Bjerg-ulf established in the smoking-room in his box, where he received many visitors.

We made our voyage on Sunday and Monday in fine weather, at an average speed of ten knots per hour; arrived at Granton about one o'clock on the morning of Tuesday, the 25th of July; landed with all our kit and live stock about eight. We were very kindly treated by the custom-house, who passed all our boxes of specimens through without opening, on our affirming what they contained.

July 25.

'St. Olaf,' as we have re-christened the Bjerg-ulf, attracted much attention. A porter who took up our things to the train said, 'I never saw but one as big before, and that came in here on board a *ship about twa years syne.*' 'Oh,' I said. 'Caught on board a Montrose fishing-boat?' '*The verra same.*' 'Well, I've got that bird too in my possession,' I said.

I arrived at home at Dunipace in the afternoon, and found all well.

So—'*Skaal til Gamlé Norgé.*'

APPENDIX

LIST OF BIRDS OBSERVED.

IN the list which follows we include (*a*) all the species observed by us on the Fillé fjeld and Valders fjeld; (*b*) those observed by us in the valleys; (*c*) notes by Dr. Hans Christian Printz, Districts-lægé of Reién, whose notes in Norsk are added*; (*d*) notes of specimens sent to us by Olé J. Lysné and collected for us by him both after our departure in 1871, and also during the following year, 1872; and (*e*) the Norsk local names, given on the authority of Olé J. Lysné and others. The nomenclature is brought up to date, and the arrangement is according to Dresser's 'Manual of Palæarctic Birds,' published in 1902.

1. **Missel Thrush.** *Turdus viscivorus*, L.

Seen at Vossévangen.

2. **Song Thrush.** *Turdus musicus*, L.

'Maaltrost.' O. J. Lysné. Observed nesting at Sköién and ? Maristuen. 'Five eggs taken 3rd July, 1872, by O. J. Lysné, ipse, in the wood between Laarsgaard and Hestéörné. The nest was built 8 feet from the ground in a fork of a birch-tree.'

* The species marked with the asterisk are those which Dr. Printz added to our list and he is sole authority for.

3. **Redwing.** *Turdus iliacus*, L.

'Rödving,' 'Rödvingé' (O. J. Lysné). Fillé fjeld and Valders fjeld list.

'Five eggs taken 4th June, 1872, by O. J. L., ipse, close to Maristuen, Fillé fjeld.'

'Four eggs taken 19th June, 1872, by O. J. L., ipse, in wood near Maristuen, Fillé fjeld. One of these eggs was rotten, and quite different from the others; it was abnormally large and the colour lighter.'

4. **Fieldfare.** *Turdus pilaris*, L.

'Trost.' Fillé fjeld and Valders fjeld list.

5. **Blackbird.** *Turdus merula*, L.

Laarsgaard (E. R. Alston). Fillé fjeld and Valders fjeld list.

6. **Ring Ousel.** *Turdus torquatus*, L.

'Sidsvort,' 'Ringtrost' (O. J. Lysné). Fillé fjeld and Valders fjeld list.

'Four eggs taken 23rd May, 1872, by O. J. L., ipse, from nest in birch-wood near Mö, Lørdal, about two feet from the ground.'

'Four eggs taken 7th June, 1872, by O. J. L., ipse, at Björkum.'

'Eight eggs taken 13th June, 1872, by O. J. L., ipse. The nest was in a cleft of a rock close to Brusestölen, Fillé fjeld.'

'Four eggs taken 19th June, 1872, by O. J. L., ipse, at Maristuen, Fillé fjeld?'

'Two eggs found 29th June, 1872, in a juniper bush in the hill above Hestéörné Scæter' (O. J. Lysné).

7. **Black-bellied Dipper.** *Cinclus melanogaster*, Brehm.

'Strandé Kong,' 'Fossé Karl,' 'Fossékal' (O. J. Lysné). 'Tys-fugl,' or more correctly 'Tusséfugl;' 'tussé' being a subterranean being, a kind of

gnome (R. Collett in letter, 5th Feb., 1872; see also 'Ornithologiské Bemærkinger til Norgés Fauna,' in Night's 'Magazin för Naturviden Raberné,' 18 bund, p. 165).

Fillé fjeld and Valdér fjeld.

'Five eggs taken 25th May, 1872, by O. J. L., ipse. The nest was in a rock close to a waterfall about a mile below the station at Husum.'

8. **Wheatear.** *Saxicola œnanthe* (L.).

'Stendiep,' 'Stendulp' (O. J. Lysné). Fillé fjeld and Valdér fjeld list.

'Six eggs taken 13th June, 1872, by O. J. L., ipse. Nest below a stone close to the road at Fillé fjeld.'

9. **Whinchat.** *Pratincola rubetra* (L.).

Fillé fjeld and Valdér fjeld list.

10. **Redstart.** *Ruticilla phœnicurus* (L.).

Fillé fjeld and Valdér fjeld list.

'Eight eggs taken 23rd May, 1872, by O. J. L., ipse, in a hole 20 feet from the ground in an old birch-tree at Mö, Lœrdal' [these were attributed to *Muscicapa atricapilla* by Lysné, but the determination corrected by J. A. H. B.].

'Five eggs taken 6th June, 1872, by A. J. Lysné near Björkum, Lœrdal' [sent as *M. atricapilla*, by Lysné, but the determination corrected by J. A. H. B.]

11. **Red-spotted Bluethroat.** *Cyanecula suecica* (L.).

'Blaakjelken' (O. J. Lysné). 'Blaastrubé sangeren' (Id.) Fillé fjeld and Valdér fjeld list.

'Four eggs taken 25th June, 1872, by O. J. L., ipse. The nest was below a juniper bush on a hill near Helim Sœter. The eggs were quite fresh.'

'Three eggs found 29th June, 1872, at Smaadalen (not far from Hestéörn) by O. J. L., ipse. One

of the birds was seen. The nest was below a root of an old birch-tree.'

'Four eggs taken 6th July, 1872, by O. J. L., ipse, on the hill between Helim Lake and Helgésyndin Lake. The eggs were very hard set. The nest was below a birch bush close by the road.'

12. **Redbreast.** *Erithacus rubecula* (L.).

Obtained by us in the valleys at Mustád.

13. **Lesser Whitethroat.** *Sylvia curruca* (L.).

Obtained by us in the valleys at Tomlévold.

14. **Blackcap Warbler.** *Sylvia atricapilla* (L.).

Fillérfjeld and Valdersfjeld list.

15. **Goldcrest.** *Regulus cristatus*, Koch.

'Fuglékong' (O. J. Lysné). Obtained by us in the valleys.

16. **Willow Warbler.** *Phylloscopus trochilus* (L.).

Fillérfjeld and Valdersfjeld list.

'Five eggs found 13th June, 1872, by O. J. L., ipse, at Fillérfjeld. The nest was in the grass in a bog.' [Sent as *Emberiza schæniclus*, and determination corrected by J. A. H. B.]

'Two eggs taken in a nest—the other being hatched—by O. J. L., ipse, 27th June, 1872. The nest was on the ground, and much like the nest of *Regulus cristatus*.'

'Seven eggs, hard-set, taken 1st July, 1872, by a boy, who told Lysné that the nest was built near the water in a low willow bush. Locality not stated. The day after, Lysné went with the boy in order to see the nest, but he could not find it again.'

'Three eggs were taken 1st July, 1872, by the same boy from a nest built on the ground' (O. J. Lysné).

- ‘Six eggs were taken by a Sæter girl at the other side of Hestéörné, 1st July, 1872’ (O. J. Lysné).
17. **Hedge Sparrow.** *Accentor modularis* (L.).
 ‘Iernspurv’ (O. T. Lysné), ‘Blaairisk’ (Id.). Observed by us in the valleys.
 ‘Four eggs taken 24th May, 1872, by O. J. L., ipse, locality not stated. The nest was first found by a boy on the 17th, who destroyed three eggs. It was built in a thick juniper bush about a couple of feet from the ground.’
18. **Long-tailed Tit.** *Acredula caudata* (L.).
 Observed by us in the valleys.
19. **Great Tit.** *Parus major*, L.
 ‘Tété.’ Fillé fjeld and Valders fjeld list.
 ‘Eleven eggs taken by a boy, 24th May, 1872, locality not stated. The nest was in a hollow in a birch-tree, and was built of fine grass’ (O. J. Lysné).
20. **Northern Marsh Tit.** *Parus salicarius*, C. L. Brehm.
 (= *P. borealis*, De Selys).
 Fillé fjeld and Valders fjeld.
- *21. **Siberian Tit.** *Parus cinctus*, Bodd. (= *P. sibiricus*, Gmel.).
 This species was not observed by ourselves, but noted by Dr. Printz as inhabiting the Fillé fjeld and Valders fjeld.
22. **Blue Tit.** *Parus cæruleus*, L.
 Found in the valleys by us.
23. **Tree Creeper.** *Certhia familiaris*, L.
 Observed by us in the valleys.
24. **White Wagtail.** *Motacilla alba*, L.
 ‘Erlé,’ ‘Linerlé’ (O. J. Lysné). Fillé fjeld and Valders fjeld list.
 ‘Linerlé. Six eggs taken by O. J. L., ipse,

close to the station, Blaaflaten, in a stone wall, 14th May, 1872.'

'Five eggs taken by O. J. L., ipse, in the stone wall about two yards from the door of the station at Husum, 17th May, 1872.'

'Five eggs taken by O. J. L., ipse, from the same nest that had six eggs taken on 14th May at Blaaflaten, 22nd May, 1872.'

'Linerlé. Four eggs, hard set, taken 27th May, 1872, by O. J. L., ipse, at Maristuen.'

'Linerlé. Five eggs taken 30th June, 1872, locality not stated (O. J. Lysné).'

25. **Blue-headed Wagtail.** *Motacilla flava*, L.

'Gulerlé' (O. J. Lysné). Fillébjerg and Valdersbjerg list.

'Gulerlé. Four eggs taken 15th June, 1872, by O. J. L., ipse, close to the station, Nystuen.'

'Gulerlé. Four eggs, too hard set, taken by O. J. L., ipse, near Syndin' (date not given, but was from context, probably 24th June, 1872).

'Gulerlé. Two eggs, which were too hard set to blow, taken by O. J. L., ipse, 25th June, 1872. Shells of eggs were all round the nest, which was in the grass at Syndin Søter.'

25a. *Motacilla flava*. *Var. viridis*, Gmel.*

Fillébjerg and Valdersbjerg list.

26. **Meadow Pipit.** *Anthus pratensis* (L.).

'Lerké.' Fillébjerg and Valdersbjerg list.

27. **Tree Pipit.** *Anthus trivialis* (L.).

Fillébjerg and Valdersbjerg list.

'Lerké? Four eggs taken by O. J. L., ipse, 27th June, 1872, found on the hills near Helim' [sent undetermined by Lysné, and determined as '*Anthus trivialis* (L.)' by J. A. H. B.].

* All the above belong to the var. *viridis*—i.e., under 25 and 25 a—.

- 28 **Spotted Flycatcher.** *Muscicapa grisola*, L.
 Observed by us in the valleys.
 'Two eggs found 6th July, 1872, in a hollow of an old birch-tree, about 2 feet from the ground.'
 No locality stated, probably near where *Cyanecula suecica* was found same day (O. J. Lysné).
29. **Pied Flycatcher.** *Muscicapa atricapilla*, L.
 'Sort and hvid Fluesnapper' (O. J. Lysné).
 Observed by us in the valleys.
 'Six eggs taken 23rd May, 1872, by O. J. L., ipse, from nest in a hole in a birch-tree, at Mø, Lørdal.'
 'Four eggs taken 29th May, 1872, by O. J. Lysné near Björkum, Lørdal' (O. J. Lysné).
 'Four eggs taken 10th June, 1872, by O. J. Lysné at Björkum' (O. J. Lysné).
30. **Swallow.** *Hirundo rustica*, L.
 Fillé fjeld and Valders fjeld list.
31. **House Martin.** *Chelidon urbica* (L.)
 'Svale.' Fillé fjeld and Valders fjeld list.
32. **Sand Martin.** *Cotile riparia* (L.).
 Observed by us in the valleys.
33. **House Sparrow.** *Passer domesticus* (L.).
 Fillé fjeld and Valders fjeld list.
34. **Chaffinch.** *Fringilla cælebs*, L.
 *Added to our Fillé fjeld and Valders fjeld list by Dr. Printz, who remarked of it, 'Ovenför Skogstad i Wang.'
 Observed by us in the valleys.
 'Four eggs taken 10th June, 1872, by O. J. L., ipse. The nest was on a branch of a birch-tree at Björkum, Lørdal, and was built of moss, lined with fine grass and a little wool. The birds were not seen' [The eggs were identified as of this species by J. A. H. B.]

35. **Brambling.** *Fringilla montifringilla*, L.

'Bjergfinké' (O. J. Lysné). Fillé fjeld and Valders fjeld list.

'Three eggs taken 27th May, 1872, by O. J. L., ipse, in birch-wood below Maristuen, Fillé fjeld.'

'Six eggs taken by a boy 29th May, 1872, from a nest found in a fork of a birch-tree in the wood below Maristuen' (O. J. Lysné).

'Five eggs taken 30th May, 1872, by O. J. L., ipse, in the wood below Maristuen, Fillé fjeld.'

36. **Linnet.** *Linota cannabina*, (L.).

Not observed by us in Norway.

'Three eggs and nest taken 24th May, 1872, by O. J. L., ipse. The nest was in a fork of a birch-tree about 10 feet from the ground, at Mö, Lærdal. The bird was on the nest, but wild and quite mute.'

'Six eggs taken with nest 10th June, 1872, by O. J. L., ipse, who saw one of the birds but could not get near it to identify it [the eggs were afterwards determined by J. A. H. B. as of this species]. The nest was built in the fork of a birch-tree about 14 feet from the ground.'

37. **Twite.** *Linota flavirostris* (L.).

Fillé fjeld and Valders fjeld list.

38. **Mealy Redpoll.** *Linota linaria* (L.).

Fillé fjeld and Valders fjeld list.

'One egg was taken 19th June, 1872, by Lars Eråker from a nest he found in a fork of a tree as he cut it down, place not stated. The nest was built of dry grass and lined with a good deal of feathers' (O. J. Lysné).

39. **Lesser Redpoll.** *Linota rufescens* (Vieill.).

This species is not included in the lists in the appendices to the diary, but is noted in the diary itself, as shot at Maristuen on 14th June, 1871 (?).

40. **Yellowhammer.** *Emberiza citrinella*, L.
 Fillé fjeld and Valders fjeld list.
 Dr. Printz remarks of it, 'Ovenför Skogstad i Wang.'
- Also observed by us in the valleys.
 'Four eggs taken 30th May, 1872, by a boy who could not give O. J. Lysné any information about either the nest or the bird.'
41. **Reed Bunting.** *Emberiza schoeniclus*, L.
 'Sivspurnen' (O. J. Lysné). Fillé fjeld and Valders fjeld list.
42. **Snow Bunting.** *Plectrophenax nivalis* (L.).
 'Snè-fugl.' Fillé fjeld and Valders fjeld list.
43. **Starling.** *Sturnus vulgaris*, L.
 'Stör' (O. J. Lysné). * Added to our Fillé fjeld and Valders fjeld list by Dr. Printz, who remarks of it, 'paa Qvaménaaset i Wang.'
- Observed by ourselves in the valleys.
 'Stör. Four eggs taken by O. J. L., ipse. Nest on the roof of Lørdalsören Hotel, 29th April, 1872.'
44. **Siberian Jay.** *Perisoreus infaustus* (L.).
 Observed by us in the valleys: one near Lién, 11th May, 1871.
45. **Magpie.** *Pica rustica* (Scop.).
 'Skjer.' Fillé fjeld and Valders fjeld list.
46. **Grey (or Hooded) Crow.** *Corvus cornix*, L.
 'Kragé,' 'Kraaké' (O. J. Lysné). Fillé fjeld and Valders fjeld list.
 'Kraaké.' Two eggs, hard set, taken 23rd May, 1872, by O. J. L., ipse, at Mö, Lørdal.'
47. **Raven.** *Corvus corax*, L.
 'Räven.' Fillé fjeld and Valders fjeld list.
48. **Swift.** *Cypselus apus* (L.).
 Fillé fjeld and Valders fjeld list.

49. **Great Black Woodpecker.** *Picus martius*, L.
Twice observed by us in the valleys.
50. **Barred (or Lesser Spotted) Woodpecker.** *Dendrocopus minor* (L.).
* Added by Dr. Printz to our Fillé fjeld and Valdersfjeld list, with the following note: 'Ovenför Skogstad ved Fillé fjeld.'
Observed by E. R. Alston in the valleys.
51. **Green Woodpecker.** *Gecinus viridis* (L.).
Observed by J. A. H. B. in the valleys.
52. **Grey-headed Green Woodpecker.** *Gecinus canus* (Gmel.).
* This is not mentioned in the appendixes to the diary, but the diary itself notes it as an addition to our lists, made by Dr. Printz.
53. **Wryneck.** *Iynx torquilla* (L.).
Observed by us in the valleys.
54. **Cuckoo.** *Cuculus canorus*, L.
'Gök Gög.' Fillé fjeld and Valdersfjeld list.
55. **Snowy Owl.** *Nyctea scandiaca* (L.)
'Snè-uglé' (O. J. Lysné). 'Snè-uglén' (Id.).
* Added by Dr. Printz to our Fillé fjeld and Valdersfjeld list, with the note, '*Surnia nyctea*, i Wang og Valdersflyen.'
'Snè-uglé. Four eggs taken by Lars Eråker, 1st June, 1872. Nest merely a hollow in the ground, on the top of a low hill at the foot of the Sulétind, Fillé fjeld, on the N.E. side of the mountain.' [Note follows by J. A. H. B. that these eggs are quite correctly determined.]
'Snè-uglé. Seven eggs taken 17th June, 1872, by O. J. L., ipse. The nest was on a low hill at the N.W. side of Sulétind, Fillé fjeld. The birds were seen on the nest, but they were very wild, so there was no chance of having a shot at them. Remains of Lemmings and Mice were laid all round

the nest. As soon as the nest was entered the birds commenced screaming, and made a most awful noise, sometimes similar to that of the Great Owl (*Bubo ignavus*, Forst.).' [J. A. H. B. notes that it was a very handsome set of eggs, but one egg was abnormally small.]

'Snè-uglé. Five eggs taken 9th July, 1872, by O. J. L., ipse, about 8 English miles from and S.E. of Nystuen. The nest was placed on the top of a low rock, and was merely a hollow in the reindeer-moss. The eggs were hard set. Both birds were seen, but they were very wild. The colour of these eggs was not so pure white as those of the 17th June. At the time the eggs were taken out of the nest they were the dirtiest eggs ever seen' [J. A. H. B. notes that these he also *believes* are correct, though somewhat peculiar. J. A. H. B. also writes marginally, 'Cannot understand.']

'Snè-uglé. Four eggs taken 13th July, 1872, by O. J. L., ipse, on the mountain above Breistölen, on the Hallingdal road. The nest was placed at the side of a hill on a rock. Lysné had a shot at the hen and wounded her. The eggs were hard set.' [J. A. H. B. writes, 'May be correct but are more like R. L. B., 'hen wounded.' J. A. H. B. also writes marginally, 'May be right, but curious.']

'Snè-uglé. Four eggs taken 23rd July, 1872, by O. J. L., ipse, by the aid of Lars Eråker, who had seen the eggs and nest before, but would not take them before O. J. L. was present, as the eggs differed a great deal from any egg of the kind we have seen. The nest was on a hill near Sulé-vand, Filléfjeld. Both birds [were seen] flying about

very wildly.' [J. A. H. B. notes '(One broken) most peculiar, but 'both birds seen flying about very wildly.' J. A. H. B. also has marginal note, 'Very peculiar.']

56. **Hawk Owl.** *Surnia ulula* (L.).

*Added by Dr. Printz to our Fillé fjeld and Valdersfjeld list, with note, 'S. funerea, Ostré i Slidré.'

57. **Tengmalm's Owl.** *Nyctale tengmalmi* (Gmel.)

* 'Natt-ugla,' 'Katt-uglé' (O. J. Lysné). Not included in any of the appendices, but the diary includes a reference to its occurrence on the Fillé fjeld, on the authority of Olé J. Lysné.

58. **Short-eared Owl.** *Asio accipitrinus* (Pall.).

*Added by Dr. Printz to our Fillé fjeld and Valdersfjeld list, with remark, 'Otus brachyotus ved Syndinvand i Wang.'

59. **Eagle Owl.** *Bubo ignavus*, Forst.

'Bjerg-ulf,' 'Bjerg-uglé.' Fillé fjeld and Valdersfjeld list.

'Bjerg-uglé. Four eggs taken by Lars Eráker, 28th May, 1872, in Honningbjerget, near Maristuen, Fillé fjeld. The birds were seen, but were very wild. One of the eggs was broken before being taken from the nest.' [J. A. H. B. notes, 'Birds seen, but very wild.' Very rum-looking Eagle Owl's eggs, and very dirty.]

60. **Buzzard.** *Buteo vulgaris*, Leach.

*Added by Dr. Printz to our Fillé fjeld and Valdersfjeld list, with note, 'Buteo vulgaris, paa Nöget ved Syndinvand i Wang.' Observed by ourselves in the valleys.

61. **Rough-legged Buzzard.** *Archibuteo lagopus* (Gmel.).

'Fjeld-Örn.' Fillé fjeld and Valdersfjeld list.

Sulétind, four eggs, 22nd July, 1871, by O. J. L. (see his letter 27.7.71) and Lars Eráker.

Storé Frostdal, three eggs, 21st August, 1871, by O. J. L. and Peder Hougen (see letter 29.8.71).

Söré Sul, two eggs, 22nd August, 1871, by O. J. L. and Peder Hougen.

Valdersdal, two eggs, 8th September, 1871, O. J. L.

Smèdalsbjerg, two eggs, 8th September, 1871, O. J. L.

Grønnénaaser, one egg, 10th September, 1871, O. J. L.

Sulétind, one egg, 10th September, 1871, O. J. L.

62. **Golden Eagle.** *Aquila chrysaëtos* (L.).

‘Kong-Örn.’ Filléfjeld and Valdersfjeld list. Seen once by us near Skogstad.

63. **Sparrow-hawk.** *Accipiter nisus* (L.).

*Added by Dr. Printz to our Filléfjeld and Valdersfjeld list, with the remark, ‘*Astur nisus*—paa Filléfjeld.’ Observed by ourselves in the valleys.

‘Five eggs taken 22nd May, 1872, by O. J. L., ipse, from nest in birch-wood above the station at Blaaflaten. It consisted of an old crow’s nest, which was filled with moss, etc., so that the nest was quite flat at the top. The nest was about 16 feet from the ground. Remains of small birds, particularly Thrushes and Wagtails, were lying all round the place. The eggs were quite fresh.’ [These eggs were sent by Lysné as *Falco tinnunculus*, but were determined as *Accipiter nisus* by J. A. H. B.]’

64. **Gyrfalcon.** *Falco gyrfalco*, L.

*Added by Dr. Printz to our Filléfjeld and Valdersfjeld list, with the note, ‘*Falco gyrfalco* in 1866 og 1868, paa Fjeldé i Wang.’

65. **Peregrine Falcon.** *Falco peregrinus*, Tunst.
 'Höse Hög.' Fillé fjeld and Valders fjeld list. Heard
 by us on two occasions and seen once.
 Dr. Printz notes, '1864 og 1866. Fjeldé i Wang.'
66. **Merlin.** *Falco aesalon*, Tunst.
 *Added by Dr. Printz to our Fillé fjeld and Valders-
 fjeld list with the note, 'F. lithofalco, paa Fillé-
 fjeld.'
67. **Kestrel.** *Falco tinnunculus*, L.
 'Veirstiller,' 'Taarnfalké' (O. J. Lysné). Fillé fjeld
 and Valders fjeld list. We found this species pre-
 paring to breed at an elevation of 4,000 feet. Dr.
 Printz noted of it, 'paa Fillé fjeld.'
68. **Wild Duck.** *Anas boscas*, L.
 Fillé fjeld and Valders fjeld list.
69. **Teal.** *Nettion crecca* (L.).
 'Pel-and.' Fillé fjeld and Valders fjeld list.
70. **Pintail Duck.** *Dafila acuta* (L.).
 Observed by us in the valleys: at Fagermaes, ♂ and
 ♀.
71. **Wigeon.** *Mareca penelope* (L.).
 Observed by us in the valleys.
72. **Scaup Duck.** *Æthya marila* (L.).
 'Hvid-sid.' Fillé fjeld and Valders fjeld list.
73. **Goldeneye Duck.** *Clangula clangion*, (L.).
 *Added by Dr. Printz to our Fillé fjeld and Valders-
 fjeld list, with the note, 'Glancion clangula, ved
 Syndinvand i Wang.'
 Observed by ourselves in the valleys.
74. **Long-tailed Duck.** *Harelda glacialis* (L.).
 Fillé fjeld and Valders fjeld lists. Bred once, *vide*
 Printz.
75. **Velvet Scoter.** *Edemia fusca* (L.)
 Fillé fjeld and Valders fjeld list.

'Eight eggs and down taken 24th June, 1872, by O. J. L., ipse, on an island in Syndin lake; the nest was below a bush and about 30 yards from the water.'

'Seven eggs and down taken 25th June, 1872, by O. J. L., ipse, near Helim Sæter. The nest was about 25 yards from the water in some under-wood. The hen bird was seen.'

'Six eggs and down taken 2nd July, 1872, by O. J. L., ipse, on the Gjeitøen (Goat Island) on the Lake Svenskin. The nest was about 16 yards from the water.'

All these three lots were sent by Lysné as of *Ed. nigra*, but J. A. H. B. considered the eggs as 'those of this species.'

About 24th June, 1872, O. J. Lysné was given two duck's eggs by a Sæter girl, who had destroyed the other eggs, which she had found to the number of ten on an island in Syndin Lake. [These eggs were considered by J. A. H. B. to be of this species. Lysné had sent them unnamed.]

76. **Black Scoter.** *Edemia nigra* (L.).

'Skjer-and,' 'Sjö-orré' (O. L. Lysné), 'Havorré' (Id).
Filléffjeld and Valdersfjeld list.

'One duck's egg found 24th June, 1872, by O. J. L., ipse, on the sand on an island in Syndin Lake' [which J. A. H. B. thought to be this species].

77. **Goosander.** *Mergus merganser*, L.

*Added with a query by Dr. Printz to our Filléffjeld and Valdersfjeld list with the remark, 'M. merganser?, ved Syndinvand i Wang?'

Observed by Alston. One ♂, Vossévangen, E. R. Alston.

78. **Red-breasted Merganser.** *Mergus serrator*, L.
 *Added by Dr. Printz to our Filléfjeld and Valdersfjeld list, with the remark, 'Ved Syndinvand i Wang?' Observed by ourselves in the valleys.
79. **Ring-dove or Wood Pigeon.** *Columba palumbus*, L.
 Observed by us in the valleys.
80. **Willow Grouse.** *Lagopus albus* (Gmel.).
 'Skov Rypé.' 'Lirypé' (O. J. Lysné). Filléfjeld and Valdersfjeld list.
 'Eight eggs, too hard set to be blown, taken 12th June, 1872, by O. J. L., ipse, near Slutébro, Filléfjeld.' [These were received by J. A. H. B., unblown, and all broken but two.]
 'Lagopus albus. Fjeld Rypé (O. J. Lysné). Seven eggs, hard set, taken 20th June, 1872, by O. J. L., ipse, on the mountain between Maristuen and Nystuen.'
81. **Ptarmigan.** *Lagopus mutus* (Montin).
 'Fjeld Rypé.' Filléfjeld and Valdersfjeld list.
82. **Black Grouse.** *Tetrao tetrix*, L.
 'Ow. fugl.' 'Aarfugl' (O. J. Lysné). *Added by Dr. Printz to our Filléfjeld and Valdersfjeld list with the note, 'paa Qvamenaaset i Wang.'
 'Tetrao tetrix. aarfugl. Two eggs found 16th July, 1872, in a nest where the others had been hatched. The nest was below a juniper bush in thick wood below Maristuen, Filléfjeld; birds not seen (O. J. Lysné).
83. **Crane.** *Grus communis*, Bechst.
 *Added to our Filléfjeld and Valdersfjeld list by Dr. Printz, with the note, 'Grus cinerea, paa Valdersflyén—once.'
84. **Golden Plover.** *Charadrius pluvialis*, L.
 'Hejlö' (O. J. Lysné). Filléfjeld and Valdersfjeld list.

'Three eggs found 14th June, 1872, by O. J. L., ipse, on the hill near Kirkestölen; the nest was merely a hollow in the ground, and the eggs were very hard set. No bird was seen, but "long distance off I heard a Golden Plover, to which I think the nest belongs"' (O. J. Lysné, MS.).

'Four eggs taken 24th June, 1872, on the way to Syndin Lake, by O. J. L., ipse; the nest was on a small hill close to Syndin Sæter.'

85. **Ringed Plover.** *Ægialitis hiaticula* (L.).

Fillé fjeld and Valders fjeld list.

86. **Dotterel.** *Eudromias morinellus* (L.).

*Added by Dr. Printz to our Fillé fjeld and Valders fjeld list, with the note, 'C. Morinellus, ved Syndinvand i Wang.'

87. **Woodcock.** *Scolopax rusticula* (L.).

'Skov-sneppé' (O. J. Lysné). 'Rugden' (Id.).
Fillé fjeld and Valders fjeld list.

'Three eggs taken 3rd June, 1872, by O. J. L., ipse, in the wood near Station Hög; the nest was only a hollow in the ground below a bush. This nest was first found by a boy, who took the fourth egg and broke it. One of the birds was seen.'

88. **Great (or Double) Snipe.** *Gallinago major* (Gmel.).

Fillé fjeld and Valders fjeld list. Breeds in scattered pairs, not in colonies.

89. **Common (or Single) Snipe.** *Gallinago caelestis* (Frenzel.).

'Bekkésin.' Fillé fjeld and Valders fjeld list.

90. **Broad-billed Sandpiper.** *Limicola platyrhyncha* (Temm.).

*Added by Dr. Printz to our Fillé fjeld and Valders fjeld list, with the note, 'Ved Syndinvand i Wang in 1861. Two nests, Godman and Printz.'

91. **Dunlin.** *Tringa alpina*, L.
Fillé fjeld and Valders fjeld list. Dr. Printz's notes,—
'Ved Syndinvand i Wang.'
92. **Redshank.** *Totanus calidris* (L.).
'Fuké-Teté.' 'Rodhenetsneppé' (O. J. Lysné).
Fillé fjeld and Valders fjeld list.
'Totanus calidris. Rodhenetsneppé. Four eggs
taken 2nd July, 1872, by O. J. L., ipse, on the
Stegleöén, Svenskin.'
93. **Greenshank.** *Totanus glottis* (L.).
*Added by Dr. Printz to our Fillé fjeld and Valders-
fjeld list, with note as follows: 'T. Glottis ved
Tyé nvand paa Fillé Fjeld.'
Observed by ourselves in the valleys.
94. **Green Sandpiper.** *Totanus ochropus* (L.).
Observed by ourselves in the valleys; shot at Sköien.
95. **Wood Sandpiper.** *Totanus glareola* (Gmel.).
*Added by Dr. Printz to our Fillé fjeld and Valders-
fjeld list, with the note, 'T. glareola, mellem
Skogstad og Nystuen.'
96. **Common Sandpiper (or Summer Snipe).** *Totanus hypo-
leucos* (L.).
Fillé fjeld and Valders fjeld list.
97. **Common Tern.** *Sterna fluviatilis*, Naum.
Observed by us in the valleys.
98. **Common Gull.** *Larus canus*, L.
'Maag-maas.' Fillé fjeld and Valders fjeld list.
99. **Lesser Black-backed Gull.** *Larus fuscus*, L.
Observed in the valleys by J. A. H. B. at Vossé-
vangen.
100. **Black Guillemot.** *Uria grylle*, L.
Observed by ourselves in the valleys; Sogne Fjord.
101. **Black-throated Diver.** *Colymbus arcticus*, L.
'Lom.' Fillé fjeld and Valders fjeld list.

The following are records of eggs and nests of ducks sent by Olé J. Lysné in 1872, to which determinate names have not been applied.

‘One Duck’s egg found 2nd July, 1872, by O. J. L., ipse, in the Kvœvlin Vand. The egg was broken and laid on a hill amongst some other broken shells.’ Lysné observed an Ermine close by.

‘One egg found 3rd July, 1872, on the shore of Svenskin below a juniper bush. No bird was seen.’ [J. A. H. B. added ‘Duck?’]



ARCHANGEL

1872



IGNATI N. Q. PIOTUCH,

J. A. HARVIE-BROWN,

JACOF GREGOROVITCH,

NICOLAI GREGOROVITCH.

ERNEST CRAEMERS,

CARL CRAEMERS,

E. R. ALSTON,

(1872).

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ARCHANGEL

1872

INTRODUCTION

IN 1872 my friend Mr. Edward R. Alston and myself, wishing to make an ornithological expedition with hopes of making discoveries of some importance, and of doing our part towards the elucidation of some of the problems which were at that time pressing for solution, turned our attention to the possibilities afforded by the extreme north-eastern portion of Finland, and by the Archangel region, eventually deciding upon the latter.

The inducements which weighed with us were that the Archangel region afforded us a better chance of meeting with new and really rare species, and that, in addition to its yielding all that we could expect to find in Finland, we could reasonably anticipate finding a great deal more, as well as many rare eastern species. The region, which is the most north-eastern locality* in Europe accessible to a collector, had never been more than half worked by ornithologists, though Meves, of Stockholm, had visited it in 1869. We heard, however, that Dr. Ficssen, of St. Petersburg, expressed surprise at our preference, and agreed with Professor Newton that the extreme north-

* Mezèn is more north-easterly, and quite accessible (*v.* 1875).

east of Finland, had not been nearly so much worked as the Archangel tract.

Further inducements were afforded in that our friend Mr. H. E. Dresser's introductions to people in Archangel and elsewhere would be most valuable to us, and secure us every possible attention and assistance;* also that the people all speak German and many of them English,† and that the trip would certainly not cost more than, if as much as, Finland. We found that £100 was quite ample for the trip we took.

In respect of the ornithological possibilities, taking Lilljéborg's paper in 'Naumannia,' for 1852, p. 87, which included observations made at Archangel, Cholmogory, Wagnuskaya, Ladejnopole, Weitegra, Kargopol, Nowaja Ladoga, and Skuretskaya (coast of Russian Lapland), and omitting not only species of general occurrence, but also (as not pertaining to the area we proposed for our own investigation) all those which he found at Skuretskaya only, we noted the following birds as being of special interest to us:—

- Icterine Warbler (*Hypolais icterina*).
- Chiffchaff (*Phylloscopus collybita*).
- Blyth's Reed Warbler (*Acrocephalus dumetorum*).
- Northern Marsh Tit (*Parus salicarius*).
- Golden Oriole (*Oriolus galbula*).
- Twite (*Linota flavirostris*).
- Mealy Redpoll (*Linota linaria*).
- Brambling (*Fringilla montifringilla*).
- Scarlet Finch (*Carpodacus erythrinus*).

* Any one carrying introductions and visiting Archangel is treated like a prince; we never experienced more kindness anywhere.

† All the upper classes speak German, and many of them also speak English; but only 'harbour-English' is spoken by stevedores and workmen in the harbour.

- White-winged Crossbill (*Loxia leucoptera*).
 Yellow-breasted Bunting (*Emberiza aureola*).
 Little Bunting (*E. pusilla*).
 Siberian Jay (*Perisoreus infaustus*).
 Great Black Woodpecker (*Picus martius*).
 Pied (or Greater Spotted) Woodpecker (*Dendrocopus major*).
 White-backed Woodpecker (*D. leuconotus*).
 Barred (or Lesser Spotted) Woodpecker (*D. minor*).
 Roller (*Coracias garrula*).
 Buzzard (*Buteo vulgaris*).
 Sea-Eagle (*Haliaetus albicilla*).
 Honey Buzzard (*Pernis apivorus*).
 Red-legged Falcon (*Falco vespertinus*).
 Black Kite (*Milvus nigrans*).
 Bittern (*Botaurus stellaris*).
 Shoveller (*Spatula clypeata*).
 Garganey (*Querquedula circia*).
 Pintail (*Dafila acuta*).
 Wigeon (*Mareca penelope*).
 Pochard (*Æthya ferina*).
 Scaup Duck (*Æ. marila*).
 Tufted Duck (*Æ. fuligula*).
 Goldeneye (*Clangula glaucion*).
 Velvet Scoter (*Edemia fusca*).
 Black (or Common) Scoter (*E. nigra*).
 Willow Grouse (*Lagopus albus*).
 Hazel Grouse (*Tetrastes bonasia*).
 Spotted Crake (*Porzana maruetta*).
 Crane (*Grus communis*).
 Golden Plover (*Charadrius pluvialis*).
 Little Ringed Plover (*Ægialitis curonica*).
 Snipe, or Brehm's Snipe (*Gallinago caelestis*, or *brehmi*).
 Spotted Redshank (*Totanus fuscus*).
 Greenshank (*T. glottis*).

Green Sandpiper (*T. ochropus*).

Wood Sandpiper (*T. glareola*).

Terék Sandpiper (*Terekia cinerea*).

Whimbrel (*Numenius phaeopus*).

Little Gull (*Larus minutus*).

Red-throated Diver (*Colymbus septentrionalis*).

Black-throated Diver (*C. arcticus*).

My good friend Mr. H. E. Dresser, whose advice and whose suggestions innumerable have always been of great service to us, noted for us also :—

Lapp Owl (*Strix lapponica*).

Ural Owl (*S. uralensis*).

Snowy Owl (*Nyctea scandiaca*).

Tengmalm's Owl (*Nyctala tengmalmi*).

Pigmy Owl (*Glaucidium passerinum*).

Siberian Titmouse (*Parus cinctus*).

Azure Titmouse (*P. cyanus*).

Waxwing (*Ampelis garrulus*).

Eversmann's Warbler (*Phylloscopus borealis*).

And probably other Asiatic warblers, as the Booted Warbler (*Hipolais caligata*), and perhaps the Dusky Thrush (*Turdus dubius* = *T. fuscatus*), and other eastern forms; also the Yellow-browed Bunting (*Emberiza chrysophrys*) and the Lapland Bunting (*Calcarius lapponicus*).

Mr. Dresser also noted the Jack Snipe (*Gallinago gallinula*) as almost certain to occur, but in the result we did not meet with it at all.

He also furnished us with notes from the proof-sheets of Meves' paper as to the occurrence of the Large-billed Willow Warbler* (*Phylloscopus*, or *Calamoherpe magnirostris*), the Lanceolated Warbler (*Locustella lanceolata*),

* This warbler has since proved to be Blyth's Reed-Warbler (*Acrocephalus dumetorum*).

the River Warbler (*L. fluviatilis*), the Rustic Bunting (*Emberiza rustica*), the Little Bunting (*E. pusilla*), the Yellow-breasted Bunting (*E. aureola*), the Two-barred Crossbill (*Loxia bifasciata*), Pallas's Grasshopper Warbler (*Locustella certhiola*), *Larus cachinnans*, and the Snew (*Mergus albellus*).

Herr Meves preserved forty-one specimens of the Little Gull (*Larus minutus*) obtained on the Ladoga Canal, near Novaja Ladoga, in 1871, but this species is very rare at Archangel, and was never seen by us.

A large collection of skins was made by a man employed by Hoffmanssegg after he had left, which passed into the custody of one of Mr. Dresser's friends there, who wrote to Mr. Dresser that Meves saw them and said there were several rare Eastern birds among them. He offered a considerable sum for the pick, but they would only sell the lot. Mr. Dresser wished to get them, and afterwards had his pick, Mr. Frank, of London, getting the remainder, of which I bespoke some. We saw the collection, but there were not many rare birds in it.

As to our choice of routes, after considering the question of proceeding to the White Sea by sea or by overland journey from St. Petersbourg, we decided on the latter, as the steamers, whether sailing from Dundee or London for the White Sea direct, or from Shields or Hull for Trondjhem, and thence by coasters, were too uncertain and started too late in the season.

We ascertained that the overland route would be by rail to St. Petersbourg, and thence to Archangel either by sledge or driving, according to time of leaving—the distance of this land journey being 1,104 versts (= 750 miles) from St. Petersbourg to Archangel. This was described to us as being by good road all the way, and not difficult unless the winter ice has begun to break up, in

which case it is better to wait a week, even at St. Petersburg, and travel by summer route; the snow should, however, be sufficiently melted by the middle of April. We took this route, and found that the road is bad in summer, but splendid in winter before the snow melts. We found tarantasse travelling trying, though not so bad, perhaps, as described.

We also ascertained that we could get good and cheap living at Archangel, either at an hotel or private lodging, and we found it so; also that there were excellent shops in Archangel, at which even 'Liebig' was procurable, and that we should not need to take any provisions.

As to servants, it was arranged that we should have a man who speaks both Russ and English, and we were informed that there are certainly people in Archangel who can skin for us. We found that our boatmen (Nicholai and Jacof Gregorovitch) could, after being taught by us, skin well, as also could our new friend Piottuch. Piottuch was engaged as interpreter and bird-skinner, the latter under our tuition. Heinké, the man employed by Hoffmanssegg, had long since left, and was now in South Russia. Heinrich—a dealer—charges too high, and had but little time in summer to devote to skinning. He was a furrier, and during the summer lived in Solómbola.

The time of year for starting, we learnt, was about the middle of April from Great Britain, but we found that if the whole season's collecting be desired, it is needful to start much earlier than we did, even earlier than mid-April, in order to get the hard snow, before it melts, for sledging.*

As to firearms, we learned that Russian law required them to be left at the frontier, and after due inquiries

* This, however, is now (1903) affected by the fact of there being railway communication with Archangel.

made they would be forwarded, if all were found correct. On further inquiries we were unable to obtain permission from the Russian Legation in London to take more than one gun each, and when we arrived at Archangel we found we had not only to pay 18 roubles (£2 10s.) for our guns and ammunition, charged by weight, but that they were detained a whole fortnight at the Custom House.

We learnt that cartridges could be procured at St. Petersburg, but not so good as English ones. We were advised to take in as much good powder and caps as we could, as German stuff is *bad and made to sell*; we were also to take dust shot. Each person is allowed to take in 1 lb. of powder. Mr. Rennie, of Dundee, told us that Russian powder is not bad now. (It is as *big as marbles*—at least, any we saw was so.) English powder, and English caps, may at times be bought at Solómbola, but one cannot trust to being able to obtain them. Piottuch bought us 1 lb., and then could get no more.

Shot of all the useful sizes can be procured, even dust shot. It is not so good as English, but answers every purpose perfectly well, and most of our small birds were shot with Russian small shot with our stick-guns. One peasant made his own shot by pouring the lead from the branch of a high tree into water beneath.

What we took with us was 250 c.f. cartridges (No. 7 and 4 shot, and 25 with ball), 750 caps suitable for stick-gun or loading cartridges, 6 lbs. dust shot, 1 lb. of Schultz powder, and 1 lb. of black powder. We found it nearly sufficient, except that we could have done with more No. 7 and less No. 4 shot.

As to the physical and climatological conditions of the Archangel district, we were assured that the weather is generally excellent at the season at which we proposed to go, cruising about the delta of the Dvina, in gipsy fashion, being both easy and very pleasant and enjoyable. And

so we found it, the weather being lovely during our investigations.

The country, Mr. Morgan told us, was partly wooded, partly swampy, partly cultivated. The delta is *the* place for birds, and is of great extent; also, of course, the surrounding forests. Onèga is not much good for shooting, and certainly there are not many Waders or Wildfowl there. A large island was spoken of as being about half a day's sail out in the White Sea, where Mr. Dresser was assured that 'all sorts' of Wildfowl breed, but no one has collected there. Any of the pilots would take us over, as they all live on the island. This evidently refers to Solovetsk.

We were told that Mèvés got numbers of little boys to work for him, which may have been the case, but we utterly failed in this. We found them lazy, and not to seem to know the value of kopecs, like ordinary mortals.

As to the great peninsula which lies to the west of the White Sea, we learnt that it is uninhabited except by fishermen in summer, and along the coast* only.

It certainly had, to us, a most uninviting aspect from the sea, and the journey to it would be a difficult one.

As to books and maps relating to the region, we were informed from St. Petersburg that the maps of the Archangel region only existed in small scale, 100 versts to the inch—but when we were there, we had the use of admirable charts of the delta from Mr. Shergold and Mr. Birse, and a copy of the best of these was made and sent to us by Piottuch, and which is now reproduced.

There were useful papers on the Ornithology, such as Hoffmansseg's on the Birds of Archangel in the 'Deutsche Allgemeine Zeitung für Naturgeschichte,' and Lilljéborg's paper in 'Naumannia,' 1852; in addition

* The Murmanian coast.

to the notes on the birds around Archangel included in Dresser's 'Birds of Europe.'

My personal luggage—in addition to the pea-coat and check trews I had on—was as follows :—

A large portmanteau, containing a suit, spare knickerbockers, light trousers, velvet coat and waistcoat, 3 pairs of long stockings, and 4 of socks, 3 flannel shirts with collars, 12 collars, ties, 18 pocket-handkerchiefs, 2 pairs of shooting boots, slippers, leggings, mosquito-veils, gloves, spare boot-laces and boot-nails, toilet requisites (brush, comb, tooth-brush and tablets, soap-box and soap, sponge), vols. ii. and iii. of Bree's book, Blasius' list, writing-case, gummed paper, indiarubber rings, botanical paper and boards, needle-book and thread-bag, box of pins, triangular needles,* Keating's insect powder, labels ready cut, wax candles, vestas and pipe-lights, spare pipes, tobacco ($1\frac{1}{2}$ -lb. uncut, $\frac{1}{2}$ -lb. cut), climbing irons,* small fly-book and reel, flexible hat, cap, small powder and shot flasks for stick-gun.

A hand-bag contained my journal and three or four small note-books with straps, map and guide-book, novel, telescope, hunting-knife, $\frac{1}{2}$ -lb. cut tobacco, large flask, collecting-box, ink-bottle, compass, egg-instruments, etc.

A bundle consisted of a plaid, macintosh, and rubber ground-sheet.

The gun-case contained gun, cleaner, oil, and gun-sling and cartridges.

Another package contained * fishing-rods, stick-guns, and ramrods. * The fishing-rods proved to be unnecessary.

The cartridge-carrier held 100 cartridges.

The packet of ammunition was as before stated.

We were told that we should find good tobacco and good cigars procurable at Archangel, but no cavendish or

* These articles were afterwards found to be unnecessary.

shag. We ourselves got good bird's-eye and fair black cavendish from the captain of the *Stevenson* and others, through Mr. Birse, but it is recommended to take a good supply with one. The Russian tobacco is either very weak, and for smoking in cigarettes, or very very filthy and weak too. Cigars are Riga-made and smokable, but not good. Plenty of wooden pipes should be taken. Clay pipes are only sometimes procurable in Solómbola, and the wooden pipes of the country hold about a thimbleful only. Other wooden pipes are not good, and badly made.

Any wine we saw was not fine wine, *sweet* champagne and *sweet* Sauterne and pale sherry. Arrak and water was not bad tippie, and 'quass' was good.

NARRATIVE

June 1.

OUR Archangel trip commenced on the 1st of June, when we left London about 8.45 p.m. for Calais, having at the last moment decided to take the overland passage instead of the steamer *Dvina*. Our heavy luggage was sent to Mr. Dresser to be forwarded to Archangel by the s.s. *Sjælland* from London.

We reached Calais about midnight, and left there about 1 a.m. on Sunday, the 2nd of June.

June 3.

We left Berlin at 11.5 o'clock at night on Monday, the 3rd of June, in beautiful carriages with draw-out cushions which nearly meet. We got one all to ourselves and slept most comfortably.

June 4.

We travelled on Tuesday, the 4th of June, all day through the tiresome plains of Prussia, the country continuing throughout of much the same character, a great stretch of slightly undulating plain, well cultivated, with small villages and farms along the route.

Storks were plentiful, having their nests on the farmhouse roofs, sometimes three nests on one roof, but oftener only one. Along the route we stopped about every four or five hours and got refreshments, which were always good.

We crossed the frontier about 4 p.m. between Ejdtkuhnen and Wirballen, at which latter place what luggage we had with us was examined, passports were shown, etc. Having a couple of hours to wait we had a meal, and then started in the Russian train, which was not so good as the Prussian. We went on through Poland, and reached Wilna about 10 p.m. After that we both got off to sleep.

June 5.

On Wednesday, the 5th of June—very hot—we travelled all day through vast level forests of Scots pine, birch, spruce, poplar, etc., with here and there at long intervals, clearings and villages, and an occasional lake. This, continuing with but slight change all the way to St. Petersbourg, became extremely monotonous. We did not observe many birds, those we recognised including Red-backed Shrike (2), Storks (scarcer, none seen after Königsberg), Hooded Crow, Pied Flycatcher, Goshawk, etc.

Our stoppages were at Dünaborg and Pskow, and we reached St. Petersbourg about 4.30 p.m. Here we had a series of mishaps. First of all, our registered luggage was not forthcoming, and we were informed that as to-morrow was a holiday we could not get it till the day after. Alston and I then leaving the station in droschkies got separated. He got to the Hôtel de France and I to the Hôtel d'Angleterre, and then each set about looking for the other, and eventually managed to meet. The sunset to-night at a quarter to nine was very fine, tinging the houses a delicate purplish rose-colour.

June 6.

On Thursday, the 6th of June—a very hot day—Alston removed to my hotel after breakfast, the advantages being greater, including an *English* commissionaire, Mr. James Pilley, whose services we engaged. A commissionaire is

indispensable to one who does not know the language, and wishes as little delay as possible. Mr. Pilley charged five roubles a day, and took every trouble for us, losing no time. Thanks to him, we were only delayed a couple of days in St. Petersburg—which is pretty nearly a record, Meves having been delayed as much as ten days.

We called upon M. Grömmé, to whom Mr. Dresser had given us letters of introduction. We found him very polite, and arranged to call on him 'on 'Change' to-morrow before four o'clock.

We then went to the University Museum, but were rather disappointed with it on the whole. The skeleton of the Mammoth, a perfect one and very fine, was the principal attraction. We saw some good Russian and Siberian mammals and birds—and one Great Auk.

Next we visited the Zoological Gardens, which were very poor; a fine Aurochs—or European Bison—and some Elk and Reindeer were the principal objects of interest.

June 7.

Friday, the 7th of June, was also very hot. First, with our commissionaire, we went to the custom-house, where we were detained all the forenoon, and had to pay eighteen roubles (£2 10s.) for duty on my gun and case, etc.—charged by weight 37 lbs. (1 pood). Then we got a few small articles we wanted, and called 'on 'Change' for M. Grömmé.

We heard from him of a German naturalist who goes to Archangel to-morrow, and whom we hope to accompany. We now settled to get off by the steamer to-morrow at one o'clock. We had still our passports to show to the police (who certify we are quiet and unoffending), and then our 'Paderoshna,' or travelling papers for securing post-horses, which we are promised for to-morrow at eleven o'clock.

In the evening we went inside the large church (St. Isaak's), and saw eleven malachite columns, each of which cost £10,000, magnificent diamonds, and frettings of silver and gold.

June 8.

Saturday, the 8th of June, a very hot day, we left St. Petersbourg without regret at 1 p.m., on board the *Alexander*. We could not find the German naturalist, but several people on board spoke English and were very civil, especially two naval officers, and a young Pole, Stanislas Waselewski, fourteen years of age, who knows three languages. His mother was a Miss Clarke, daughter of Shergold's partner. So far we get on swimmingly.

The country is dull, but Lake Ladoga is like the open sea, no land visible to the north-east, giving all the pleasures of a sail without the disagreeables, except that we had to wait nearly two hours for dinner after ordering it.

We saw a Gull which *may* have been *Larus cachinans*.

We slept on deck comfortably, the night being fine and warm.

June 9.

Sunday, the 9th of June, was a fine very hot day. We arrived at Novaja Ladoga about 3 a.m., where the Pole left us, giving us messages to Shergold and others whom he knew in Archangel. We now sailed up the Swir River which connects Lakes Ladoga and Onèga, a fine deep, broad river.

We discovered the German naturalist by seeing him closely scrutinising a horse-fly. He speaks no Russ however. His name is Herr Jacobi, of Frankfort, and he is collecting for the Museum. He goes to Archangel, and thence, if he can get a vessel, to Spitsbergen, and perhaps Novaja Zemlya, in search of plants and insects.

During the day we saw Little Gulls, Divers, Ducks, etc. We sailed all day up the Swir River, taking a pilot on board at the foot of the rapids. The scenery is level, marshy, or wooded, and extremely monotonous and uninteresting.

We reached Wosnasenja, on Lake Onèga, about 10 p.m. After a gabble with the ferrymen, and by the extremely obliging aid of the two Russian naval officers, we got a boat across to where the *Drishkott* (Steam-canal boat) starts on the Onèga canal for Weitegra (75 versts).

Here we bought some beer, bread, etc., for our canal passage, as it takes thirteen hours to Weitegra. The *Drishkott* started at twelve midnight, sailing through extensive marshes.

Herr Jacobi placed himself very helplessly in Alston's hands, and instead of his taking care of us, we in great measure had to take care of him.

June 10.

Monday, the 10th of June, was cooler. We had slept well. We had a small bunk, 7 feet by 6. Mosquitoes were biting, so we had to put on veils and gloves. I got bitten yesterday on both hands, and they swelled up like baked rolls.

We sailed along the Onèga Canal drawn by two horses. In the great marsh we were lucky in seeing two Cranes (*in coitu*) within a couple of hundred yards of the canal bank. We also saw a Scarlet Finch.

The *Drishkott*, or canal-boat, was crowded on deck with Russians, who slept like herrings in a barrel, close to one another, leaving scarcely an inch of deck uncovered. They gambled for copecks at some game with cards.

We arrived at 4 o'clock p.m. at Weitegra, which is the place where Meves' son was laid up last year, had some

dinner, and at 6 p.m. proceeded in a tarantasse, or country cart for Kargopol.

We parted at Weitegra from Herr Jacobi, who had forgotten to have his passport *visé*, and had no paderoshna. He turned up at Archangel more than a week after we did.

At Weitegra, a Russian gentleman who spoke French and a little English was good enough to help us.

During our first stage on the tarantasse we experienced considerable anxiety as to how we should be able to stand that style of travelling; but later we got accustomed to the jolting, and even in a measure to the confinement, and slept now and then. The want of room for one's legs was the worst part of it. The following are the stages and distances we travelled to-day, when we slept part of the way:

1. 25 versts—9 o'clock.
2. 24 versts—12 midnight.

June 11.

During Tuesday, the 11th of June—a cooler day—we drove on through the same kind of level and forest-clad country, not interesting. We got nothing to eat but bread and milk and eggs and the cheese we had with us.

We arrived at Kargopol at 11.30 p.m., where we had some difficulty in making people understand our wants, but at last succeeded. We were very sleepy, but not done up as one might have expected, having travelled 225 versts (147 English miles) 'straight on end'!

The stages from Weitegra to Kargopol were:—

1st	25 versts	9	p.m.	10th June.
2nd	24	„	12	p.m. „
3rd	26	„	3.30	a.m. 11th June.
4th	25	„	7	a.m. „

5th	21	versts	10	a.m.	11th June.
6th	28	,,	2	p.m.	,,
7th	18	,,	4	p.m.	,,
8th	20	,,	7	p.m.	,,
9th	16	,,	9	p.m.	,,
10th	22	,,	11.30	p.m.	,,

225 versts = 147 miles in 27½ hours.

June 12.

Wednesday, the 12th of June—a cold day—we had breakfast, which was good, and we bought some bread and meat, etc., for our journey.

Kargopol is a town of some size, situated on a lake, a large expanse of water.

We did not leave Kargopol till 11.30 a.m. Before leaving we had an amusing conversation with a Russian who came into our room. He insisted on speaking long sentences in Russ, which we in vain told him we did not understand. At last, rather than let him have all the talking to himself, I spouted Marcellus' speech, and put great emphasis into—

'You block! you stone! you worse than senseless thing!
Oh, you hard heart! you cruel man of Kargopol!'

This had the desired effect, as he shook his head slowly, and then—shortly afterwards withdrew.

Driving from Kargopol we met numerous men and women, each carrying a knapsack and staff, who we concluded were pilgrims returning from Solovetsk Shrine in the White Sea. It was very cold, and we had bad horses and a bad road.

On the second stage we were much more comfortable, getting a cushion from the driver. All the common

people travelling in Russia carry one or more cushions or pillows—*padoshka*.

At the third station we crossed a ferry on the Onèga River, horses, cart, and all, and on the opposite side drove up a steep bank at an angle of about 35 degrees.

We saw several specimens of the Red-footed Falcon (*Erythropus vespertinus* of Lilljéborg's List), also—late in the evening—three or four Hares, very dark coloured.

During the fourth stage, 8.30 to 12 p.m., there was a very cold north wind, and we had to put on under-flannels and all our wraps, a goodly number.

June 13.

It was now Thursday, the 13th of June, when the fifth stage was begun. It was still very cold. Alston slept well, but I could not, having a nasty fit of heartburn.

We saw tents or huts for shepherds or field-labourers, made like those in use among North American Indians—of conical shape with hole at top.

Ferry.

The sixth stage I still had no sleep—cold.

During the seventh stage we entered a great forest of pine, fir, birch, larch, etc., which lasted for nearly 100 versts (75 miles), with only one or two little clearings at the stations. Here the road was abominable, frightfully rough, being made of rotten logs and pitfalls between. The carts were also wretched things with hind wheels just under our heads. Our time was occupied in looking out for the deep ruts and holes. I suffered a great deal at this time from stitches in my side.

The eighth stage was worse even than the last, and positively painful to endure.

The ninth stage the boy drove at full gallop over the

rough roads, and I knelt on the cushions which we had bought from the driver on the second stage, and held on like grim death. We told him to drive fast, and promised 20 copecks= $(6\frac{1}{2}d.)$ to do so, as we hoped to catch a steamer on the Dvina at Sjukia. We did the twenty-one miles in two and a half hours. The driver encourages his horses and comparatively seldom uses the whip, save to wave it in circles round his head. There was sufficient excitement in this wild gallop to give an interest to the *otherwise* monotonous character of the road.

On the tenth stage the road was better, but here and there we had some 'big jumps' over logs of wood laid 'corduroy' fashion, in the wet parts.

June 14.

On the eleventh stage, which brought us to Friday, the 14th of June, having some hours to spare, we slept at Sjukia for three hours or so.

The twelfth stage began at Sjukia at 9 a.m., when we were ferried across the Dvina, a noble stream at least a mile wide. During our morning's drive we saw Northern Jays, Woodpeckers, Fieldfares, Bramblings, etc. At the other side of the Dvina we had to wait for the steamboat (parakhòt).

The following are the stages and distances from Kargopol to Sjukia:—

1st	27 versts.	Station at	2.30 p.m.	June 12th.
2nd	24	„	5.0 p.m.	„
3rd	26	„	8.30 p.m.	„
4th	21	„	12.0 p.m.	„
5th	23	„	3.30 a.m.	June 13th.
6th	26	„	6.30 a.m.	„
7th	23	„	10.45 a.m.	„
8th	24	„	3.0 p.m.	„

9th	21 versts.	Station at	8.45 p.m.	June 13th.
10th	19	„	11.15 p.m.	„
11th	24	„	3.13 a.m.	June 14th.
12th	19	„	9.0 a.m.	„

277 versts, or 187 miles, in 45½ hours.

While waiting—twelve hours—at Sjukia we took out the gun, and shot and skinned three birds, Garden Warbler, Whinchat, and Hooded Crow.

We saw two or three birds which we took to be Pine Grosbeaks, but they were so shy that we could not get a right sight of them.

We also bought a Sterlet for 30 copecks, and Alston skinned it. Sterlets first entered the Dvina about 1861, through the canal from the Volga.

We got on board the steamer about 10 p.m. The captain, a German, who speaks a little English, and an Irishman who was on board named Smith, manager of a flax-mill up the river, gave us much information.

The steamer is flat-bottomed, with two great barges lashed one on each side. We got a small cabin for two, and slept well.

June 15.

Saturday, the 15th of June, a warm day, we arrived at Archangel about 1.30 p.m. We had passed Cholmogory during the night.

We had quite a couple of hundred pilgrims on board on their way to Solovetsk. They sleep like herrings in a barrel, packed close side by side. Fancy the insect life!

The scenery of the Dvina is not interesting.

On landing we went to the Tarapof (inn, or rather, lodging-house), had some lunch, and then called upon Mr. Shergold. We shall never be able to forget this



ARCHANGEL, MADAME LEITHZHOFF'S HOUSE.

gentleman's kindness. He has already secured us most excellent lodgings—three rooms—at Madame Nathalie Andrevna Leitzoff's, at a rate for board and lodging of Rs.1.50 (4s. 3d.) each per diem.

He has also employed a collector for us who formerly worked for Heinké and Meves, and already has for us about a hundred and fifty eggs, which we took to the inn at night. They are twenty-one Gulls, eight Temminck's Stints, fifty-one Terék Sandpipers and Ducks (Long-tailed?), which last, however, we could not be sure of at the time, Oyster-catchers, Curlew, Fieldfares. Mr. Shergold also undertook to manage all about a boat, men, etc., for us, gave us a good chart of the delta, and altogether overwhelmed us with kindnesses. Later, when Mr. Birse came in, these two gentlemen together discussed every matter which they could think of for our comfort and assistance. We also called at the house of a naturalist, Herr Heinrichs, where we saw many good things. Next day we were introduced to a young fellow, brother-in-law to Mr. Birse, by name Ernst Craemers, who can speak English, and will accompany us to the Outer Islands.

June 17.

On Monday, the 17th, Ernst brought in several nests of common birds, such as Spotted Flycatchers, White Wagtails, Redstarts, Fieldfares, Chaffinches, Redpolls. In the evening, about eight o'clock, we had a trial trip among the nearer islands of the delta in Mr. Birse's boat, accompanied by himself and by Karl and Ernst Craemers. Midnight found us among the islands, and we did not return till 6 a.m. on the 18th.

June 18.

On the 18th we sailed or rowed about among the islands, landing on one and then another. I killed a

couple of Gulls, also (later in the morning) one Terék Sandpiper, Grey-headed Wagtail, Reed Bunting, etc., and Alston killed a Little Bunting and took the young of the Hooded Crow.

On one island we landed to make tea and cook potatoes. The fire was simply laid with birch-bark and wood, and the tea and potatoes were ready in a very short time. On this island we took some eggs of Sand Martin, and caught two or three birds. The cruise in and out among the islands was about fifteen miles. On our return, at about 6 a.m., we had a half-hour's sleep, and then with Mr. Birse went to the market, which is held every Tuesday. We bought four Ruffs, a Shoveller Drake, a Curlew Sandpiper, and two Garganeys for the small sum of 50 copecks, Birse bargaining for us most successfully.

The fish market also was interesting. Sterlet, Bream, Petchora Salmon (quite white), and various other kinds of fish.

We did not go out for the rest of the day, but worked hard at skinning, in which we were helped by our two peasants when they came in from egg-collecting. They complained that it is rather late in the season now. With the eggs they brought in three Red-throated Divers, Shoveller, Wigeon, and Pintails.

We engaged a Polish exile, named Ignati Nartzisovitch Qublitski Piottuch, to shoot and skin for us while we are here for 30 roubles a month. Mr. Shergold assisted us in hiring men. We engaged Nicholai Gregorovitch at 2 roubles a day, Jacob Gregorovitch at 1½ roubles, and a third man at 1 rouble, to do whatever we need—working the boat, collecting, skinning, etc.

June 19.

Wednesday, the 19th, was spent working in the house all day, instructing Piottuch in skinning.

June 20.

On Thursday, the 20th, after making all needful preparations, we started on our first trip about 7 p.m., the party consisting of Alston and myself, Ernst Craemers, Piottuch, and the three peasants.

On the first island we landed on—Vosnusainski—we found Terék Sandpipers in a marshy wood, constantly perching on the trees, which we were hardly prepared for. Three were shot, and a nest of four young ones was found. We then had tea, Nicholai's wife bringing out samovar and a small table.

June 21.

About midnight on the 21st we proceeded down among the islands, skinning the birds in the boat as we went, for which purpose we had a couple of boards conveniently placed across the thwarts. About half-past four we landed on a large, bare, marshy island, heather-clad and covered with reindeer-moss, called Tinèvâti Ostrov. Here we found that Great Black-backed Gulls, Red- and Black-throated Divers were breeding, and Nicholai brought us a nest of four Temminck's Stints.

We made a fire, had more tea, and slept for an hour or so rolled up in our fur coats and waterproof sheets. 'Kumarei' (Mosquitos) were very unendurable.

Waking up about 8 a.m. we resumed our voyage, and at ten we landed two of our men on an island, Borké Ostrov, we ourselves proceeding up a long, narrow creek about 10 versts in length; but we had to wait five or six hours for the tide, and stuck fast in the mud several times, the which accidents and delays told upon our tempers!

When we again picked up our men they had shot a couple of Teal, two Great Grey Shrikes, Green Sandpipers, etc. The wind now became fresh.

We next came to a large flat island covered with grass, called (along with four others) Ostrov Teelanik (also called Tscheiké Ostrov), on which we landed. 'Our Savage' (Nicholai) took us a long, level stalk on hands and knees up to a bunch of Wigeon, at which we fired, dropping four. Then round the shore of the island, which is only raised about three or four feet above the level of the sea, we saw many Temminck's Stints and Ruffs. The Stints, as Alston noted, are very pretty birds as they hang hovering in the air, uttering a pleasing, twittering note. The 'Savage' brought in a good specimen of the Little Stint, a female, in full breeding plumage. He declares that this bird breeds on the delta, that its eggs are a trifle smaller than those of Temminck's Stint, and are laid among grass instead of on sandy ground. We did not find any nests, nor did we see any more of the birds. We intend to have a close search for the nest, as it has not yet been taken in Europe, or, indeed, anywhere. I also found a nest of four Terek Sandpipers, and shot the bird. These eggs are more like those of the Common Sandpiper than any we have as yet.

The wind still kept fresh as we ran down to shelter in an old log hut on Teelanik Ostrov, which we soon made comfortable, as we purpose remaining here for some days to work the islands round about.

June 22.

On Saturday morning, the 22nd of June, I went out with Nicholai and shot a couple of Temminck's Stints, the others staying in to skin. About three in the afternoon we started for Goletz. On the way we again landed on Tscheiké Island, where I shot two Ruffs and Alston three fine Grey Plovers in full summer dress. 'The Savage,' however, says that they do *not* breed here. A hen

Harrier rose within beautiful range whilst we were after the Plovers.

About 6 p.m. we arrived at Goletz. We went along the shore, finding two Ducks' nests and eggs, which we left for the present. We found nests and eggs of Arctic Terns, one with three eggs, some with slight nests, and some without. We also found three nests of Terék Sandpipers, one of a Gull, and one nest of five Mealy Redpoll. We shot a Stint and three of the Gulls. We made a big fire on the sand amongst the bent grass, and were very comfortable at tea. We then turned in and slept well in a log hut.

Goletz is a level island, sandy around its edges, covered with bent, and a low ridge of sand runs all along the coast-line. The interior is marshy, with long reeds interspersed with large spaces of red-coloured grass, upon which a flock of Grey Geese were feeding, and innumerable ducks rose out of the reed-beds. More inland and westward wood begins, but this is a part we must leave for another trip. Koombush Ostrov and other islands in the vicinity are all heavily wooded.

June 23.

On Sunday, the 23rd of June, Piottuch took me to a Ruff's nest, which was simply a hollow in the sand amongst long grass lined with finer grass. Temminck's Stints were numerous around, and constantly rising in the air or hovering, with raised wings, about 15 feet from the ground. We also found the nest of Ringed Plover.

On rising this morning I went to the Ducks' nests, but the birds were not on. I shot, however, a Shoveller from another nest of eight, in which nest was no down. The other two nests we took, down and all, and have little doubt they were Pintails.

Returning in the boat past the island of Kashieminski, we saw a fine Sea-Eagle perched on top of a bare pine-tree. On this island there are Willow Grouse.

We arrived at the hut on Tscheiké Ostrov, blew our eggs, and started again about 2 p.m. The tide being out, the boat had to be shoved over the mud about thirty yards, and Nicholai carried us on his back into it afterwards. He said in his curious broken 'harbour' English that I was 'four pood' (*i.e.*, four times 36 lbs. avoirdupois, 144 lbs.).

With a gentle breeze we sailed all the way to Archangel, and when within 15 versts we landed on Cholopyain Ostrov, where the savage said the Little Gulls had been, but none were to be seen. We had a great hunt after young Ducks, Shovellers, and Pintails. We secured a female of each, with four young Shovellers and six young Pintails, all of which were at once skinned. We reached Archangel about 7 p.m.

June 24.

On the 24th we were occupied indoors, skinning, etc.

June 25.

On the 25th, being Tuesday, we were again at the market, but got no birds, as the peasants are now busy with farm work. We saw Grey Lag Geese with the left wing cut off at the first joint, which the market woman said was always done when they were shot, but she either could not or would not give any reason for its being done, whether from superstitious motives or not. The cut wings are used as brushes by the villagers.

About 7.30 in the evening we started for our second trip, the party being the same as on the first. Ernst got a gun at a village called Maimùx, and then we sailed to the extreme point of Goletz, sleeping on the way.

June 26.

On Wednesday, the 26th of June, we made the eastern end of Goletz about 4 a.m., and had to lie-to for an hour, waiting for deep water, before we could land, but Nicholai waded half a verst to shore and lighted a fire. After we had breakfasted we started for the other end of the island through the pine-woods. From the time we landed to the time we left Goletz—nine hours afterwards—we suffered greatly from the mosquitoes, and as we had left our veils in the boat we were nearly driven wild. At first we had good luck. We saw a flock of a dozen or more Black-throated Divers. Alston shot a male Hobby, and soon afterwards found the nest—an old Hooded Crow's—lined partly with the bird's own feathers. We took the three pale eggs, which were hard set. The female bird got off without a shot. Soon after we fell in with a small flock of Waxwings—about half a dozen—of which Piottuch shot two, both females, with the breast pretty bare, but the eggs not much developed.

We walked about seven versts to the bare eastern end, where we slept on Saturday night, finding two nests of Ruff, with one and four eggs respectively. We got a Teal's nest with nine, and I shot a female Willow Grouse, but we could not find either nest or young. We returned to the boat, which we reached at 4 p.m.; then after a couple of hours' sleep we had dinner of salt cod, potatoes, and tea, and then sailed to Koombush Ostrov, which we reached about 11.30 p.m., when Alston and I bathed.

Nicholai showed us some feats of strength. He lifted with his little finger from the floor of the hut on to the seat, a stone tied with rope which would weigh $2\frac{1}{2}$ poods (about 72 lbs.). He could also lift 10 pood (360 lbs.) with his hand and put it on the back of his neck.

June 27.

At 2 a.m. on the 27th, Piottuch brought in two Red-throated Divers, from one of which we afterwards took a perfect egg. He had also fired at and struck a Crane.

On the 27th of June, Thursday, Nicholai and Piottuch started for the far end of the island (Koombush), intending to remain there all night if necessary. The rest skinned all the forenoon and then went short trips into the woods. Alston got two Little Buntings, and I two Wood Sandpipers, one Willow Warbler, one Red-throated Pipit, a species which Meves does not seem to have met with here. We also caught a young Grey-headed Wagtail.

Our stock of drinking-water ran out, and there being none near us, we sent two of the men in the boat up the river for a fresh supply, which it took them two and a half hours to bring. We cooked our own dinner, split and fried Willow Grouse and tea, the former pretty well burnt! After dinner Ernst Craemers made a big bonfire with an old tar-barrel.

He told us that, in spring five years ago, the north wind drove the water from the Arctic Sea into the White Sea, dammed back the river Dvina, flooded all the lower part of the peasants' houses in the villages on the delta, and a famine ensued, as they could not sow their grain or plant potatoes till June.

Our friend Piottuch is a great bear-hunter, and around Mezèn has killed at least twenty bears (been in at the death of twenty), and Ernst thinks quite thirty.

Koombush is a sandy island, covered for some distance inland with low scrub of birch and alder, frequented by great numbers of Grey-headed and White Wagtails, Willow Warblers, Mealy Redpolls, and it was here that we met with the Red-throated Pipit for the first time.

Piottuch and Nicholai returned, having had no luck. They saw several Cranes and found an empty nest, and

believe that the eggs or young had been eaten by the foxes which abound here. Alston and I had already seen lots of Cranes' footprints in the marshes.

At midnight, the 27th-28th of June, we started for Laidi Ostrov.

June 28.

About 1.30 p.m. on Friday, the 28th of June, we reached Laidi Ostrov, having left Koombush an hour before with a nice fresh breeze. On landing we had a great chase after Black Vipers amongst some old logs and log houses, capturing two very fine specimens, Piottuch slipping a forked stick across the back of their necks. We consigned them to a big jar of vodka, along with a Lamprey, a Lizard, and a small fish. We also found a dead and decayed *Arvicola raticeps*, of which Alston preserved the skull, and on the shore the bones of a cetacean, sternum and vertebræ, probably of bottle-nosed whale, and also of a porpoise.

Having eight hours to wait here for deep enough water we went off into the woods in different directions, Alston with Piottuch, and I with Nicholai. Alston had but poor success, shooting only a Rustic Bunting, which was, however, our first example of the species. Piottuch got three Willow Grouse, a Common Crossbill, a Yellow Wagtail, and a young Redpoll. I had an eight-mile walk, and brought in a Willow Grouse, a Pintail with down and three eggs, two Waxwings, three Redpoles, and a young Redstart. Piottuch cooked us a capital dinner of duck and grouse, and while we were eating it a Short-eared Owl flew over us, which Nicholai marked down and killed when it alighted further on the shore.

Laidi Ostrov lies parallel with Goletz Ostrov, and is covered with pine and underwood, and at low water is connected with Goletz. Here and there, as upon Goletz and Koombush, long shallow marshes, covered with

cotton-grass and long reed, intersect the forest at regular intervals. A small sour red berry (cranberry) grows in these marshes, and is good for food, Nicholai and I partaking of them plentifully.

We left Laidi Ostrov about 9 p.m. and sailed for Tscheiké Ostrov to search again for the Stints, which we had seen so many of on our last trip. We arrived there at night, and rigged up a tent with the boat-sail, our ground sheet, etc., and had 'tchai.'

June 29.

On Saturday, the 29th of June, Nicholai having found two nests (or 'two stook,' as he calls everything), each of four eggs, of the Stint. Alston and I took our guns and went to shoot the birds so as to make sure that there were only Temminck's Stints breeding here. I shot two birds and Alston one, all from the nests. Two of them we proved to be males. We then found four other nests, each with four eggs, and were able in every case to identify the birds as Temminck's Stints. We have, therefore, come to the conclusion that no Little Stints *breed* here, although one specimen was obtained on a former occasion. Our ammunition was now nearly done, and as one of our party (Ernst Craemers) was suffering badly from toothache, we decided to run for Archangel, which we reached about six or seven o'clock, after starting from the island about 12 noon.

June 30.

On Sunday, the 30th of June, the shoemaker brought us the two pairs of long boots which we ordered on Monday last. They cost us 15 roubles a pair, equivalent to 37s. 2d., and are cheap. Mr. Birse sent round also a huge packing-case for our spoils, about $4\frac{1}{2}$ feet long by $2\frac{1}{2}$ wide by $2\frac{1}{2}$ deep, which should hold some hundreds of birds.

Yesterday evening it rained heavily, but to-day again it

is lovely weather. Our luggage has not yet come from the Custom House.

In the afternoon we went with Mr. and Mrs. Birse and a Russian friend to the Museum, with which we were very favourably impressed. It contained a very fair collection of birds, all of which we were assured had been killed in the Government of Archangel, but unfortunately there were no exact localities or dates. The collection we found very well worth a visit, and Mr. Birse promised to introduce us to the manager, who is a good ornithologist, and from whom we hope to get more information about some of the specimens.

Of mammals, Alston noted—

(*Vespertilio?*) Bat.

(*Putorius ermineus*) Stoat.

(*Putorius luteola*).

(*Putorius putorius*) Polecat.

(*Vulpes lagopus*) Fox.

(*Gulo borealis*) Glutton.

(*Lynx borealis*) Lynx.

(*Pet. volans*).

(*Sciurus vulgaris*) Squirrel.

Of birds, the most remarkable to us was a large Godwit, labelled '*melanura*,' but it seemed to us too big for that species. Its measurements were—Tarsus, $3\frac{8}{10}$; tibia, nearly $2\frac{8}{10}$; middle toe, $2\frac{1}{8}$; bill, $4\frac{7}{8}$; wing, carpal joint to tip, $9\frac{8}{10}$:—1.

We also noted some of the most interesting of the other birds, and before we left Archangel we obtained a list, which is given as an appendix.

July 1.

On the 1st of July, Monday, we at last got our luggage, which had been detained in the blessed (?) Custom House since the 19th of June. Some of the *customs* of this country are certainly a nuisance. We went to the German

Club, where we were introduced by Mr. Rollo. We there met Herr Jacobi, who, with many grimaces, contortions, twists, and signs, described his visit to Solovetsk, whence he returned on Sunday.

At 5 p.m., Nicholai and Piottuch returned from a short expedition. They had started at 2 a.m. for the woods behind the town, and had walked about 40 versts (?). The birds they brought in were *good*. There were two Warblers and a young Bunting we could not make out, also three Little Buntings and a young Bluethroat, a lovely specimen, besides a number of commoner birds. These were at once skinned, labelled, and catalogued, bringing our total number up to 134.

July 2.

The 2nd of July, Tuesday, we occupied in unpacking our luggage and making preparations for our further expeditions. We decided to take boat down the River Dvina, past the mouth of the Urus River, and on to the Ismitchi River, up which we intend to proceed about 14 versts, to a village which we have to walk to from the boat, about five miles. There we purpose taking lodgings for a day or two to work the neighbourhood.

Here, we are told, immense numbers of Owls are to be found in autumn, and we have good chance of getting some now also, besides plenty of small birds, and also Raibchiks, or Hazel Grouse, which we want 'muchly.'

July 3.

On Wednesday, the 3rd of July, Ernst Craemers' toothache being no better, his brother Carl accompanied us this trip, and we started with two men only—Nicholai and Jacof—about ten o'clock this morning, for the Ijma River and village down the eastern branch of the Dvina.

It was about 6 o'clock p.m. that we entered the mouth

of the Ijma, the men having rowed all the way, the wind being right ahead. The distance from Archangel to where we landed on the Ijma Reáka is 24 versts. We shot specimens, and saw many others, of the Common Sandpiper—the first we have seen on the Dvina. [Also seen at Suja, up the river.] They are very common on the Ijma.

We had stopped at Talága village, on the Dvina, about halfway on our journey, where we obtained some milk and had our dinner. We promised copecks to boys to gather eggs, or find nests and show them to us on our return in three or four days' time.

We arrived about 9 o'clock p.m. at the point on the Ijma where we were to leave the boat. Whilst a man went to the village—five versts—for a horse and cart, we boiled water, and had 'tchai' and dinner.

Large quantities of firewood, cut in pieces about one and half feet long, were floating down stream or stacked along the banks, and many men, women, and children were working at splitting and setting them afloat. Where we landed was an encampment of the people from the village, and a road leads from here to the village. We left the encampment about 10.30 p.m.

On the way we captured young Wild Ducks. We heard 'whit, whit, whit,' in the marshes, and from the description we received of the bird we concluded it was the Spotted Crake. This sound we had previously heard all along the banks of the Onèga Canal and the Swir Reáka. Piottuch saw one bird and described it as a 'poulet au l'eau.' (His French is no better than our own, but we get on fairly well.)

July 4.

It was about two o'clock in the morning of the 4th of July when we arrived at Ijma village. After an hour's

rest Alston and I took our stick-guns and repaired to the woods. After three hours' 'chasse' Alston brought in four or five Little Buntings, and I the same number of that species, also one Rustic Bunting (our second example), one Garden Warbler, one young Double or Great Snipe, and a Warbler similar to or the same as our Willow Warbler. We heard the low sweet warble of the Little Bunting, and also its sharp call-note. I shot a male, and the female came within three yards of me, flying so close round that for quite half an hour I could not shoot for fear of spoiling it. I saw also two Great Spotted or Pied Woodpeckers, fired at them, but missed, and thereafter I increased my charge of powder.

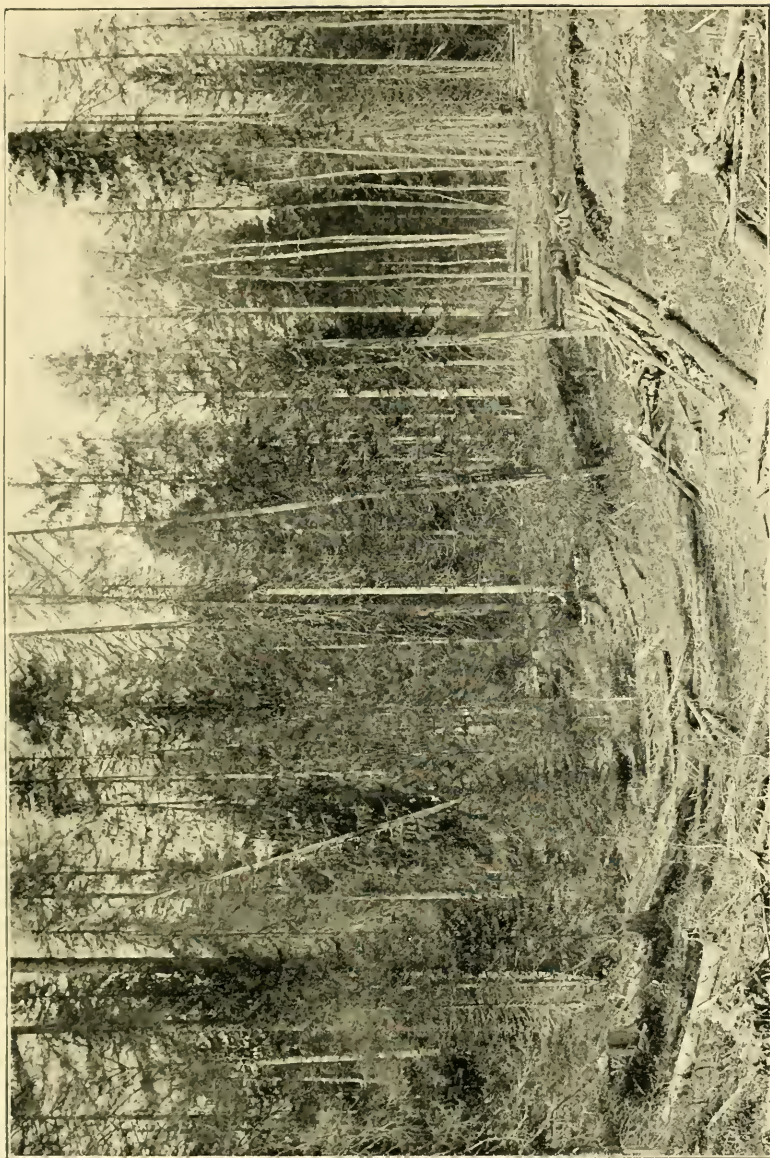
A hunter, named Vassili (= William), brought in young Willow Grouse (Kouropatki), young Capercaillie, and Black-game, and a basket of game. We bought the young birds, or 'youngish,' as Nicholai calls them, in his 'harbour English,' but none of the others. We engaged Vassili at a rouble a day as long so we remain here. This is evidently a good locality for small birds.

Nicholai killed a nice Pike in the river with a stone, and shot a male Bullfinch of the large race.

For the rest of the day, all of us—including Carl—were occupied skinning, and we added 25 to our previous list of 135 before six o'clock.

At 10.30 p.m. we started for Lake Ijma, a distance of eight versts, through great forest much frequented by Bears. Soon after we started I shot a young Hare. We walked very fast all the way, doing the eight versts—equivalent to six miles English—in an hour and a half.

When close to the lake, where there is a small village inhabited by members of a religious sect called 'Old Believers' (see Hepworth Dixon's 'Free Russia'), Piottuch pointing forward in a state of great excitement said, '*Plus vit, monsieur, plus vit!*' And Carl, who was



THE FOREST IN SUMMER.
From a Photograph obtained in Archangel.

just behind him said, 'a bear.' Piottuch was now rapidly loading his rifle, but just as I was popping in ball-cartridges Piottuch said, '*Non, non, c'est un cheval,*' and we had a rare laugh over our first adventure with a bear. The brown hide of the horse seen through the bushes ahead in the uncertain midnight light might certainly have been taken by any one for any large wild animal; but Alston and I confessed to a feeling of thankfulness that the mistake was made by an experienced bear-hunter—as Piottuch undoubtedly is—and not by either of ourselves. Otherwise we should never have heard the last of it at the club during our stay in Archangel. The dogs—Plutka and Beilka, *i.e.*, black and white—which were on ahead of us, were quite unconcerned, and just as Carl said 'bear,' I certainly felt doubtful when I saw the dogs so indifferent, as the night breeze was blowing directly in our faces.

Arriving at the village of the Old Believers, we gained admission to the best-looking of the farmhouses, and after a frugal meal retired to sleep on the floor opposite the oven.

One of the blessings in the dwellings of the Old Believers is that their religion requires them to be very clean. We were requested not to smoke in the house, or to drink spirits out of any of their vessels. Beyond this we did not observe any peculiarities, except that they had no samovar, or tea—as tea-drinking, even, is not permitted to them.

A very little old woman was sole proprietress of the house, and seemed well-to-do. She was also extremely active on her pins (needles they looked more like), and made her only eye do quite the duty of two. Piottuch described her as '*très petite, très vieille, mais pas très belle.*' We slept for about seven hours. Previous to this we had only slept four hours out of forty. During our walk it had rained, and it still rained heavily.

July 5.

The 5th of July, Friday, was showery. We were out all day, starting about 10 a.m., tramping through the forest which surrounds Ijma Ozëro (Lake Ijma), and Nicholai rowed a boat round, keeping alongside our line of march. We had good sport.

Though in search of Hazel Grouse—Raibchik—not one did we see, but we got better birds. First Alston shot a Three-toed Woodpecker, and then Piottuch and Carl Craemers got three fine Northern or Siberian Jays. We were dreadfully punished by mosquitoes, but what we shot fully rewarded us. Alston and I each shot a Northern Jay, while I also obtained a Buzzard, a Willow Grouse (Kouropatki), and a Rustic Bunting. Further round the lake Alston and Nicholai each shot a fine male Waxwing. We failed to find the nests, though we think there can be little doubt that they breed here. Nicholai also shot a female Wigeon and caught a young one, and Piottuch shot two Little Buntings.

Alston, in his diary, noted that the Northern Jays are very lively birds, queer-looking, with their big bushy heads and fluffy plumage, which makes them seem much larger than they really are.

Most of the birds were in the more open marshy parts of the woods.

At the head of the lake, and about a hundred yards from its shore, was an Osprey's nest, which we visited. It was an immense structure on the very top of a huge larch-tree, which could not be climbed without irons, if even then. The old birds were absent, but Vassili was sure that it was inhabited, although there was not much appearance of this, there being no remains of food round the base of the tree. It has been regularly inhabited, as Vassili assures us, for the last ten years, and the birds were seen at the spot about a month ago.

We returned across the lake to the village, and after tea we started back for Ijma village. Carl and I walked the eight versts in an hour and a quarter, or 1 hour 20 minutes; the others came in half an hour after us.

July 6.

On Saturday, the 6th of July, we skinned, adding 25 skins to our list, including young Black Game, etc., brought in by Vassili. We paid for our lodgings, 23 bowls of milk, use of samovar, etc., two roubles; then packed and walked back to the boat, six versts. We made 'tchai' and started again, drinking it in the boat.

We shot a Terék Sandpiper (Kuleek) and obtained two young ones larger than the last ones we got; also two fine Redpolls were brought in by Piottuch and Carl during our walk to the boat. In four hours we reached Talága, where we propose remaining twelve hours. Nicholai and Jacof returned to the landing-stage at Ijma, where Alston found he had left his big knife (one made by Wilkinson, of London). They expect to return in ten hours. At Talága we found good quarters, and Piottuch set about cooking at once.

July 7.

On Sunday, the 7th of July, while Alston, Carl, and I slept for five hours, Piottuch went out, coming in with a Little Bunting, two Wood Sandpipers, and two young ones, two 'flapper' Wild Ducks, one Terék Sandpiper, and one Northern Marsh Tit.

Besides the Wood Sandpipers, Piottuch got five young *Arvicola ratticeps*, seeing the female but failing to secure her. The young ones were not in a regular burrow, but in a hole below a root about a span from the surface.

Alston and I then went out, taking different directions, but nearly all the luck fell to me. Between the village and the mouth of a backwater, or kuria, I killed a female

Scarlet Finch (our first), two pipits (? sp.) and a Spotted Flycatcher.

I then put a female Yellow-breasted Bunting off her nest, but could not at first find the latter. I shot the male and watched. Presently the female went on, after flying round and lighting on the tops of a broad-leaved dockweed, which was growing in great abundance round. After a short search I found the nest and then shot the female bird. The nest contained five eggs, and was under a large plant of dockweed on the ground, on a dry raised bank in a marshy opening in an alder thicket, close to the mouth of a kuria, or creek, near the village of Talága on the Dvina. The eggs were easily blown, but were slightly incubated. These birds were the only pair seen here.

We came in and skinned, and waited for the men's return. They did not get back till six o'clock, or thereabouts, having been delayed both by the wood-floating in the river and by the difficulty of getting back the knife, which a man had seen Alston lay down, and had meant to keep. Nicholai got it at last by giving a rouble for it, but the man wrote a paper saying we must send him another rouble. If he says anything more we shall hand him over to the police, and have him severely punished for his impertinence. They also threatened to beat Nicholai if the rouble were not forthcoming, which we fancy they would find a tough job! Besides the knife, he got for the rouble an egg and nestling of the Common Buzzard.

We set off, and a fair breeze brought us the 15 versts back to Archangel in about an hour and a half. On arrival we found a fine Crane ('giraffe') for sale, shot by a peasant, for which he asked 1 rouble and 20 copecks. We of course decided to have it.

July 8.

On Monday, the 8th of July, Nicholai made a good job of the Crane, and Jacof finished all the small birds.

A distressing thing happened to-day. Nicholai's dog bit out the eye of the poor little pet dog belonging to the house, and the doctor was at once sent for. Piottuch and Nicholai went out about three o'clock to shoot behind the town, and it was on their way there that it happened. It is very annoying and distressing to us. The poor little beastie, too, is so patient under the pain it must be suffering, and, as its mistress, Madame Leitzoff, says, as it holds up one little paw, seems to think itself in fault and to beg pardon:—' *Pauvre belle petite.*' The veterinary surgeon came, and the eye had to be taken out, which operation he performed well, though it was an ugly one to look at; and very patient the doggie was under it.

In the evening Mr. Birse went out for a short sail, and we accompanied him. We landed on Moses Island, and Alston and I shot with our stick-guns four Terék Sandpipers, one of which was young of the year, so that now we have all the stages.

Piottuch and Nicholai brought in while we were out, about a score of small birds, the only good ones being two Pipits of different species (meadow and red-throated?), four Little Buntings, and a young Redwing, and young Willow Warbler.

We had a capital supper and a very pleasant evening at Mr. Birse's, and he gave us some excellent American tobacco, which he had obtained from a ship's captain for nothing. So our smoking does not cost us much!

July 9.

On Tuesday, the 9th of July, we went to the market, where we bought a Hazel Grouse (Raibchik) and three Sterlets—one to preserve and two to eat. They are, as Alston remarked, 'verrie goode meate.'

A young fellow, named Hartmann, brought us three Pine Grosbeaks, alive and quite tame—very handsome

birds. He told us that on the Urus Reáka we can catch twenty in a day if we take one of these as a decoy bird.

We worked at home all day, skinning, labelling, etc.

July 10.

On Wednesday, the 10th of July, we also worked at home, finishing the Crane we began yesterday, and skeletonising another which has come in. We also packed traps for our trip to Cholmogory, where we intend to stay a week or ten days to work the neighbouring country. Mr. Rollo has kindly given us letters to Cholmogory and to its Governor, from whom we hope to receive a paper to the same effect as that we have from the Governor here, which will ensure assistance from the peasants. We propose to start early to-morrow morning in our own boat, instead of taking the river steamboat, should the wind be fair.

July 11.

On Thursday, the 11th of July, we left a little after twelve midnight, and got aboard the steamboat at 1 a.m. There was a marriage party aboard. Our boat was towed behind, our men steering and sleeping time about. We were told we should reach Cholmogory in three or four hours, but it was half-past nine when we got off the steamboat into our own boat and proceeded in her up a side branch of the Dvina. We were much delayed by our men not knowing the channels, and consequently being much bothered with sand-bars, and having to be constantly poling or wading and pushing.

On the way we twice saw Cranes, first two and then five, firing at them with bullets without success, as the range was rather long for smooth-bores.

It was half-past eight at night when we arrived at

Cholmogory—a very different time from what we had been told. We called upon the people to whom we had letters, gave in our passports, and then had supper.

About 10 o'clock p.m. Carl Craemers and I went out, crossed the river, and made for a fir-wood about a verst off. We passed through a thick willow growth into a park-like country, where many cows were feeding.

In the willow-wood we saw only a nest of young Wood Sandpipers and a Hare, and in the high fir-wood Carl found a Redwing's nest with three young and two eggs. We saw a large raptorial bird, which I took to be a Black Kite. Its tail was slightly forked, its plumage dark, its cry like a Buzzard's, but shriller. We could not find any nest. Then about half a verst further we saw Divers, Ducks, and heard the 'whit-whit' in the marshes, probably the cry of the Spotted Crake.

We recrossed the river, and from the boat shot three Common Gulls. Then we tried the back of the town—small alder thickets and pasture-ground—but were not much more successful, getting only one 'Kuleek' (Terék Sandpiper), one Yellow-breasted Bunting, one Garden Warbler, and a Black-headed Gull.

July 12.

It being now about 3 a.m. on Friday, the 12th of July, we came in, awakened Alston and Piottuch, and had our sleep.

About 4 a.m. Piottuch and Alston went out. At first they could see nothing, but after a time they both—separately—happened on a great colony of Yellow-breasted Buntings, of which they brought thirteen home, besides losing seven or eight in the long grass. They were all about in some large, damp meadows covered with a sort of dock, and they constantly perched on the high stalks of the docks and on the longer grass. There were,

however, no nests found. They shot a Terék Sandpiper also, and returned about ten o'clock to breakfast.

The day was spent in skinning; but a Wheatear and many Skylarks were seen.

In the evening Alston and I, with Carl, went out again after Yellow-breasted Buntings, and secured ten more specimens, including three 'youngish,' and we found a couple of nests with very young birds.

The ground they frequent consists of hay-fields, about five acres or more in extent, in which it is extremely difficult to find either the nests or the birds themselves after they are shot. That the birds also run from the nests I am almost certain, as when the bird rose, and afterwards we watched her to the nest, it was placed quite six yards from where she rose first. These hay-fields are covered with the same dockweed (not true dockweed) as was growing at Talága, where I found the nest of eggs; also with plants of horse-celery and long grass. The Buntings perched on the dockweeds and uttered a low 'chit-chit,' and often flew close round when one was shot. Amongst the three of us, eight were shot and six were lost. We came in, but Carl and I could not sleep for the heat and closeness of the room.

July 13.

On Saturday, the 13th of July, Alston and Piottuch started at twelve o'clock noon for the 'Grand Bois,' ten versts off. They walked the first five versts to a village, where they got a cart to drive the other five to the forest of Glubocki, which they entered about 2.30 p.m. They presently came on the fresh tracks of a large bear, and finding they had only one bullet, halted to make three more, by melting shot in a hollowed stump and pouring it into an empty cartridge-case. Piottuch thought it was an old female with young, in

which case they made sure of finding her. But on proceeding further they found tracks not ten minutes old, the bent grass still fresh on the break, showing that it had been close to them, and had 'marscherum' (*i.e.*, 'departed,' or, literally, 'walked off!'). Whereupon Piottuch said it must have been a male, and that there was no chance of catching him without a dog. So there was another Bear-sell!

They got a few birds, lost a Hazel Grouse, and obtained a Northern or Siberian Jay, Crested Titmouse, three Rustic Buntings (male, female, and young one), a young Redwing, etc. They reached home about 1 a.m. next day.

Meanwhile Carl and I stayed in and skinned the birds, and in the afternoon slept for three hours.

In the evening we (Carl and I) went again to the Bunting-ground, where I shot eight, losing three, and Karl shot two. I killed one 'youngish,' nearly full-grown, and Carl also knocked over a large Hawk, which, from his description, was probably a hen Harrier, but when he was just putting his hand on it, it recovered, got up, and flew away.

July 14.

It was about 1 a.m. on the morning of Sunday, the 14th of July, when Alston and Piottuch returned with their account of the Bear, and we had a big 'Bear-talk' before going to rest, and determined to go on Monday in search of Bruin, if only we can get a good dog, as without one it would be no use. Unfortunately we were unable to meet with a right dog, and had reluctantly to give up the project.

We prepared for a start this afternoon, first intending to go to Chircha (or Shirsha), on the way to Archangel, fifty versts distant from here; but when we actually

started, at eight o'clock in the evening, it was for Uima that we rowed, having decided upon that place as being in the more direct line for Walduski.

In the boat we had a grand romp, in which Carl and Hôspodeen Piottuch principally figured, Carl, with his long legs, getting hopelessly mixed up with rugs, 'choubas' (fur coats), guns, and grub baskets. Piottuch kept chaffing all the people in the boats as we passed, almost as much banter passing as if a couple of London cabbies were the speakers.

A cold mist at night made our guns red-rusty. Piottuch in mad pursuit of an Owl, and Carl killing two Rooks (which are very rare here) out of a mixed flock of Rooks and Hooded Crows, were the only other events. Towards morning I got my three hours' sleep, which would have been hard work earlier in the midst of the row.

July 15.

It was about 7 o'clock a.m. on Monday, the 15th of July, that we reached Uima. We had 'tchai,' and after discussing our plans, decided to proceed at once to Walduski, whence we shall send Nicholai for tobacco, letters, etc., it being only six versts from Archangel.

When about three or four versts short of Walduski, Alston and Carl and I landed, the boat going on. Just as I landed a Kite came close overhead, and with No. 7 shot I rolled it over, but it recovered itself before touching the ground and made off. No. 4 shot would have killed it.

We walked under a broiling sun to Walduski, and drank on the way two 'krinkas' (bowls) of cold milk, and most delicious it was. The milk is always kept in ice-houses, which are attached to every farmhouse, large or small. This made thirty-nine bowls of milk this trip.

We also drank and washed from a deep well, in which

sometimes ice remains all summer attached to the walls. In some wells in the country the ice never melts.

We shot a Tree Pipit and a few other things, and arrived at Walduski about 3.30 or four o'clock.

The village of Walduski lies on the only high ground for miles round, about 80 feet above the river, and commands a fine view of Archangel and the surrounding country.

We found the heat so suffocating in the house that I gave up all idea of sleeping until the sun should go down. I shall then get three hours' sleep, and about three o'clock in the morning we are all to go out to collect.

July 16.

Just as we were going to try to sleep, somewhere about midnight or early morning of Tuesday, the 16th of July, a peasant came in and told us of a large Eagle which was frequenting a spot about three versts away. So Carl, Alston, and I started, with a lad to guide us. We saw a pair of Eagles (true Eagles this time, probably *Haliaetus albicilla*), one of them pursued by a large grey Owl, which we suspect to be the Lapp Owl. The trees which the Eagles principally alight upon being pointed out to us, we crossed a small pond of water in a canoe and landed in marshy hay-fields. We saw the Eagle in one tree, but he made off. We took up positions, and most painful 'positions' they were, up to the ankles in soft, moving bog, and clouds upon clouds of cumári (*i.e.*, mosquitos) feasting upon us till we were nearly devoured. This we endured for about half an hour, but could hold out no longer. The Eagle was seen but did not come near.

We returned along the river by some hay-fields, where I killed, at midnight, three Reeves (one of them a young one), and Alston a Yellow-breasted Bunting and a young Curlew. Shooting the Reeves on the wing, like Snipe,

was not easy, as one had to kneel down to get the bird against the sky. I got about three hours' broken sleep, Alston about the same, and Carl hardly any.

Tuesday, the 16th of July, was a very hot day. At half-past six or seven, when it was already scorching hot, Alston found the hornets worse than the *skeeters*, his wrists being covered with blisters, and one of them had a lump as big as half a hen's egg. Lots of birds were seen, but all of them 'common'—at least, what we considered so. We came in to breakfast and then skinned, Carl going out to shoot.

This place *looks* a much better locality than we think it *is*, after our experience of this morning. The hornets, horseflies, and common flies were almost as bad as the mosquitoes in the night. Alston suffered most from the hornets. With me their bites do not cause swellings, though those of the mosquitoes do. I forgot my leggings last night, and suffered accordingly, seven or eight 'cumári' covering the space of half a square inch. We did little to-day but skin a few birds, including adult and young Spotted Crake brought in by our guide of last night.

Alston and I were each separately entertained to tea by the peasants at whose houses we were respectively staying.

It was so hot, and there were so many 'cumári' that it was impossible to get any sleep this night, so we had a romp and kicked up a general row, *by way of keeping cool*, as Alston put it.

July 17.

On Wednesday morning, the 17th of July, about half-past one, there was a tap at the window, and on looking out, whom should we see but Carl Ivanovitch Birse and his crew. They had rowed over from Archangel in less than an hour, to see how we were getting on.

We had planned overnight with our landlord to search for Raibchik (Hazel Grouse), about ten versts away, starting about three o'clock this morning, but Birse confirmed the doubts we had as to the locality holding Raibchik, so we were easily persuaded to pack up and go back with him to Archangel. We left about 6 a.m. [Alston's diary has it, *arrived* at Archangel at 6 a.m.]. Landing on an island on the way, we shot a Yellow-breasted Bunting and a Sedge Warbler.

The two boats had then a race home, but ours was far superior, and Nicholai, Jacob, and one of Birse's men, with Carl and Alston, easily beat the other boat, although Birse's men were the best rowers. We then had a glorious bathe and romp, then a cup of coffee at Mr. Birse's, then to bed about 9 a.m., sleeping till 1.30 p.m.

We then had another bathe and a romp with Birse, Piottuch, Carl, and Ernst, then unpacked the boxes and birds, and got things more ship-shape, as they had been very hurriedly packed.

We planned our next trip, which will probably be either to Urus Reáka or to Lya, and then our last, we hope, to Solovetsk. Carl will accompany us on one and Ernst on the other. They are both exceedingly nice fellows, though I get on best with Carl, as he speaks more English than Ernst. Carl is very like my old schoolfellow and friend 'Doggie' Grant,* and of much the same character and temperament.

July 18.

Thursday, the 18th of July, was cooler, and we had a thunderstorm. We had planned to have a photograph of our boat and crew taken at the landing-place, but it was a failure, Herr Hilda, the photographer, not having a dark tent, and it being too far to carry the plate to his

* The late Alexander Grant, of New Zealand.

house. So later in the day we had a good group of the men taken in his garden, standing round a camp-fire. This view appeared in perfect loveliness, especially old Nicholai chopping wood for the fire, and Piottuch with his multifarious instruments and sporting paraphernalia. We secured the negative also and twelve plates, which, if well printed, ought to be a complete success. Between the two photographic attempts we lunched and spent some time with Mr. Shergold.

July 19.

Friday, the 19th of July, was warm, with heavy thunder showers. We had Mr. Birse to breakfast, and afterwards we bathed with the two Craemers. Nicholai and Jacof went home last night, and are to be back about eleven o'clock to-night, in time for our early morning start for Lya—twenty-five versts off—a journey on which Ernst accompanies us, as Carl will be busy in the office.

In the afternoon, about three o'clock, Mr. Birse drove us down to Solómbola to dine with Captain Farfar, of the ss. *Joseph*, of Montrose, a fine new vessel on her first trip, and lading with flax. The captain gave us 'sea-pie,' a most delightful soup made of potatoes, paste, meat, etc. The captain—a Scotsman—told us that he could not tell us what was 'in til't.' Alston described it as a cross-breed between potato-soup and beefsteak pie. Of this we ate till we could hardly stir, washing it down with plenty of Allsopp's bitter beer and London stout. We afterwards had plum-duff. I mention these 'trivials'; but they were no 'trivials' to us.

Going on deck we watched the Russian labourers pressing the flax into the hold. Huge bales, worth £10 or £12 each, are pressed by leverage by four or five men each into a third of its bulk. While thus engaged the men join in a rough chorus, working from six in the morn-



OSPREY'S NEST ON BROKEN-TOPPED SPRUCE FIR, NEAR SUZMA, ONEGA.

Roughly drawn from memory. R.-drawn by J. Pedder.

ing till six at night. It was a curious sight to see them down in the hold pouring with perspiration and singing a rude chorus, the burden of which was 'Oh, give us something to drink, for we are very dry.' The sight was one well worth seeing.

Driving back to town we called at the house where pilgrims for Solovetsk are lodged, to inquire about the next steamer going there.

We now changed our plans for our next trip, and decided to go with Mr. Birse to Suzma, eighty versts away, and quite a new locality for us. This expedition will require four days, and to catch the Solovetsk steamer we should have to be back on Wednesday night or Thursday morning. We go in two boats, as Mr. Birse takes two friends to join his wife and his mother-in-law (Mrs. Craemers) at Suzma. We have lost one of our men—Jacof—as he must go and get his hay cut, not being able to employ another man in his place. Our party will, therefore, this trip consist of Mr. Rogers and a lady (Miss Giernet), Birse, Piottuch, Carl, and Ernst, ourselves, and two crews of four men each.

July 20.

On Saturday, the 20th of July, we made preparations for our trip to Suzma—including a lovely mosquito-veil which Madame Leitzoff made for me to replace one I had lost. I told her I would never part with it. (It was, I believe, a piece of her own crinoline.) We started in our two boats about 3 p.m., on a journey which took twenty-two hours to accomplish, stopping at Nicholaïsk Monastery for tea on Sunday, the 21st of July. We had been told the journey would take twelve hours.

July 21.

On Sunday, the 21st of July, we shot Great Black and Great Spotted Woodpeckers, Great Grey Shrike, Grosbeaks, etc.

July 22.

On Monday, the 22nd of July, we got Waxwing, Red-throated Diver, female Scarlet Finches, etc.; and dead Quails were brought in to us.

July 23.

On Tuesday, the 23rd of July, we left Suzma by post-horses and tarantasse, which we were assured would save us much time; but having no 'paderoshna' we were delayed for horses and made to pay through the nose, and it took us twenty-two hours to reach Archangel. Meanwhile our boat and Mr. Myers took eight hours less. On the way we saw large Black Terns (?).

July 24.

We arrived at 11 a.m. on Wednesday, the 24th of July, after a trip which was the least successful and enjoyable one of our Archangel tour.

We have now 324 birds' skins and the Skeleton of the Crane.

July 25.

On Thursday, the 25th of July, we got the first copies of the photograph of the boat's crew, which is a success. We then drove to Solómbola with Piottuch, and bought divers-neck muffs, etc.

July 26.

On Friday, the 26th of July, after packing birds and eggs, we went back to Solómbola in the evening, and found that we must give up the Solovetsk trip, as it would entail our missing the only steamer that would suit us for our return. We therefore arranged our passage with Captain Burnet of the *Stevenson*, either to London, Hull, or Aberdeen. She is to sail Thursday next.



SOLÓMBOLA—THE PORT OF ARCHANGEL.

July 28.

On Sunday, the 28th, Nicholai and his wife came in, bringing us presents, including two or three Yellow-breasted Buntings, a Golden Plover, and a Sedge Warbler, all skinned, and a Pipit in the flesh, as well as a bicker full of milk, Russian bread, etc.

We afterwards went to Shergold's, to see the collection left with him by Heinké, who collected for Hoffmanssegg. There were four large chests, one of stuffed birds beautifully done, one of skins and furs in good condition, and two of large horns. They are not very valuable from a scientific point of view, though in a monetary sense they are.

There were ten splendid skins of Eagle Owl, and as many of the Snowy Owl, Red-necked Grebe, Brent Goose, and one or two more were the only ones we had not before identified at Archangel. Of Warblers there were none, though we had been led to understand from Mr. Dresser that there were.

Mr. Shergold has had them in his keeping for twelve years, and as he pays insurance and cannot hear from Heinké, he has decided to send the whole lot to Dresser to be disposed of in London, where we assured him they would fetch a good price.

Carl dined with us at five o'clock, and then we went to visit the Samoyèdes, who live near the slaughter-houses, about a verst and a half behind the town. We certainly were not prepared to see such savages anywhere in Europe. There are two families of them, living in conical-shaped wigwams, exactly like those of North American Indians, covered with squares of birch-bark sewed together, and the door closed with the same. Inside the huts were strewn with filthy pieces of fur, logs of woods, casks, and in the centre burned a wood fire, on either side of which sat a Samoyède woman,

while a naked, or nearly naked, baby sprawled about in dangerous proximity to the flames. Hung above by a long rope or chain from the top of the wigwam was a large iron pot, and the smell which issued from the doorway was simply *unbearable*. There were no men at home, so the women were shy of showing themselves. One came out to the doorway, however, and we had a good view of her. She had the true Mongolian stamp of features, the sallow complexion, flat nose, long narrow eyes, high cheekbones; was of small stature, and was dressed or wrapped up in furs of different colours, and wore the regular Samoyède boots. Withal she was not ugly, but had rather a pleasant expression.

A perfect swarm of mongrel dogs rushed out to meet us, and for a time we were puzzled to know what these could be kept for, but all doubts vanished when afterwards we found skulls and bones both of dogs, cats, horses, lying about in close proximity, and when we peeped into the large casks in which they store their *perfectly rotten* meat. The stench that emanated from these casks, and indeed pervaded the whole neighbourhood, was loathsome in the extreme. Carl assured us that they prefer this food to any other, and live close to the slaughter-house in order to obtain it and the offal.

But these poor creatures are not to be taken as types of the Samoyèdes in position socially, as their contact with civilisation has certainly not improved them. No; these people belong to another race, who hold the Samoyèdes almost as slaves, and who came from the East and conquered them—so we were told.

They are not to be compared with the wealthy Samoyèdes of Mezèn and Petchora, who each own 15,000 or 20,000 * Reindeer, who have clean and com-

* See, however, the Petchora journals; 10,000 is a big property.

fortable wigwams, with a chamber only used for guests and for purposes of hospitality.

The two families we saw live always here, and gain a living by begging in the town, or working when work can be had. Our walk was well worth our while, as we thereby gained a slight insight into the habits of a people, the most savage in Europe, with whom we may perhaps on some future occasion make a nearer and longer acquaintance.

At the slaughter-houses was a large flock of filthy Ravens, of which I shot one, which stank as badly as the offal upon which they were feeding. The ground behind the town is a marshy moor covered with 'maroushka' (cloudberry), *Betula nana*, heath, and small bushes and trees. A Common Snipe was all we saw besides the Ravens.

July 29.

On Monday, the 29th of July, we went down to Solómbola, and bought a glutton's and a lynx's skin for five and seven roubles. Then in the town we bought a few curios, but could not get any of the ivory models of the Samoyède huts, as all had been sent to Moscou for exhibition.

July 30.

On Tuesday, the 30th of July, the old savage and his squaw, the latter in all her barbaric splendour, dress picturesque but not elegant, visited us. We then went to the Museum with Piottuch, writing our list of species wanted.

In the evening, at the Club, we entertained Shergold, Birse, Roller, Piottuch, and Gellermann to a little dinner, which was a great success. Shergold sang like a nightingale, and sent to his house for some Kuhlenbacher—dark-brown beer—which was very good, the other liquors being wretched.

July 31.

On Wednesday, the 31st of July, we dined at Mr. Birse's and then completed our packing, and on Thursday, the 1st of August, we said our goodbyes, Nathalie Andrèvna in floods of tears, and the last we saw of Archangel were the firemen galloping full speed to the first quarter of the town—a false alarm for the sake of practice. We were on board the *Stevenson* at Solómbola at one o'clock. The ship being a 'tee-tottle' one, we got some few private stores on board, and the captain promised us the use of the medicine-chest. The vessel steamed off at last on the 2nd about half-past one in the early morning, and reached the Maimùx Bar about 5 a.m., where it stuck fast, and had to be lightened in order to pass over that and the second bar. The reloading from the lighters was completed about ten minutes to 6 p.m. on Sunday, the 4th of August, when we finally left our anchorage. The last we saw of Russians were the men and women on the lighters as they dropped astern, and the last we heard was a—by this time—well-known Russian song, joined in by all hands.

August 4.

The White Sea was at this time as calm as a mirror, and far away to the West the long point of land stretched out, which separates the Archangel and Onèga Bays, which we also saw from Suzma. When we left our anchorage we proceeded nearly North, at about eight and a half knots, bound either for Peterhead or Aberdeen, where the captain puts in for orders and to coal. It is expected that eight and a half days will bring us to port. We rose about 9 a.m. on Monday, the 5th of August, to find we had crossed the Arctic Circle and were steaming along the dreary coast of Finland—long low barren hills, with a low cliff-line and great drifts of

snow lying in the hollows close down to the sea. A few hours after noon we passed the lighthouse of Orlobka, a slight mirage causing it at first to look double. Between 12 and 1 p.m. the wind suddenly shifted to the North, and it became icy cold, with the thermometer at 48° in the sun, when yesterday it was 92°. In the afternoon came thick fog, and the steam-whistle had to be blown. Bottle-nosed Whales (*Globicephalus soineval*) were seen, and a Glaucous Gull hovered close overhead. The lead heaved, showed a sandy shelly bottom at about forty fathoms, and at 8 p.m. the log showed 310 miles from Archangel.

August 6.

We ran all Tuesday, the 6th of August, and night with all sails and half steam at about ten and a half knots before a strong breeze and in thick mist, and on Wednesday, the 7th of August, we passed—about seven miles off—the North Cape, a fine headland, with the strata twisted and distorted in every conceivable direction.

The 8th, Thursday, was a disagreeable day of heavy rain with head winds and a heavy swell. The 9th, Friday, was a beautiful day. We saw a peak or two of the Lofodden Isles in the distance. We observed numbers of Fulmars, an Eider Drake, a flock of Terns (Arctic Terns with one Common Tern), Richardson's or Arctic Skuas, one Long-tailed Skua, Puffins, Razor-bills and Kittiwakes, and two large black Petrels, which were probably Great Shearwaters.

August 10.

On Saturday, the 10th of August, we saw in the evening a couple of large whales, probably *Balanoptera musculus*,

blowing in the distance. The rest of the voyage needs no account, and we finally arrived at Peterhead during the early morning of the 13th of August, Tuesday. After spending a night in Aberdeen we reached our respective homes on the 14th.



IGNATI N. Q. PIOTTUCH, ARCHANGEL (1872)



C. Craemers

C. CRAEMERS (1872).
OUR FRIENDS—1872—ARCHANGEL.



ERNEST CRAEMERS (1872).

APPENDIX A

FULL LIST OF THE BIRDS COLLECTED AROUND ARCH- ANGEL IN 1872, BY E. R. ALSTON AND J. A. HARVIE-BROWN.

The numbers are those on the labels, and the asterisks(*) signify specimens retained in Museum H. W. Feilden and J. A. Harvie-Brown.

Redwing. *Turdus iliacus*, L.

- 136. Juv. Ijma Reáka, 3rd July, 1872, I. Piottuch.
Bill horn; base of lower mandible yellowish;
legs ditto.
- 229. Juv. Talága, 7th July, 1872, I. Piottuch.
Diseased; in spirits.
- 268*. Juv. Glubocki, 15th July, 1872, I. Piottuch.

Fieldfare. *Turdus pilaris*, L.

- 44. Juv. Borki Ostrov, 21st June, 1872, I. Piottuch
and Nicholai.

Whinchat. *Pratincola rubetra* (L).

- 2*. ♂ Suyia, 14th June, 1872, J. A. H. B. Insects
in stomach.
- 216*. Near Archangel, 8th July, 1872, I. Piottuch and
Nicholai.
- 219.)
- 220.) Near Archangel, 8th July, 1872, I. Piottuch
221.) and Nicholai.
- 222. Juv.)

278. Juv. Walduski, 15th July, 1872, I. Piottuch.

Redstart. *Ruticilla phœnicurus* (L.).

94*. Juv. Laidi Ostrov, 28th June, 1872, J. A. H. B.

117. ♂ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai. With young.

133*. ♂ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

Bluethroat. *Cyanecula suecica* (L.).

123. ♂ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

Garden Warbler. *Sylvia hortensis*, Bechst.

1*. ♂ Suyia, 14th June, 1872, E. R. A. Insects in stomach.

146*. ♀ Ijma, 4th July, 1872, E. R. A.

247. ♂ Cholmogory, 12th July, 1872, J. A. H. B. and C. Craemers.

270*. Cholmogory, 15th July, 1872, J. A. H. B.

274. ♂ Walduski, 15th July, 1872, J. A. H. B.

285*. ♂ } Walduski, 16th July, 1872, J. A. H. B.

286*. ♂ }

288. ♂ Walduski, 16th July, 1872, I. Piottuch.

Willow Warbler. *Phylloscopus trochilus* (L.).

151. ♂ Ijma, 4th July, 1872, J. A. H. B. Upper mandible dark brown, lower yellowish; legs dark brown.

223*. Juv. } Near Archangel, 8th July, 1872, I.

224. Juv. } Piottuch and Nicholai.

Wood Warbler. *Phylloscopus sibilatrix* (Bechst.).

302*. ♀ Suzma, 21st July, 1872, I. Piottuch.

Sedge Warbler. *Acrocephalus schœnobænus* (L.).

330*. Near Archangel, Nicholai. Received 28th July, 1872.

Northern Marsh Tit. *Parus salicarius*, C. L. Brehm.

201*. Talága, 7th July, 1872, I. Piottuch.

White Wagtail. *Motacilla alba*, L.

261. Cholmogory, 12th July, 1872, E. R. A.

301. ♀ Juv. Suzma, 21st July, 1872, C. and E. Craemers.

303*. ♀ Juv. Suzma, 21st July, 1872, C. and E. Craemers.

311*. ♂ Juv. Suzma, 21st July, 1872, C. and E. Craemers.

Blue-headed or Grey-headed Wagtail. *Motacilla flava*, L.

14. ♂ Kakari Ostrov, 18th June, 1872, Nicholai and Jacof. Insects in stomach.

131*. ♂ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

Tree Pipit. *Anthus trivialis* (L.).

273*. ♂ Walduski, 15th July, 1872, J. A. H. B.

Red-throated Pipit. *Anthus cervinus* (Pall.).

91*. ♂ Koombush Ostrov, 27th June, 1872, J. A. H. B.

211. ♂ } Near Archangel, 8th July, 1872, I. Piottuch

212. ♂ } and Nicholai.

113. ♀ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

202. ♂ } Talága, 7th July, 1872, J. A. H. B.

203. ♀ }

331. ♂ Near Archangel, Nicholai. Received 28th July, 1872.

Great Grey Shrike. *Lanius excubitor*, L.

41*. ♂ } Borki Ostrov, 21st June, 1872, I.

42. Juv. } Piottuch and Nicholai.

312*. ♂ Suzma, 21st July, 1872, I. Piottuch.

321. ♀ Suzma, 22nd July, 1872, E. R. A.

Waxwing. *Ampelis garrulus*, L.

80*. ♀ } Goletz Ostrov, 26th June, 1872, Piottuch.

81. ♀ } Seeds in stomachs of both.

96*. ♂ { Laidi Ostrov, 28th June, 1872, J. A. H. B.

97*. ♂ { Flock of three, testes rather developed.

97*. ♂ { Stomach contained cranberries, growing in marshes.

175. ♂ Ijma Ozero, 5th July, 1872, E. R. A.

181*. ♂ Ijma Ozero, 5th July, 1872, Nicholai.

320. ♂ Suzma, 22nd July, 1872, E. R. A.

Spotted Flycatcher. *Muscicapa grisola*, L.

112. ♀ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

198*. ♀ Talága, 7th July, 1872, J. A. H. B.

Brambling. *Fringilla montifringilla*, L.

191. ♂ Talága, 7th July, 1872, E. R. A.

Mealy Redpoll. *Linota linaria*, L.

84*. ♂ Koombush Ostrov, 27th June, 1872, J. A. H. B.

95*. Juv. Laidi Ostrov, 28th June, 1872, I. Piottuch.

Northern Redpoll. *Linota exilipes* (Cones).

7. ♂ Near Archangel, 18th June, 1872, E. R. A. and J. A. H. B. Grit and green seeds in stomach.

8*. ♂ Near Archangel, 18th June, 1872, E. R. A. and J. A. H. B. Grit and green seeds in stomach.

104. ♂ Laidi Ostrov, 28th June, 1872, J. A. H. B.

111*. ♂ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

129*. Juv. } Near Archangel, 1st July, 1872, I. Piottuch

130. Juv. } and Nicholai.

132*. ♀ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

197. ♂ Talága, 7th July, 1872, I. Piottuch.

204*. ♂ Talága, 7th July, 1872, J. A. H. B.

215. ♂ Near Archangel, 8th July, 1872, I. Piottuch and Nicholai.

Scarlet Finch. *Carpodacus erythrinus* (Pall.).

194*. ♀ Talága, 7th July, 1872, J. A. H. B. Bill pale horn; legs flesh. Grit in stomach.

316. ♀ Suzma, 22nd July, 1872, E. R. A. and J. A. H. B.

317. ♀ }
318*. ♀ } Suzma, 22nd July, 1872, J. A. H. B.

Bullfinch. *Pyrrhula major*, Brehm.

157. ♂ Ijma, 4th July, 1872, Nicholai.

Pine Grosbeak. *Pinicola enucleator* (L.).

304*. ♀ Juv. Suzma, 21st July, 1872, J. A. H. B.

Emberiza.

110. ♂ Juv. Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

Reed Bunting. *Emberiza schæniclus*, L.

272. Juv. Walduski, 15th July, 1872, J. A. H. B.

Yellow-breasted Bunting. *Emberiza aureola*, Pall.

192*. ♂ Talága, 7th July, 1872, J. A. H. B. Upper mandible, horn; edges and lower, flesh; legs, do. Food: small insects, beetles; hair with nests and eggs.

193*. ♀ Talága, 7th July, 1872, J. A. H. B. Upper mandible, horn; edges and lower, flesh; legs, do. Food: small insects, beetles; hair with nests and eggs. Small caterpillars and grubs in stomach.

230. ♀

231*. ♂

232. ♀

233. ♂

234*. ♂ Immat.

235. ♂

236. ♂ Immat.

237*. ♀

238. ♂

239*. ♀

240*. ♂

241*. ♂

252*. ♂ Cholmogory, 12th July, 1872, E. R. A. and J. A. H. B.

Cholmogory, 12th July, 1872,
E. R. A. and I. Piottuch.

- 253*. ♀ Cholmogory, 12th July, 1872, C. Craemers.
 254*. Juv. Cholmogory, 12th July, 1872, E. R. A.
 255. Juv. } Cholmogory, 12th July, 1872, Nicholai.
 256. Juv. }
 257. ♂ } Cholmogory, 12th July, 1872, J. A. H. B. and
 258. ♀ } E. R. A.
 259*. ♂ Cholmogory, 12th July, 1872, J. A. H. B.
 260. ♀ Cholmogory, 12th July, 1872, J. A. H. B. and
 E. R. A.
 262*. ♂ Cholmogory, 15th July, 1872, J. A. H. B.
 263. ♀ Cholmogory, 15th July, 1872, C. Craemers.
 269*. Juv. advd. Cholmogory, 15th July, 1872, J. A. H. B.
 271. ♀ Cholmogory, 15th July, 1872, J. A. H. B.
 277. ♀ Walduski, 15th July, 1872, E. R. A.
 279. ♂ } Walduski, 16th July, 1872, I. Piottuch.
 280*. ♀ }
 283*. ♂ } Walduski, 16th July, 1872, C. Craemers.
 284. ♀ }
 289*. ♂ }
 290. ♂ }
 291*. Juv. }
 292*. Juv. } Walduski, 16th July, 1872, C. Craemers.
 293*. Juv. }
 294. Juv. }
 295*. Juv. }
 327. ♂ } Near Archangel, Nicholai, recd. 28th July,
 328. ♂ } 1872.
 329*. ♂ }

Yellow Bunting, or Yellowhammer. *Emberiza citrinella*, L.

- 114*. ♂ } Near Archangel, 1st July, 1872, I. Piottuch
 115*. ♂ } and Nicholai.
 116. ♂ }

Rustic Bunting. *Emberiza rustica*, Pall.

- 144*. ♂ Ijma, 4th July, 1872, J. A. H. B. Bill, upper mandible, dark horn; lower, paler; legs, flesh.

264. Juv. Glubocki, 15th July, 1872, I. Piottuch.

265. ♂ } Glubocki, 15th July, 1872, E. R. A.
266*. ♀ }

Little Bunting. *Emberiza pusilla*, Pall.

4. ♂ Near Archangel, 18th June, 1872, E. R. A.
Insects in stomach.

89. ♂ }
90. ♂ } Koombush Ostrov, 27th June, 1872, E. R. A.

93. ♂ Laidi Ostrov, 28th June, 1872, E. R. A.

98*. ♀ Laidi Ostrov, 28th June, 1872, J. A. H. B.

118. ♂

119. Juv. }
120*. Juv. } Near Archangel, 1st July, 1872, I. Piottuch
121*. Juv. } and Nicholai.

122*. ♂

137*. ♂ }
138*. ♀ } Ijma, 4th July, 1872, J. A. H. B.

141. ♀ Ijma, 4th July, 1872, E. R. A.

147. ♂ Ijma, 4th July, 1872, J. A. H. B.

149. ♀ Ijma, 4th July, 1872, E. R. A.

150*. ♂ Ijma, 4th July, 1872, J. A. H. B.

152. ♂ }
153*. ♂ } Ijma, 4th July, 1872, J. A. H. B.

160*. ? Juv. Ijma, 4th July, 1872, Carl Craemers.

161*. Juv. Ijma, 4th July, 1872, Carl Craemers.

170*. Juv. Ijma Ozero, 5th July, 1872, I. Piottuch.

173*. ♀ }
174*. ♂ } Ijma Ozero, 5th July, 1872, I. Piottuch.

176*. ♂ } Ijma Ozero, 5th July, 1872, Nicholai and I.

177. ♂ } Piottuch.

190. ♂ Talága, 7th July, 1872, E. R. A.

195. ♀ }
196*. ♂ } Talága, 7th July, 1872, I. Piottuch.

217*. } Near Archangel, 8th July, 1872, I. Piottuch

218. } and Nicholai.

225. Juv. Near Archangel, 8th July, 1872, I. Piottuch and Nicholai.

281. Juv. } Walduski, 16th July, 1872, E. R. A.
282. ♀ }

319*. ♂ Suzma, 22nd July, 1872, J. A. H. B.

Skylark. *Alanda arvensis*.

102*. ♂ Tscheiké Ostrov, 29th June, 1872, E. Craemers.

287. ♂ Walduski, 16th July, 1872, E. R. A.

Siberian, or Northern Jay. *Perisoreus infaustus* (L.).

164. ♂ Ijma Ozero, 5th July, 1872, E. R. A. Bill and legs, black; irides, red-brown. Food: insects, small beetles.

165*. ♀ Ijma Ozero, 5th July, 1872, J. A. H. B. Bill and legs, black; irides, red-brown. Food: insects, small beetles.

167. ♂ } Ijma Ozero, 5th July, 1872, C. Craemers.
168*. ♀ }

171. ♀ } Ijma Ozero, 5th July, 1872, I. Piottuch.
172*. ♂ }

184. ♂ Ijma Ozero, 5th July, 1872, I. Piottuch.

267. ♀ Glubockie, 15th July, 1872, E. R. A.

Hooded Crow. *Corvus cornix*, L.

3*. ♂ Suzma, 14th June, 1872, J. A. H. B.

24. Juv. Near Archangel, 18th June, 1872, E. R. A.

Jackdaw. *Corvus monedula*, L.

250. } Cholmogory, 12th July, 1872, Nicholai.
251*. }

Great Black Woodpecker. *Picus martius*, L.

368. ♀ Suzma, 21st July, 1872, E. R. A.

Barred or Lesser Spotted Woodpecker. *Dendrocopus minor* (L).

12*. ♂ { With nest, Kakaree Ostrov, 18th June,
1872, Nicholai and Jacof. Insects in
13*. ♀ { stomach.

Middle Spotted Woodpecker. *Dendrocopus medius* (L.).

305*. ♂ Suzma, 21st July, 1872, I. Piottuch.

306*. ♂? Suzma, 21st July, 1872, Carl Craemers.

307. ♂ Suzma, 21st July, 1872, E. R. A.

Three-toed Woodpecker. *Picoides tridactylus* (L.).

180. ♀ Ijma Ozero, 5th July, 1872, E. R. A. Bill and legs, dark lead. Stomach contained ants and beetles.

Cuckoo. *Cuculus canorus*, L.

166. ♂ Ijma Ozero, 5th July, 1872, I. Piottuch.

323*. Juv. ♀ Suzma, 22nd July, 1872, J. A. H. B.

Short-eared Owl. *Asio accipitrinus* (Pall.).

105. ♂ Laidi Ostrov, 28th June, 1872, Nicholai.

134*. ♀ Near Archangel, 1st July, 1872, I. Piottuch and Nicholai.

325*. ♀ Juv. Near Archangel, Mr. Myers; received 26th July, 1872.

Buzzard. *Buteo vulgaris* (L.).

178*. ♀ Ijma Ozero, 5th July, 1872, J. A. H. B. Food, bones of frog.

207. Juv. Ijma, brought back by Nicholai; bought in Ijma with one egg; received 7th July, 1872.

Hobby. *Falco subbuteo*, L.

79. ♂ Goletz Ostrov, 26th June, 1872, E. R. A.

Anas.

158*. Juv. Ijma Reáka, 3rd July, 1872, Carl Craemers.

Wild Duck. *Anas boscas*, L.

159. Juv. Ijma Reáka, 3rd July, 1872, I. Piottuch.

162*. Juv. } Ijma Reáka, 3rd July, 1872, I. Pottauch.

163. Juv. }

Shoveller. *Spatula clypeata* (L.).

9. ♂ Archangel Market, 18th June, 1872.

18*. ♀ (With the 9 eggs, received 15th June, 1872.)

Tinéváto Ostrov, 18th June, 1872, Nicholai and Jacof

19*. ♂ (With the 9 eggs, received 15th June, 1872.)
Tinèvátó Ostrov, 18th June, 1872, Nicholai and
Jacof.

64*. ♀ Goletz Ostrov, 23rd June, 1872, J. A. H. B.

65. ♀ (With four young), Cholopyain Ostrov, 23rd
June, 1872, Jacof.

66. Juv.	}	Cholopyain Ostrov, 23rd June, 1872, J. A. H. B. and E. R. A.
67*. Juv.		
68*. Juv.		

Garganey. *Querquedula circa* (L.).

11*. ♂ Archangel Market, 18th June, 1872.

23. ♂ Archangel Market, 18th June, 1872 (with
No. 11).

Teal. *Nettion crecca* (L.).

39. ♀ Borki Ostrov, 21st June, 1872, I. Piottuch
and Nicholai.

40*. ♀ Borki Ostrov, 21st June, 1872, I. Piottuch
and Nicholai.

Pintail Duck. *Dafila acuta* (L.).

17. ♀ Tinèvátó Ostrov, 18th June, 1872, Nicholai
and Jacof.

70*. ♀ (With young.) Cholopyain Ostrov, 23rd
June, 1872, J. A. H. B.

71*. Juv.	}	Cholopyain Ostrov, 23rd June, 1872, J. A. H. B. and E. R. A.
72*. Juv.		
73. Juv.		
74. Juv.		
75*. Juv.		
76*. Juv.		

106. ♀ Laidi Ostrov, 28th June 1872, J. A. H. B.
(with down and 2 eggs).

Wigeon. *Mareca penelope* (L.).

169. Juv. Ijma Ozero, 5th July, 1872, Nicholai.

179. ♀ Ijma Ozero, 5th July, 1872, Nicholai, with
No. 169.

Common or Black Scoter. *Edemia nigra* (L.).

299*. ♂ Walduski, 16th July, 1872, peasant boy.

Willow Grouse. *Lagopus albus* (Gmel.).

82*. ♀ } Goletz Ostrov, 26th June, 1872, J.A.H.B.
83*. ♀ } and Piottuch. (Eggs broken.)

99. ♂ }
100*. ♀ } Laidi Ostrov, 28th June, 1872, I. Piottuch.

A154. Juv. }
B155. Juv. } Ijma, 4th July, 1872, B. J. Wassili.
156*. Juv. }

Capercaillie. *Tetrao urogallus*, L.

154. Juv., Ijma, 4th July, 1872, B. J. Wassili.

Black Grouse. *Tetrao tetrrix*, L.

155. Juv. Ijma, 4th July, 1872, B. J. Wassili.

182. Juv. Ijma, 6th July, 1872, brought in with

183*. Juv. No. 185, by Wassili.

185*. Juv. Ijma, 6th July, 1872, Wassili, with 182-3.

Hazel Grouse. *Tetrastes bonasia* (L.).

226. ♀ Archangel Market, 9th July, 1872.

322. ♀ Suzma, 22nd July, 1872, peasant.

Spotted Crake. *Porzana maruetta* (Leach).

297*. ♀ } Walduski, 16th July, 1872, peasant
298*. Juv. } boy. Base of bill of Juv. fleshy red;
tip with diamond; legs greenish lead.

Crane. *Grus communis*, Bechst.

208*. ♂ Moorahvichi Ostrov, 3rd July, 1872, brought to us by Ilya, received 7th. Bill, red at base, yellowish towards tip; irides, red; legs, black; weight, 10 lbs. 4 oz. Stomach contained vegetable matters, and a few fish-bones; sternum preserved.

227. ♂ (Skeleton), Walduski, 7th July, 1872, bought. Stomach contained vegetable substances and grit; gullet and crop, small univalve shells.

Golden Plover. *Charadrius pluvialis*, L.

25*. ♂ Pratosclotski Ostrov, 20th June, 1872,
Ernst Craemers. Stomach empty.

310. ♂ Suzma, 21st July, 1872, I. Piottuch.

326. Near Archangel, Nicholai, received 28th July, 1872.

Grey Plover. *Squatarola helvetica* (L.).

56. ♀

57. ♂

58*. ♂

} Tscheiké Ostrov, 22nd July, 1872, E. R. A.

Oystercatcher. *Hæmatopus ostralegus*, L.

324. Juv. R. Dvina, 23rd July, 1872, Nicholai.

Great or Double Snipe. *Gallinago major* (Gmel.).

142*. Juv. Ijma, 4th July, 1872, J. A. H. B. Bill, horn;
pale at base of lower mandible; legs, greenish-grey.

Little Stint. *Tringa minuta*, Leisl.

48*. Tschatché Ostrov, 21st June, 1872, Nicholai.

Temminck's Stint. *Tringa temmincki*, Leisl.

45*.

46*.

47. ♂

77. ♂

78. ♂

} Tscheiké Ostrov, 21st June, 1872, E. R. A.
and J. A. H. B.

} Goletz Ostrov, 22nd June, 1872, Nicholai.

107. ♀ Tscheiké Ostrov, 29th June, 1872, E. R. A.
Nest No. 1.

108*. ♂ Tscheiké Ostrov, 29th June, 1872, J. A. H. B.
Nest No. 2.

109*. ♂ Tscheiké Ostrov, 29th June, 1872, J. A. H. B.
Nest No. 3.

Curlew Sandpipers. *Tringa subarquata* (Güld.).

128. Archangel Market, 18th June, 1872.

Ruff. *Machetes pugnax* (L.).

50*. ♀

51*. ♂

52. ♂

53. ♂

54. ♂

} Tschatché Ostrov, 21st June, 1872, E. R. A.
and J. A. H. B.

59. ♂ } Tscheiké Ostrov, 22nd June, 1872, J. A. H. B.
 60. ♂ }
 124*. ♂ }
 125*. ♂ } Archangel Market, 18th June, 1872.
 126. ♂ }
 127*. ♂ }
 275*. Juv. } Walduski, 15th July, 1872, J. A. H. B.
 276. Juv. }

Greenshank. *Totanus glottis* (L.).

- 38*. Borki Ostrov, 21st June, 1872, I. Piottuch and Nicholai.

Wood Sandpiper. *Totanus glareola* (Gmel.).

43. ♀ Borki Ostrov, 21st June, 1872, I. Piottuch and Nicholai.
 85*. ♀ }
 86*. ♂ } Koombush Ostrov, 27th June, 1872, J. A. H. B.
 140*. ♂ Ijma Reáka, 3rd July, 1872, I. Piottuch.
 145. ♀ Ijma Reáka, 3rd July, 1872, I. Piottuch.
 188. Juv. } Talága, 6th July, 1872, I. Piottuch, with
 189*. Juv. } 199 and 205.
 199. ♂ Talága, 7th July, 1872, I. Piottuch, with 188 and 189.
 205*. ♀ Talága, 7th July, 1872, I. Piottuch, with 188 and 199.
 246. Cholmogory, 12th July, 1872, J. A. H. B. and C. Craemers.
 296*. ♂ Walduski, 15th July, 1872, I. Piottuch.

Common Sandpiper. *Totanus hypoleucos* (L.).

- 139*. ♂ Ijma Reáka, 3rd July, 1872, Carl Craemers.

Terék Sandpiper. *Terekia cinerea* (Güld.).

- 5*. ♂ Near Archangel, 18th June, 1872, J. A. H. B. Stomach empty.
 6*. ♂ Near Archangel, 18th June, 1872, Carl Craemers. Grit in stomach; bill, black; eye, dark; legs, greenish-orange.

- 26*. ♂ } Postodvornia poscotina Ostrov, 20th June,
 27*. ♂ } 1872, J. A. H. B. and E. Craemers.
 28. ♀ Same place and date, E. R. A., the mother
 of the four following:—
 29. Juv.)
 30. Juv.)
 31*. Juv.) Same place and date, E. R. A. and J. A. H. B.
 32*. Juv.)
 37*. ♂ Tinéváto Ostrov, 21st June, 1872. E. Crae-
 mers.
 49*. ♀ Tscheiké Ostrov, 21st June, 1872, J. A. H. B.
 92. ♂ Koombush Ostrov, 27th June, 1872, E. Crae-
 mers.
 135. ♂ Ijma Reáka, 3rd July, 1872 (?). Bill, black ;
 base of lower mandible, yellowish ; irides, dark ;
 legs, pale orange.
 148*. ♀ Ijma Reáka, 3rd July, 1872, J. A. H. B.
 186*. Juv. River Dvina, 6th July, 1872, J. A. H. B. and
 E. R. A.
 187*. Juv., River Dvina, 6th July, 1872, J. A. H. B.
 Caught by dog.
 200. ♂ Talága, 7th July, 1872, I. Piottuch.
 206*. ♂ Talága, 7th July, 1872, I. Piottuch.
 210. ♂ Moses Ostrov, 8th July, 1872, E. R. A.
 213*. ♂) Moses Ostrov, 8th July, 1872, J. A. H. B.,
 214. ♂ Juv.) E. R. A. (full-grown).
 228. Moses Ostrov, 8th July, 1872, J. A. H. B. (for
 skeleton).
 229 bis. Juv. River Dvina, 11th July, 1872, I. Piot-
 tuch.
 242. Juv. River Dvina, 11th July, 1872, I. Piot-
 tuch.
 243. ? } Cholmogory, 12th July, 1872, J. A. H. B.
 244. ? } and C. Craemers.
 245. ? Cholmogory, 12th July, 1872, E. R. A.

Curlew. *Numenius arquatus* (L.).

- 209*. ♂ Juv., Moorahveechi Ostrov, 3rd July, 1872.
Brought to us by Ilya (or Eilah?).

Arctic Tern. *Sterna macrura*, Naum.

- 300*. ♂ Cholmogory, 12th July, 1872, C. Craemers.

Black-headed Gull. *Larus ridibundus*, L.

249. Cholmogory, 12th July, 1872, J. A. H. B. and
C. Craemers.

Common Gull. *Larus canus*, L.

61. ♂ Goletz Ostrov, 22nd June, 1872, E. R. A.
62*. ♂ Goletz Ostrov, 22nd June, 1872, J. A. H. B.
63. ♂ Goletz Ostrov, 22nd June, 1872, J. A. H. B.
(No. 63. Fish-bones in stomach; eye, dark;
eyelid and inside of mouth, red; whole
bill and legs, pale lemon-yellow.)
101. ♂ Laidi Ostrov, 28th June, 1872, J. A. H. B.
103. Juv. Tscheiké Ostrov, 29th June, 1872,
J. A. H. B. and E. R. A.
248*. Cholmogory, 12th July, 1872, J. A. H. B. and
C. Craemers.

Lesser Black-backed Gull. *Larus fuscus*, L.

20. Archangel, 18th June, 1872, J. A. H. B.
21*. Juv. Archangel, 18th June, 1872, J. A. H. B.
Of this the bill was coloured horn; upper
mandible, white at base; legs, fleshy white;
eyes, pearl-grey.
36*. ♂ Tinèvátó Ostrov, 21st June, 1872, I.
Piottuch.

Greater Black-backed Gull. *Larus marinus*, L.

- 34*. Juv. Tinèvátó Ostrov, 21st June, 1872, E.
Craemers.
35. Juv. Tinèvátó Ostrov, 21st June, 1872, E.
Craemers.
55*. Juv. Tscheiké Ostrov, 21st June, 1872, E. R. A.
and J. A. H. B.

Red-throated Diver. *Colymbus septentrionalis*, L.

10. ♂ Tinèvátó Ostrov, 18th June, 1872, Nicholai and Jacof. Small river shells in stomach.
- 15*. ♀ Tinèvátó Ostrov, 18th June, 1872, Nicholai and Jacof.
22. ♀ Tinèvátó Ostrov, 18th June, 1872, Nicholai and Jacof.
- 33*. Juv. Tinèvátó Ostrov, 21st June, 1872, E. Craemers.
- 87*. ♂ } Koombush Ostrov, 27th June, 1872, J. Piottuch.
- 88*. ♀ } A pair—the ♀ contained a perfect egg.
- 313*. ♀ }
 314. Juv. } Suzma, 22nd July, 1872, E. R. A. and J. A. H. B.
 315*. Juv. }

331 *Specimens.*

For Summary see Appendix C.

APPENDIX B

FULL LIST OF EGGS COLLECTED.

- Fieldfare.** *Turdus pilaris*, L.
1872. June 15th, Dvina delta. 6 eggs and nest taken
15/3/'72 (Old Style), by E. Craemers.
1872. June 17th, Dvina delta. 5 eggs and nest taken
27/5/'72 (Old Style), by Ernst Craemers.
- Redstart.** *Ruticilla phænicurus* (L.).
1872. June 17th, Dvina delta. *6 eggs and nest taken
20/5/'72 (Old Style), by Ernst Craemers.
- White Wagtail.** *Motacilla alba*, L.
1872. June 17th, Dvina delta. 5 eggs and nest taken
21/5/'72 (Old Style), by Ernst Craemers.
- Spotted Flycatcher.** *Muscicapa grisola*, L.
1872. June 17th, Dvina delta. 6 eggs and nest taken
27/5/'72 (Old Style), by Ernst Craemers.
- Redpoll.** *Linota linaria* (L.).
1872. June 17th, Dvina delta. 2 eggs and nest taken,
date not stated, by Ernst Craemers.
1872. June 22nd, Goletz Ostrov. 5 eggs and nest
(broken) taken by E. R. A. and J. A. H. B.
1872. July, Archangel. *4 eggs and nest, and *1 egg
and nest taken by I. Piottuch.
1872. July 7th, Talága. Nest taken by E. R. A.

1872. July 13th, Archangel. 4 eggs (one broken) and nest taken by Carl Craemers and brought to us July 18th.

1872. Date not given. Dvina, on the road to Suzma. Three eggs and nest taken by J. A. H. B., ipse.

Yellow-breasted Bunting. *Emberiza aureola*, Pall.

1872. July 7th, near Talága, on the River Dvina. 5 eggs and nest taken by J. A. H. B., ipse. ♂ and ♀, Nos. 192, 193, shot. See journal under this date.

Siberian or Northern Jay. *Perisoreus infaustus* (L.).

1872. July 13th, Glubocki, near Cholmogory. Nest taken by E. R. A.

Lesser Spotted or Barred Woodpecker. *Dendrocopus minor* (L.).

1872. June 18th, Nakari Ostrov. 1 egg and nest taken by Nicholai and Jacof.
(Two birds.)

Buzzard. *Buteo vulgaris*, Leach.

1872. July 7th, Ijma. 1 broken egg and young bird, taken by a peasant, and received by Nicholai the above date.

Hobby. *Falco subbuteo*, L.

1872. June 26th, Goletz Ostrov. 3 eggs taken by E. R. A., ipse. ♂ shot. In old nest of Hooded Crow, lined partly with a little of the bird's own down.

Shoveller. *Spatula clypeata* (L.).

1872. June 15th, Dvina delta. 9 out of a nest of 10 taken by Nicholai, employed by Mr. Shergold on our behalf prior to our arrival at Archangel. The bird was shot and brought in afterwards.

1872. June 22nd, Goletz Ostrov. *8 eggs taken by

J. A. H. B., no down in nest; ♀ shot (skin No. 64); one egg in bird broken.

Teal. *Nettion crecca* (L.).

1872. July 26th, Goletz Ostrov. 6 eggs and down taken by E. R. A. and J. A. H. B. ♀ shot by I. Piottuch.

Pintail Duck. *Dafila acuta* (L.).

1872. June 15th, Dvina delta. 2 eggs taken by Nicholai, employed Mr. Shergold on our behalf prior to our arrival at Archangel.

1872. June 18th, locality doubtful. 10 eggs taken by Nicholai and Jacof upon an island covered with reindeer moss.

1872. June 18th, Tinèváto Ostrov. 2 eggs (deformed) taken by Nicholai and Jacof.

1872. June 22nd, Goletz Ostrov. Clutches of 8 with down and 5 with down, taken by E. R. A. and J. A. H. B.

1872. June 28th, Laidi Ostrov. 2 and down taken by J. A. H. B., ipse. ♀ shot.

Anas? Not identified.

1872. June 15th, Dvina delta. 4 eggs taken by Nicholai, employed by Mr. Shergold on our behalf prior to our arrival at Archangel.

Willow Grouse. *Lagopus albus* (Gmel.).

1872. June 18th, locality doubtful, not far off Tinèváto Ostrov. 10 eggs taken by Nicholai and Jacof, upon an island covered with reindeer moss.

1872. June 26th, Goletz Ostrov. 9 eggs taken, would not blow, by I. Piottuch. ♀ bird shot, No.

Ringed Plover. *Ægialitis hiaticola* (L.).

1872. June 22nd, Goletz Ostrov. Clutch of 4 taken by E. R. A. and J. A. H. B.

Temminck's Stint. *Tringa temmincki* (Leisl.).

1872. June 15th, Dvina delta. 7 collected by Nicholai, employed by Mr. Shergold on our behalf prior to our arrival in Archangel. (Of these, 4 remain in Mus. F. & H. B.); also 31, mostly slightly incubated, with yolks rich orange. (Of these remain in Mus. F. & H. B.)
1872. June 28th, Tinévato Ostrov. 4, taken by Nicholai.
1872. June 28th, Tscheiké Ostrov. Clutches of 4, 4, and 4 belonging to skins No. 107, 108, 109, taken by Nicholai; clutches of 4, 4, and 4 taken by J. A. H. B. and E. R. A.; and clutch of 4 taken by J. A. H. B., ipse.

Ruff. *Machetes pugnax* (L.).

1872. June 22nd, Goletz Ostrov. 3 eggs taken by I. Piottuch, E. R. A., and J. A. H. B.
1872. June 26th, Goletz Ostrov. Clutcher of 4 and 1 taken by E. R. A. and J. A. H. B.

Terék Sandpiper. *Terekia cinerea* (Guld).

1872. June 15th, Dvina delta. 51 eggs collected by Nicholai, employed by Mr. Shergold on our behalf prior to our arrival at Archangel. These eggs were mostly fresh or slightly incubated. (Remain in Mus. F. & H. B.)
1872. June 21st, Tscheiké Ostrov. 4 by I. Piottuch. These being hard set were put into spirits.
1872. June 22nd, Goletz Ostrov. Clutch of 4 taken by E. R. A., ipse; clutches of 3 and *4 taken by J. A. H. B., ipse.

Arctic Tern. *Sterna macrura*, Naum.

1872. June 22nd, Goletz Ostrov. 2 eggs taken by E. R. A., ipse.
1872. June 28th, Tscheiké Ostrov. 2 eggs taken,

laid in an old nest of *Terekia cinerea* from which J. A. H. B. took eggs on 21st June.

? Gull. *Larus*. Not identified.

1872. June 21st, Tscheiké Ostrov. 2 eggs taken (one broken) by I. Piottuch.

Red-throated Diver. *Colymbus septentrionalis*, L.

1872. June 18th, Tinévato Ostrov. 2, *2, *2, and 2 eggs, not in nests, with three birds, taken by Nicholai and Jacof.

1872. June 27th, Koombush Ostrov. 1 egg found in ♀ shot by I. Piottuch.

Black-throated Diver. *Colymbus arcticus*, L.

1872 June 18th, Tinévato Ostrov. 2 eggs taken by Nicholai and Jacof.

APPENDIX C

LIST OF BIRDS COLLECTED WITH YOUNG, BIRDS, NESTS, AND EGGS
IN SEPARATE COLUMNS.

	Species.	Young.	Birds.	Nests.	Eggs.
1.	Hobby. <i>Falco subbutco</i>	—	1	—	3
2.	Buzzard. <i>Buteo vulgaris</i>	1	1	—	—
3.	Short-eared Owl. <i>Otus brachyotus</i>	1	2	—	—
4.	Sand Martin. <i>Hirundo riparia</i>	—	—	—	5
5.	Sedge Warbler. <i>Acr. schænobænis</i>	—	1	—	—
6.	Garden Warbler. <i>Sylvia hortensis</i>	—	3	—	—
7.	Wood Warbler. <i>Phyll. sybilatrix</i>	—	1	—	—
8.	... ..	2	5	—	—
9.	Redstart. <i>Ruticilla phænicurus</i>	1	2	1	5
10.	Bluethroat. <i>Cyanecula suecica</i>	—	1	—	—
11.	Whinchat. <i>Saxicola rubetra</i>	1	4	—	—
12.	Northern Marsh Tit. <i>Parus borealis</i>	—	1	—	—
13.	White Wagtail. <i>Motacilla alba</i>	3	1	1	6
14.	Blue-headed or Grey-headed Wagtail. <i>Motacilla flava</i> (var.?)	—	2	—	—
15.	Red-throated Pipit. <i>Anthus cervinus</i>	—	3	—	—
16.	Do. do.	—	3	—	—
17.	Do. do.	—	1	—	—
18.	Do. do.	—	1	—	—
19.	Fieldfare. <i>Turdus pilaris</i>	1	—	2	10
20.	Redwing. <i>Turdus iliacus</i>	2	1	—	—
21.	Spotted Flycatcher. <i>Muscicapa grisola</i>	—	3	1	6
22.	Waxwing. <i>Ampelis garrula</i>	—	7	—	—
23.	Great Grey Shrike. <i>Lanius excubitor</i>	1	3	—	—
24.	Siberian or Northern Jay. <i>Perisoreus in-faustus</i>	—	8	1?	—
25.	Hooded Crow. <i>Corvus cornix</i>	1	1	—	—
26.	Jackdaw. <i>Corvus monedula</i>	—	2	—	—
27.	Brambling. <i>F. montifringilla</i>	—	1	—	—
28.	Bullfinch. <i>Pyrrhula major</i>	—	1	—	—
29.	Scarlet Finch. <i>Carpodacus erythrinus</i>	—	4	—	—
30.	Pine Grosbeak. <i>Pinicola enucleator</i>	1	—	—	—
31.	Mealy Redpoll. <i>Linota linaria</i>	2	9	7	18
32.	Yellowhammer. <i>Emberiza citrinella</i>	—	3	—	—

Species.	Young.	Birds.	Nests.	Eggs.
33. <i>Emberiza citrinella</i> Juv.	1	—	—	—
34. Reed Bunting. <i>Emb. schornicus</i>	2	—	—	—
35. Yellow-breasted Bunting. <i>Emb. aureola</i>	8	34	1	5
36. Rustic Bunting. <i>Emb. rustica</i>	1	3	—	—
37. Little Bunting. <i>Emb. pusilla</i>	7	26	—	—
38. Skylark. <i>Alauda arvensis</i>	—	2	—	—
39. Great Black Woodpecker. <i>Picus martius</i>	—	1	—	—
40. Middle-spotted Woodpecker. <i>Picus medius</i>	—	3	—	—
41. Three-toed Woodpecker. <i>Picus tridactylus</i>	—	1	—	—
42. Lesser-spotted Woodpecker. <i>Picus minor</i>	—	2	1	—
43. Cuckoo. <i>Cuculus canorus</i>	1	1	—	—
44. Capercaillie. <i>Tetrao urogallus</i>	—	—	—	—
45. Black Grouse. <i>Tetrao tetrix</i>	—	—	—	—
46. Hazel Grouse. <i>Tetrao bonasia</i>	—	2	—	—
47. Willow Grouse. <i>Lagopus albus</i>	3	5	—	12
48. Grey Plover. <i>Squatarola helvetica</i>	—	3	—	—
49. Ringed Plover. <i>Equialitis hiaticula</i>	—	1	—	4
50. Crane. <i>Grus cinerea</i> (and <i>Sternum</i>)	—	1	—	—
51. Common Sandpiper. <i>Totanus hypoleucos</i>	—	1	—	—
52. Wood Sandpiper. <i>Totanus glarcola</i>	2	9	—	—
53. Greenshank. <i>Totanus glottis</i>	—	1	—	—
54. Terek Sandpiper. <i>Terekia cinerea</i>	7	19	—	62
55. Ruff. <i>Machetes pugnax</i>	2	11	—	8
56. Little Stint. <i>Tringa minuta</i>	—	1	—	—
57. Temminck's Stint. <i>Tringa temmincki</i>	—	8	—	—
58. Curlew Sandpiper. <i>Tringa subarquata</i>	—	1	—	—
59. Great or Double Snipe. <i>Scolopax major</i>	1	—	—	—
60. Spotted Crane. <i>Crex porzana</i>	1	1	—	—
61. Wigeon. <i>Mareca penelope</i>	1	1	—	—
62. Pintail. <i>Dafila acuta</i>	6	3	2	27
63. Wild Duck. <i>Anas boscas</i>	3	—	—	—
64. Teal. <i>Nettion crecca</i>	—	2	1	6
65. Garganey. <i>Querquedula cirica</i>	—	2	—	—
66. Shoveller. <i>Spatula clypeata</i>	3	5	—	17
67. Common or Blade Scoter. <i>Oedemia nigra</i>	—	1	—	—
68. Red-throated Diver. <i>Colymbus septentrionalis</i>	3	6	—	9
69. Black-throated Diver. <i>Col. arcticus</i>	—	—	—	2
70. Common Gull. <i>Larus canus</i>	—	4	—	—
71. Greater Black-backed Gull. <i>Larus marinus</i>	2	—	—	—
72. Lesser Black-backed Gull. <i>Larus fuscus</i>	—	2	—	—
73. Black-headed Gull. <i>Larus ridibundus</i>	—	1	—	—
74. Arctic Tern. <i>Sterna hirundo</i>	—	1	—	—

Grus cinerea skeleton, 1 sternum, trachea, etc.

Terekia cinerea, 2 sternums, 1 bird in spirits.

Turdus iliacus, 1 in spirits, diseased.

APPENDIX D

LIST OF THE RARER BIRDS IN THE MUSEUM AT ARCHANGEL.

Stated to have been all procured in the Government of Archangel.

The nomenclature within parentheses is that upon the labels of the specimens in the Museum.

Cyanecula suecica. **Bluethroat.** (*Lusciola suecica.*)

Parus cinctus. **Siberian Tit.** (*Parus sibiricus.*)

Parus salicarius. **Northern Marsh Tit.** (*Parus borealis.*)

Sitta europæa. **Northern Nuthatch.** (*Sitta europæa.*)

Anthus trivialis. **Tree Pipit.** (*Anthus arboreus.*)

Lanius collurio. **Red-backed Shrike.** (*Lanius collurio.*)

Chrysomitris spinus. **Siskin.** (*Fringilla spinus.*)

Carpodacus erythrinus. **Scarlet Finch.** (*Pyrrhula erythrina.*)

Pinicola enucleator. **Pine Grosbeak.** (*Pyrrhula enucleator.*)

Loxia leucoptera. **White-winged Crossbill.** (*Loxia leucoptera.*)

Emberiza schæniclus. **Reed Bunting.** (*Emberiza melanocephala.*)

Emberiza aureola. **Yellow-breasted Bunting.** (*Emberiza aureola.*)

Emberiza rustica. **Rustic Bunting.** (*Emberiza rustica.*)

Emberiza pusilla. **Little Bunting.** (*Emberiza pusilla.*)

Calcarius lapponicus. **Lapland Bunting**. (*Plectrophanes lapponica*.)

Otocorys alpestris. **Shore Lark**. (*Alauda alpestris*.)

Sturnus vulgaris. **Starling**. (*Sturnus vulgaris*.)

Nucifraga caryocatactes. **Nutcracker**. (*Nucifraga caryocatactes*.)

Perisoreus infaustus. **Sibernian Jay**. (*Garrulus infaustus*.)

Cypselus apus. **Swift**. (*Cypselus apus*.)

Caprimulgus europæus. **European Nightjar**. (*Caprimulgus europæus*.)

Picus martius. **Great Black Woodpecker**. (*Picus martius*.)

Dendrocopus leuconotus. **White-backed Woodpecker**. (*Picus leuconotus*.)

Picoides tridactylus. **Three-toed Woodpecker**. (*Picus tridactylus*.)

Gecinus canus. **Grey-headed Green Woodpecker**. (*Picus canus*.)

Strix uralensis. **Ural Owl**. (*Ulula uralensis*.)

Strix lapponica. **Lapp Owl**. (*Ulula barbata*.)

Nyctea scandiaca. **Snowy Owl**. (*Surnia nyctæa*.)

Surnia ulula. **Hawk Owl**. (*Surnia funerea*.)

Nyctala tengmalmi. **Tengmalm's Owl**. (*Nyctale tengmalmi*.)

Bubo ignavus. **Eagle Owl**. (*Bubo maximus*.)

Glaucidium passerinum. **Pigmy Owl**. (*Surnia passerina*.)

Athene noctua. **Little Owl**. (*Ulula noctua*.)

Aquila chryætos. **Golden Eagle**. (*Aquila chryætos*.)

Haliæetus albicilla. **Sea Eagle**. (*Haliæetus albicilla*.)

Falco peregrinus. **Peregrine**. (*Falco peregrinus*.)

Falco subbuteo. **Hobby**. (*Falco subbuteo*.)

Falco vespertinus. **Red-legged Falcon**. (*Falco vespertinus*.)

- Pandion haliaetus*. Osprey. (*Pandion haliaetus*.)
Anser fabalis. Bean Goose. (*Anser segetum*.)
Anser albifrons. White-fronted Goose. (*Anser albifrons*.)
Branta bernicla. Bernicle Goose. (*Anser torquatus*.)
Chaulelasmus streperus. Gadwall. (*Anas strepera*.)
Spatula clypeata. Shoveller. (*Anas clypeata*.)
Querquedula circia. Garganey. (*Anas querquedula*.)
Dafila acuta. Pintail. (*Anas acuta*.)
Æthya ferina. Pochard. (*Fuligula ferina*.)
Æthya marila. Scaup Duck. (*Fuligula marila*.)
Æthya fuligula. Tufted Duck. (*Fuligula cristata*.)
Æthya nyroca. White-eyed Duck. (*Fuligula nyroca*.)
Harelda glacialis. Long-tailed Duck. (*Harelda glacialis*.)
Mergus albellus. Smew. (*Mergus albellus*.)
Syrhaptus paradoxus. Pallas's Sand Grouse. One. (*Syrhaptus paradoxus*.)
Lagopus albus. Willow Grouse. (*Lagopus albus*.)
 Eggs.
Tetrastes bonasia. Hazel Grouse. (*Tetrao bonasia*.)
Porzana maruetta. Spotted Crake. (*Porzana maruetta*.)
Grus communis. Crane. (*Grus cinerea*.)
Gallinago major. Great Snipe. (*Scolopax major*.)
Tringa minuta. Little Stint. (*Tringa minuta*.)
Calidris arenaria. Sanderling. (*Calidris arenaria*.)
Totanus fuscus. Spotted Redshank. (*Totanus fuscus*.)
Totanus ochropus. Green Sandpiper. (*Totanus ochropus*.)
Terekia cinerea. Terék Sandpiper. (*Terekia cinerea*.)
Limosa lapponica. Bar-tailed Godwit. (*Limosa rufa*.)
Hydrochelidon leucoptera. White-winged Black Tern. (*Sterna leucoptera*.)
Pagophila eburnea. Ivory Gull. (*Larus eburneus*.)

Larus minutus. **Little Gull.** (*Larus minutus.*)

Larus glaucus. **Glaucous Gull.** (*Larus glaucus.*)

Stercorarius pomatorhina. **Pomarine Skua.** (*Lestris pomarina.*)

Podiceps griseigena. **Red-necked Grebe.** (*Podiceps rubricollis.*)

70 SPECIES at the date of our inspection in 1872. But, in a more complete List made in 1875, we made out 151 species represented in the Archangel Museum—all stated to have been procured in the 'GOVERNMENTS of ARCHANGEL' (v. p. *infra*, 218).

Amongst the more important of these may be mentioned the following (I have the complete list in MS.) :—

<i>Otus vulgaris.</i>	<i>Passer montanus (albino).</i>
<i>Otus brachyotus.</i>	<i>Pyrrhula major.</i>
<i>Syrnium aluco.</i>	<i>Carduelis elegans.</i>
<i>Pernis apivorus.</i>	<i>Carduelis spinus.</i>
<i>Milvus ictinus.</i>	<i>Linota exilipes.</i>
<i>Falco gyrfalco.</i>	<i>Emberiza citrinella.</i>
<i>Falco æsalon.</i>	<i>Anthus pratensis.</i>
<i>Falco tinnunculus.</i>	<i>Budytes viridis.</i>
<i>Accipiter palumbarius.</i>	<i>Cinclus aquaticus? *</i>
<i>Accipiter nisus.</i>	<i>Glareola pratincola.</i>
<i>Circus æruginosus.</i>	<i>Platalea leucorodia.</i>
<i>Picus minor.</i>	<i>Recurvirostra avocetta.</i>
<i>Iynx torquilla.</i>	<i>Himantopus candidus.</i>
<i>Cuculus canorus.</i>	<i>Hydrochelidon fissipes.</i>
<i>Corvus monedula.</i>	<i>Hydrochelidon nigra.</i>
<i>Lanius excubitor.</i>	

* E. R. Alston and I had another specimen sent by Piottuch in 1873, of *Cinclus* (*sp.*?) but which passed into the collection—I think—of Canon Tristram.

PETCHORA

1875

PETCHORA

1875

PART I

JOURNEY TO UST ZYLMA.

OUR preparations were most satisfactorily completed for our journey to the Petchora by Wednesday, the 3rd of March, 1875.

Our letters of introduction were of the very best. The Russian Ambassador in London, Count Schouvaloff, had furnished us with letters to the Minister of the Interior, at St. Petersburg, and to the Chief of the Customs at Wirballen. Col. Colville also empowered us to call on Lord Loftus and make use of his name, and Mr. Dieckstahl's introductions and relationship with Count Schouvaloff were also of considerable service to us, as also was Lord Derby's letter to the Russian Embassy. We had also an introduction to M. Jessen, of the Foreign Office in St. Petersburg, which we obtained through the kindness of Prof. Newton.

I started from London at 7.40 a.m. on the morning of Wednesday, the 3rd of March. The country around London had a coating of snow, and the weather was all that *we* could desire.

I crossed the Channel from Dover to Ostend, and—for the second time in my life—suffered a little from *mal de mer*. My train spun over the flat land of Belgium, with its small clumps or rows of tall poplars or lines of pollarded willows, its white or yellow and red-tiled farmhouses, its narrow frozen ditches and canals; and I arrived at Cologne at 11.35 p.m.

Here Seebohm met me as arranged, and by the judicious assistance of an official we had no difficulty with our 2 cwt. 1 lb. of luggage. This custom house being cleared, we shall now have no trouble to expect all the way to St. Petersbourg. As I had had only a cup of coffee and slice of bread at starting this morning, a bit of bread and cheese at Ostend, and a sandwich at Nervier, I was able to do ample justice to-night to cold meat, etc., and a bottle of Hockheimer.

March 4.

On Thursday, the 4th of March, we left Cologne at 7.5 a.m., and arrived at Hanover at 1.52 p.m. Here we stayed a couple of hours, and dined with Dieckstahl at his house. So we had an opportunity of thanking Mrs. Dieckstahl for her kind assistance with letters to her cousin, Count Schouvaloff, and to her cousin at the Russian frontier, the chief of the custom house, M. de Pisánko.

All the country from near Ostend, as far as we have gone, is hard frozen, but there is little snow. We saw various parties skating on the overflowings of the rivers and shallow rain ponds.

At Berlin we drove to the Hôtel Victoria, where, according to appointment, we met Dr. Peters, introduced to me by Dr. P. L. Sclater. He gave us a letter to M. Brandt, of St. Petersbourg. We dined, and left Berlin at 10.45 p.m.

Up to Berlin the railway carriages were heated with



HENRY SEEBOHM.

charcoal pans, shoved underneath the seats, making the atmosphere most disagreeable and suffocating. After Berlin the heating was by hot-water pipes, which are much better, but not good either. To-night we had a temperature inside the carriage of $+ 15^{\circ}$ Reaum., and outside $- 4^{\circ}$ Reaum.

March 5.

On Friday, the 5th of March, our journey still continued. We found at Warlubien more snow; and a sledge at the station. The snow had evidently lain a long time. We crossed the Weichsel (Vistula) River, which was frozen hard, with hummocky ice-heaps hurled in grand and wild confusion by some former sudden break-up of the frost, now again consolidated.

Near Königsberg the arm of the Baltic was one smooth sheet of snow-covered ice, and people were out upon it, fishing or skating, we could not tell which at the distance.

At Wirballen—thanks to our powerful letters to the chief, M. de Pisánko, from the Russian Ambassador and from Madame Dieckstahl—we had no trouble with our luggage, not one package being opened, and scarcely a question asked.

To Vilna we travelled with another of the staff at Wirballen—M. Alexr. Mikailoff—and went first-class in order to secure his company, but found the carriages not so comfortable as the second-class, and awfully stuffy. There was keen frost and much more snow now.

March 6.

At noon on Saturday, the 6th of March, the thermometer was at $- 12^{\circ}$ Reaum. in the shade. We arrived at St. Petersbourg about 10 p.m., the train being more than an hour late, owing to the tyre of a wheel breaking between Berlin and the frontier. Seebohm's agent met us here, and—leaving our luggage to come in the

hôtel 'bus—we drove off in a capacious sledge for the Hôtel d'Europe (Gostinitza Klée), where we supped, had a warm bath, and went to bed.

March 7.

On Sunday, the 7th of March, we went to see the fair, as it was the last day of a great Russian feast. We found it much like a fair anywhere else in the world in general appearances. The ice-slide was kept up with great vigour, and afforded much fun to large, densely-packed crowds of Russians and others.

The handsome horses, also, of the private sledges—black, of the Ukraine breed, with long flowing tails and cropped or uncropped manes—were alone worth seeing.

The racing sleds, of which we saw a few, with one of these fine animals in each, are driven, even in crowded streets, at a spanking pace, the driver holding each rein in one hand, with outstretched arms wide apart. The racing takes place on the ice of the Neva, in a large circular space enclosed with planks. As they are to take place next Sunday we do not expect to have the opportunity of seeing them.

Numerous booths, with mountebanks, swings, circular 'Ride-in-the-rings,' etc., were closely studded over the open ground where the fair is held. Red and white bladders, sold on the ground, were cut adrift and, singly or in bunches, were to be seen floating away before the gentle east wind at immense heights, to drop, perhaps, in the Baltic or much further west. A Russian crowd is always, I believe, a merry, good-natured one, and I was surprised to see so few drunken people.

We saw also the interior of a church attached to the fort, and witnessed a service of the Russian Church in St. Isaacs—the 'heathen worship of God,' as Mr. — Seebohm's agent, who accompanied us, called it. It was certainly a strange sight, with the bowing the forehead

on the steps of the altars and before the shrines, the kissing of innumerable painted images of saints, and the pressing of foreheads against the lips of these senseless images. The wild intoning of the priests, the eager, often bloodless, upturned faces of the worshippers as they prayed and crossed themselves, made a scene which was scarcely imposing, but curious and sad, according to our ideas.

As we could not deliver our letters to-day or get any business done, we gave it up to sight-seeing and enjoying ourselves. It is Mr. Treeck's birthday, so we are to join this evening in a merrymaking at his house.

We dined at the *table d'hôte*, and got a fair dinner at a moderate price. The *table d'hôte* is the least expensive item of hotel expenditure in St. Petersbourg. Then, after dinner, we adjourned to Mr. Treeck's house to spend the evening.

March 8.

On Monday, the 8th of March, we were up at a quarter to ten, and went to the Museum, where we saw Herr Brandt, Herr Schultz, and some of the assistant curators. We saw two specimens of Middendorff's Sabine's Gulls, shot on the island St. Pauls, of the Aleutian Group, but we were not able to see his Siberian specimens, which were not unpacked. There can, we think, be no reason to doubt the accuracy, however, of his records, although we should have liked to examine the specimens.

We learned also that the Curator of the Museum at Kazán—Herr Pölzam—was at the Petchora last year, and made general collections, which are now in the Kazán Museum. We obtained his address with the view of writing to him. He has not yet published anything about his journey.

Middendorff was at Archangel four years ago in summer, also at Kola, but he did not collect at the

former place, and only stayed two days at the latter. He made a complete catalogue (or bare list) of the birds in the Archangel Museum, which we are to copy out to-morrow at the Museum here (see *antea* p. 209).

We then walked through the Hermitage and Picture Galleries. One picture by a Russian artist—Ivanofsky—struck me as wonderfully executed. It was a large piece of canvas representing a large raft and human beings tossing about on a strong sea at sunset. It is nearly all cloud and wave and sunlight, but the rendering of the *hollow green transparent* wave with foam on top and the dripping water from the half-submerged end of the raft, and the red glory of the reflected rays of the setting sun, are beyond my power to describe. Then, besides the pictures, examples of Raphael, Murillo, etc., there are the wondrous vases of malachite and lapis-lazuli, and other stones, etc., occupying the centre of the grand lofty halls, and much more which I need not describe here.

Then, after lunch at the hotel, we went to the *frozen market*, accompanied by one of our acquaintances of last night, one of Mr. Treack's clerks, who has been most kind and obliging in assisting us all this morning.

Here we purchased fifteen Waxwings,* with a view to

* SPECIMENS OF *Ampelis garrulus*.

- S. 1. *Ampelis garrulus*? St. Petersburg frozen market. Sex? J. markings on wings. Wax medium size. No wax on plain secondaries. None on tail. Upper tail coverts dark chestnut.
2. *Ditto* ♂ V. marks. Wax large. None on plain secondaries or tail. Upper tail coverts dark chestnut.
- S. 3. *Ditto* ♂ I. marks. Wax small. None on plain secondaries, but rudiments on tail. Upper tail coverts dark chestnut.

carefully sexing them and arriving at conclusions, if possible, in regard to their sexual differences in plumage. Here also we saw whole pigs frozen hard, chopped up with an axe into joints as required, and an immense variety of fish, flesh, fowl, Hares, Roedeer, Hazel Grouse,

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- B. 4. *Ampelis garrulus* ♂ J. Wax small. None on plain secondaries. Rudiments very slight on tail.
- B. 5. *Ditto* ♂ V. Wax large. On plain secondaries. Rudiments on tail. Central tail feathers with Wax. Upper tail coverts dark chestnut.
- S. 6. *Ditto* ♂ V. Wax large. On plain secondaries. Rudiments on tail. Upper tail coverts dark chestnut.
- B. 7. *Ditto* ♂ I. Wax small. None on plain secondaries. On tail. Upper tail coverts dark chestnut.

Besides the above seven specimens we sexed three more, all also males. The following is a description of these three:—

- A. ♂ I. Wax small. None on plain secondaries. None on tail. Upper tail coverts dark chestnut.
- B. ♂ V. Wax large. None on plain secondaries. None on tail. Upper tail coverts dark chestnut.
- C. ♂ V. Wax large. None on plain secondaries. None on tail. Upper tail coverts dark chestnut.

Of the above ten specimens all are ♂'s, and all have the upper tail coverts dark chestnut. Some, the younger males, have simple I. marks on the primaries, others have the J. marks (or the I. marks beginning to return), and the very old birds with the V., or fully-returned white, on the primaries. We await a series of ♀'s for comparison.

and other game, and quantities of dried mushrooms strung in bunches.

In the evening Ernst Craemers—my old friend of the Archangel trip—dined with us at the *table d'hôte*. He has got our Samoyède dresses, coats, caps, gloves, and felt boots.

March 9.

On Tuesday, the 9th of March, we called and saw the Minister of the Interior, his Excellency General Timáscheff, who promised us by this evening a letter to the Governor of Archangel.

In the Museum we examined specimens—types?—of *Sylvia middendorffii* and also of *S. evermanni*, and took their diagnostic characters, as in the footnote.*

We bought six sheets of the Archangel Government General Map, also the 'Kusten gebirge Pae-choi,' in two volumes.

* *Phylloscopus borealis* Blasius. *Phylloscopus sibilator*.

2nd and 6th about =

2nd and 4th =

Bastard primary trifle longer
than wing coverts

— shorter —

W.C. more tipped with white

— less —

Edges of primaries greenish-
brown

— bright yellow

Phylloscopus viridanus (= *P. middendorffii* Meves).

Phylloscopus superciliosus ?

17th August.

8th June.

Large Bastard Primaries

do.

2nd primaries $\frac{1}{8}$ th inch less
than longest

Quite a quarter of an inch

Shorter bird

longer —

Smaller bird

larger —

Yellow comes round the nape

not —

Phylloscopus coronata.

Bastard primaries longer than wing-coverts.

2nd primaries $\frac{3}{13}$ ths shorter than 4th.

About = in size with *S. evermanni*.

Larger than *Ph. middendorffii*.



ON THE ROAD TO MEZEN (WINTER). NEAR UST PINEGA.
(See page 247.)

We skinned and dissected six ♂ Waxwings. We await a series of females.

Ernst brought us our Samoyède dresses complete. They are wonderfully hot and ugly, but practical.

We engaged Mr. Martin, the English Commissionaire here, for to-morrow forenoon (Pillee, whom we employed in 1872, being dead), and hope to get through much business, as he seems a sharp fellow.

Evening came, but no letter from His Excellency. He is an absent-minded man, and has most likely forgotten all about it; but we will get it to-morrow or perish in the attempt.

In the evening Mr. Treeck and Mr. Belliss accompanied us to sundry coffee-houses, where we drank tea or wine or beer, and smoked—a stupid amusement, and one which must very soon become profoundly monotonous, not to say hurtful to one's stomach!

March 10.

On Wednesday, the 10th of March, Martin—the English Commissionaire—and I drove first to M. Sidóroff's, but missed him. I will call again in the afternoon. Then, after some trouble, we found M. Shovin, Sixth Street, House 21, in the Pesky, and he gave me the address of the manager of the sawmill at Archangel—in the matter of Piottuch. I left a card for Dr. Ficssen, and bought sundry things we required.

Martin, who has been twelve years in St. Petersburg, distinctly said that the right pronounciation of a certain word is 'telèga,' and not 'tschelèga,' as Mr. Rae upholds.* Also 'paderojna,' not 'paderostni.'

We left St. Petersburg at 7.15 p.m., after dining at Mr. Treeck's and getting many a 'gluckliche reise.' Mr. Treeck and Mr. Belliss saw us off.

* 'Land of the North Wind,' *q.v.*

March 11.

On Thursday, the 11th of March, we arrived at Moscou at 11 a.m., and went to the Hôtel Berlin. We breakfasted, and with the Commissionaire 'did' the Kremlin and viewed the city from the bastions or belfry of the highest church.

The cold is 15° Reaum., but I am not oppressed with it in the least. The dreadfully warm houses and heated carriages on the railway easily account for the extra muffling up of the Russians. In Scotland or England, with this cold, sportsmen would go out shooting at the covert-sides simply in tweeds. I, as yet, have not worn gloves, and I freely expose my hands and ears without inconvenience. The air is very dry.

At St. Petersburg I got a paper upon Kolguev, which gives all the information known at present. It is in Russian, but we shall have it translated for us at Archangel.

We left at night for Jaroslav and Vologda.

March 12.

We arrived at Jaroslav at 4 a.m. on Friday morning, 12th March. The carriages were awfully stuffy and close, and I got no sleep. We crossed the frozen Volga on a sledge to the other station, and left at 10 a.m. We arrived at Vologda at 12 p.m., two hours late, owing to a breakdown.

We telegraphed to M. Vorâkin, at Vologda, that we should be at the Golden Anchor (Zolotoi Lakor), and he sent his man up and brought us to his own house, which we did not immediately discover, as no one spoke anything but Russ.

We had some idea to-night of what fast sledging is on a cold starry night. It is only the exposed skin that feels it.

March 13.

On Saturday, the 13th of March, we remained at M. Vorâkin's house all day and made full arrangements for our sledge journey.

We took a walk in the town, and saw innumerable Jackdaws, Hooded Crows, and Tree Sparrows, and one or two Ravens and Magpies.

March 14.

The morning of Sunday, the 14th of March, was cloudy and warm when we left Vologda, at 8.15 a.m. We have a roomy sledge with hood, which belongs to a gentleman in Archangel, and for the use of which we are charged nothing.

As a sledge journey—though it was new to us—soon becomes monotonous, I can but give the itinerary of our route from a list of the stations which is furnished to travellers by the stationmaster. ‘Paderojnaya’ are now not required, the list answering every purpose. We got all our luggage stowed away, but as our journey proceeded we made various changes for the better.

Leaving Vologda at 8.15 a.m., the thermometer being at 16° Fahr., we sledged merrily along by the side of the Volga, arriving at the first station at 10.15 a.m., and at the second station at 1.30 p.m. The roads were bad, and one of our three horses broke down and had to be taken out of the sledge. The third stage was fast and merry, and we finished it at 3 p.m.

The fourth station was reached at 5.20 p.m. Hitherto we have had three horses abreast, but here, owing to the narrower road, two of the horses were put in front. We left at 6 p.m., and arrived at the fifth station at 8.20 p.m. Our horses were now placed tandem fashion.

It is snowing, the snow-flakes formed of innumerable minute six-rayed stars, each ray beautifully feathered. Later, when the snow became denser, the spaces between

the rays became partially filled up, and the rays, in consequence, less feathery.

We reached the sixth station at 11.20 p.m., in the moonlight.

We reached the seventh station on Monday, the 15th of March, at 1.45 a.m., the eighth at 4 a.m., and the ninth at 7 a.m. The stationmaster here was drunk, and we found Seeböhm's bearskin rug missing; it must have fallen out of the sledge.

The tenth stage, along a beautiful road through pretty country, with pine forests on either side and undulating country around, was finished at 10.20 a.m.

On the eleventh stage, which brought us to 12.45 p.m., our 'yemstschick,' or driver, was a most energetic old fellow, and most liberal in his terms of abuse to his horses or to other yemstschicks who did not get out of his way. On arriving at the station also he continued his garrulous talk, and apparently quarrelled with all about the place.

March 15.

We reached the twelfth station at 3 p.m., and the thirteenth at 6 p.m. Here we got eggs, Russian butter, some more bread, etc., in addition to our supplies, and made a good meal. We left at 7.30 p.m., and arrived at the fourteenth station at 9.30 p.m., and the fifteenth at 12.45 midnight.

March 16.

On Tuesday, the 16th March, we reached the sixteenth station—Slovódka—at 4.30 a.m. For the second time our sledge-runner came loose, and some time was lost in having it hammered up again. It was a beautiful morning. At this place is now being held a great triannual fair. We found a baker here from Hesse-Cassel, who spoke German, the only one we have yet met who could speak anything but Russ. We had half expected to meet

my old friend Birse here, but his last letter showed that he had changed his mind and would meet us at a much later stage of our journey. We reached the seventeenth station at 7.45 a.m.

Along the eighteenth stage, which ended at 11.15 a.m., we saw Crossbills, a great Spotted Woodpecker, a Jay, and Marsh Tits.* We arrived at the left bank of the Dvina, and for some distance drove along close above the river, which bore a solid mass of ice covered with dazzlingly white snow.

We saw a flock of Snow Buntings on the nineteenth stage, which we accomplished by 2.15 p.m. We reached the twentieth station at 5.15 p.m., and the twenty-first at 7.15 p.m., when we stopped for dinner.

March 17.

I have no record of the time of reaching the twenty-second station, but we arrived at the twenty-third at 1.20 a.m. on Wednesday morning, the 17th of March, at the twenty-fourth station at 4 a.m., the 25th at 6.30 a.m., and the twenty-sixth at 8.45 a.m. During the last two stages, having had our traps better arranged, we both managed to sleep comfortably. The weather continued warm and cloudy, and the roads were a little soft.

We saw distinctly a white-winged Crossbill (a green ♀) and other Crossbills on the twenty-seventh stage, which ended at 10 a.m. We reached the twenty-eighth station at 12 noon, and the twenty-ninth at 2.30 p.m. Here we found that the Government horses were all out, taken by post. We bargained for three others at three roubles—not an overcharge, judging from my former experience between Suzma and Archangel, in 1872.

* The skins of the Marsh Tit obtained by us on this expedition were considered to be of the Siberian form by Messrs. H. E. Dresser, Howard Saunders, and H. Seebohm, when our collections were gone through at Sheffield in September, 1875.

The thirtieth stage brought us to Suja, at 5.15 p.m. Here we got a letter from Birse, and telegraphed to him the time of our departure, and he is to meet us nearer to Archangel.

We left Suja at 6 p.m., and arrived at the thirty-first station at 8 p.m. On this stage we had a capital driver, who accomplished the long run of twenty-seven versts in five minutes less than the two hours—by far and away our quickest stage. To encourage, or urge on his horses, he kept up a continual noise, and imitated the short bark of wolves. We crossed and recrossed the Dvina more than once, and finally crossed to the right bank for the last time. We arrived at the thirty-second station at 10 p.m., and the thirty-third at 12 midnight.

On Thursday, the 18th of March, at 2 a.m., we reached the thirty-fourth station, and the 35th at 4.10 a.m., with the thermometer at zero Fahr. We reached the thirty-sixth station at 8.30 a.m., thermometer at 16° Réaumur.

We met Birse at Uima, which I recognised as the place we once stopped at when coming down the river from Cholmogory. After a nip of cognac we sledged on merrily for Birse's house, and arrived at Archangel about noon.

March 18.

We saw the following birds along our route from Vologda to Archangel:—

Hooded Crows were very common at all the stations. They were very tame, feeding almost exclusively upon what could be found in the droppings of cattle and horses. They were in beautiful plumage, with the rays of the black star on the breast very distinctly defined.

Jackdaws were equally abundant with the last. They had very white collars.

Tree Sparrows were very plentiful, replacing the House Sparrow completely as we proceeded north.

Of Magpies there were at most of the stations a pair, but they became apparently commoner northward.

Ravens were nowhere seen abundantly, but occasional pairs were seen at Vologda and along our route.

Yellowhammers were very common along the opener parts of our route.

Crossbills were very common in the wooded parts, perching on the topmost twigs of the pine-trees.

White-winged Crossbill. I identified one green bird very distinctly, the white bar being very conspicuous. I have little doubt we saw many more, but the light was a difficult one in which to identify small birds at any distance.

Bullfinches were common on the skirts of the pine-woods, and feeding—generally in pairs—on the droppings on the road.

Marsh Tits were not uncommon on the edges of the pine-woods.

A Jay was seen during our eighteenth-nineteenth stage, and another near Suja.

Great Spotted Woodpecker. Several seen crossing the road.

Willow Grouse. Four or five were once seen, and were scarcely distinguishable from the pure white snow upon which they were sitting or running.

Coal Tit. Seebohm saw one about the middle of the journey.

A large raptorial bird was seen, but not identified.

Grosbeak. I saw what I felt almost certain was one of this species.

At different places we observed Rookeries! in the villages and towns, as at Vologda, and particularly along our first and second day's stages. We were not able to

ascertain if these were formed by the Common Rook, or if the Hooded Crows breed here in colonies, but further north these colonies of nests became scarcer, and finally disappeared.

With regard to the scenery along our route from Vologda to Archangel, there is not much to be said in its praise. At a few points the road certainly was pretty, as it wound in graceful curves amongst the tall pines, and glimpses occasionally given to the right or left over an undulating, almost hilly country, similarly wooded, relieved the monotony.

Of Russian villages, all that need be said is that they closely resemble one another. There is a broad road though *some*, on each side of which the houses stand with their ends or gables to the road; whilst in others the road swings abruptly round corners and plunges down a steep hill, and the houses are dotted about in a more irregular manner.

After reaching the Dvina the scenery improves a little; the noble snow-covered river is backed with clay or earth cliffs on the further shores, which are crowned by the dense pine-forests.

Travelling without 'paderojna,' and being supplied by the stationmaster with a list of the stations and distances, paying at the rate of three kopeks per horse per verst for three horses, we found little or no difficulty, and the people were honest.

It is advisable always to carry small money, as change is not usually to be had along the route.

Our luggage was packed partly under the driver's seat and partly under us as a seat during the day, and at night we levelled the place over by taking out some from under the seat and placing it where our feet had been during the day. Thus we could stretch our legs to the full extent, and we slept well generally. I experienced no

inconvenience whatever from the cold, and found the 'målitsa,' or Samoyède 'shoub,' a perfect protection. The boots were admirable, and so also is the cap for use during the night, but during the day I preferred my otter-skin cap, made from the pelts of otters killed at Dunipace.

March 19.

On Friday, the 19th of March, we saw some 80 birds of Piottuch's, none of which, however, were very valuable. We then called and saw my old friends, Nathalie Andrèvna Leitsoff and Mr. Shergold, and met Mrs. Craemers.

We had an interview with Graf Wilczek's guide, Katzoff by name, whom we hope to engage for our trip. He told us that we must go to Mezèn, and take the south route after to Ust Zylma, as in going direct from Piñega there is difficulty in procuring horses. He says that about the middle of May the snow melts at the Petchora, and that the ice breaks up on the river at the same time. This is the average time (Old Style). It takes four days (of twenty-four hours) to go down the river in a boat, and eight days back with contrary wind, by towing. From Ust Zylma to Pustozersk is 220 versts, and to Kuja 80 versts further—300 versts. The islands up the river are never flooded. Birds breed on all the islands of the Petchora and on the Ussa from the beginning of June. Trees follow the course of the rivers and their tributaries all the way to their mouths. On the islands are smaller trees and brushwood-willow. On the Timanski Tundra there are plenty of Samoyèdes in summer. Small boats can go from Kuja to the islands of the delta in the beginning of June, but vessels do not enter the Petchora till the beginning of July. There are horses and winter roads all the way from Ust Zylma to Kuja—two days' journey. He advised us that the latest time to start

from Archangel for the five days' journey to Ust Zylma is the 1st of April, Old Style—12th of New.

It is not colder at Kuja than at Archangel. There are not many birds on the outer islands, but plenty on the Timanski Tundra and peninsula. The tide goes to Pustozersk. The river falls to its ordinary level in August. Reindeer in summer go 30 versts per twelve hours if a herd be taken and they are changed frequently. In winter (with sledges) they go 210 versts in 24 hours. We can get white bread, beef, mutton, milk, cranberries, tea; besides fish and reindeer, at almost every village on the Petchora.

The water on the Great Tundra is good, coming in streams from the lakes. People do not cut the hay on the islands. Sidóroff's steamer is 120 feet long and of 85 horse-power.

It is better to go *viâ* Mezèn. There is swampy ground near Zylma, on the Mezèn route, 240 versts, where new huts are built. Food for the journey from Mezèn to Ust Zylma should be taken from Archangel. It is *two* or three days' journey from Archangel to Mezèn.

Flax-tow and cotton-wad can be had at Ijma. Sidóroff has stayed at Bouligan's house at Ust Zylma.* A good house in Kuja is Gregory Koriapanoff's. From Ust Zylma back to the portorage between the rivers Zylma and Pëza takes about three days.

Such was a summary of the information we received from Katzoff, which we found very good.

We hope to see Mr. Schmidt, his present employer, to-morrow at Solómbola, and, if possible, arrange to secure his services for four months.

We saw also a priest who has lived among the Samo-yèdes in the Ural, east of Petchora, and he will call

* The house we ourselves occupied later.



ON THE ROAD TO MEZEN (SUMMER). KULOI RIVER.

(See page 248.)

to-morrow evening, when we hope to get still more information from him.

Rae has had some £60 worth of old silver purchased for him in Archangel by Mrs. Birse. Some of it is very curious and rich.

Mrs. Craemers came in the evening, and we had a long chat about Carl and his prospects. The eldest son, whom I have not yet seen, is engaged to Miss Giernet, a sister of the lady who accompanied Alston and myself on our trip to Suzma in 1872.

To-night the temperature was -20° R. equal to -16° below zero of Fahrenheit.

March 20.

On Saturday, the 20th of March, we called upon Mr. Schmidt, and it became quite certain that we cannot obtain Katzoff's services.

We saw the chief priest of the Archangel Cathedral, Father Inokentia, who at one time resided for seventeen years among the Samoyèdes, at Kolva, on the Ussa, up to 1847, and who made sundry trips to the Ural whilst engaged in converting (?) the Samoyèdes. Castrèn, the Swede, stayed a long time with him at Kolva. Schrenk botanised on the Ussa towards the Ural, and Keyserling *was* as far north as Pustozersk.

Speaking of the Petchora, he agreed with Katzoff as to the 1st of April (New Style 12th), being the best time to leave Archangel, and he stated that the journey would take seven days of hard travelling. The end of May (middle of June—New Style) by boat from Ust Zylma. We shall be able to shoot at Ust Zylma by the end of May, that is, when the snow leaves the higher ground. Forests are *not* extensive at Ust Zylma or Ijma. The latter place, which is very little flooded, is a better place to stay at than Ust Zylma. Only the west side of the river at

Ust Zylma is flooded. There is only small brushwood at Kuja, and rather larger at Pustozersk.

With regard to the islands up the river, he says they are always flooded, thus differing from Katzoff, who states they are never flooded.

Speaking of the return journey, it appears that the only way to get back from Kuja is by boat at the end of summer, and that from Ust Zylma to Archangel is a three weeks' journey, of which fourteen days are taken up by the route between Ust Zylma and Mezèn.

We may not reach Kuja until the 20th of June (New Style) if we wait at Ust Zylma during May. For it is quite impossible to go *by any route* from Ust Zylma to Kuja during the month of May, that is, after the break-up of the ice and snow begins, until the river is open. The end of April (10th of May, New Style) is the latest time we can go by the winter route from Ust Zylma to Kuja.

The Hooded Crows first appear at Pustozersk at the end of March (10th April). Magpies are the only birds that winter there.

Speaking of the Tundras, Father Inokentia says that the Upper Tundras—those nearest the sea—are more difficult to work, but he thinks it is possible. The Tundras are cut through with many small rivers and lakes, with rocky, marshy, and also dry ground. The Northern Tundras are good for birds.

The water on the Tundras is 'beautiful,' and the Petchora water very good.*

Kañin, Timan, and the Great Tundra towards Novaya Zemlya are the three places resorted to by the Samoyèdes in summer. The Timanski Tundra is also thinly populated by Russians.

Many geese—2,000?—are caught alive on the lakes of

* This we found to be true.

the Tundra, about the 10th of July, for the sake of the feathers, down, etc.

The island of Kolguev is inhabited by Samoyèdes, who are employed by the Russians at Pustozersk as shepherds for their Reindeer. There they live a nomad life in tents all the year round.

There are many idols—'Kayé'—on Waigatz, but also some at different places on the other Tundras.

The word Samoyède means 'eat alone,' not 'self-eating' (*vide* Richardson's 'Polar Regions').

Petchorit is a hard stone.

To-night the temperature was -26° Reaum.

March 21.

On Sunday, the 21st of March, we saw a young fellow—by name Urpin—who has been several times to the Petchora, and has been as high up as Ust Zylma. He told us that in the delta the hay is cut about the 15th of August, or earlier; that the vegetation there springs up very rapidly if the ice goes quickly, but is often delayed by north-east winds in spring and June; that there is usually fine weather in June and July, rain in August; and that we shall be able to sleep in the temporary houses on the delta.

Speaking as to the river, he said that in July the winds are variable; that Sidóroff's steamer cannot always go up to Ust Zylma, by reason of the shallowness of the water; and that he himself took a week from Kuja to Ust Zylma, with tacking and two days' favourable wind.

As to the North-East Tundra, he mentioned that he had been *wrecked* on the coast between Varandai and Kuja, 15th–27th August, and travelled a short distance over the Tundra. It takes a couple of days' boat voyage on the average from Kuja to Varandai. In August he saw few, but *some very small*, 'Kuleeki,'

a name applied generically to small Sandpipers, and plenty of Ducks and Geese. Also Snow Buntings.

Speaking of wages, he asked 250 roubles for the four months, April, May, June, and July. He gets 300 roubles for his whole summer's work, but cannot take less than 250 from us, as he would lose his permanent chance of employment. An engagement he may have with Sidóroff also may clash.

We also saw a man named Richter, now clerk with Schmidt, formerly with his own vessel, going often to Petchora, who accompanied Heinké about fifteen years ago, and seemed to be acquainted with several birds by their Latin names. Most of our time to-day was taken up with these and other preparations, and visits to the Museum, the silversmith, etc.

This evening the temperature was only -11° Reaum, but felt very cold with wind. At mid-day it was -9° Reaum.

March 22.

On Monday, the 22nd of March, the morning temperature was $-9\frac{1}{2}$ Reaum.

We have named Piottuch, 'Cock-sure Piottuch'; he is so awfully sure of his own infallibility, but he is an honest good fellow for all that. We found him a 'cute hand at a bargain, and spent some hours this morning over his engagement. Seebohm, who dubbed him, said 'He *wishes* to be "cock-sure" now.' All went pleasantly, however, and we arrived at the following bargains:—

1. Piottuch wants 500 roubles, or £70, for the whole four months.
2. We agree, if he will guarantee—

700 skins of his own doing;	to give him	400 roubles.
900 " " " " "		450 "
1,100 " " " " "		500 "
If he gets more still, we only give the	500	"

And we guarantee 700 birds. This is at the rate of half a rouble (1s. 6d.) per skin. We consider we are treating him handsomely, but he knows he will have to work hard in return, and 500 roubles being the full sum we will pay him, he is bound to guarantee us 1,100 skins for that sum and as many more as he can skin.

Katzoff we cannot engage, nor do we think it advisable to take any other man. Had we taken another he would cost us 300 roubles. But we can get men at Petchora far cheaper and quite as good. Except Katzoff, who certainly is a most superior man, and would have been invaluable to us, we cannot hear of another.

March 23.

We spent Tuesday and Wednesday, the 23rd and 24th of March, in Archangel, and on the Tuesday we went to the market and bought some requisites, tow, cotton, shot, two small barrels for spirits—cognac, and arrack, etc.—and I purchased some old silver at 4s. 6d. per oz. and a few kopeks over, viz., chain and cross, 8½ roubles; clasp, 2 roubles; set of four sleeve-links, 2 roubles; cross, 1 rouble; and cross, 2 roubles 50 kopeks.

The following are some of the prices of provisions in Archangel:—

Beef, 80 k. in winter, 10 k. in summer; Capercaillie, 50 k. each in winter, 25 k. in autumn; Hazel Grouse, 30 k. per pair in winter, 25 k. in autumn; Hares, at present, 20 k. in winter, 8 k. in autumn; butter, 20 k.; white bread, 12 k. per lb.; English rolls, four to the English lb., are 3 k. each; black bread, 2 k. per lb.; salmon, 40 k. per lb., sometimes 25 k.; 'krinke' (about a quart), of milk, 3 k.; cream, 12 k. per bottle, 1¼ pint; 100 fathoms of firewood—the average allowance of annual firing in a small family—70 roubles.

The German Club in Archangel contains a handsome

ball-room—its floor of polished wood—with card, reading, billiard, and dining-rooms opening off it, and is much frequented in the evenings, especially in winter.

Outside is a good ice slide, upon which Seebohm and I ventured to-day for the first time. Birse played a trick on me, raising the sledge and shooting me down the slide in a most undignified manner, minus the sledge. I felt it cold behind.

Ladies in St. Petersburg and Archangel can go down in these sledges in a standing position, and Mrs. Birse is one who does it well, I believe.

The beginning of the slide is at an angle of 45° and about 20 feet high, the top at either end being reached by a flight of steps. To steer, the slider requires to wear thick gloves, and, sitting on the sledge, to steer right or left by placing his hand on the ice on that side to which he desires to go; *or*, by lying on his stomach, steer with his feet.

March 24.

The thermometer was in the morning of Wednesday, the 24th of March, at 10° Reaum., and by midday rose to 8° Reaum., the weather being bright, clear, and quite warm.

We called this day upon the Vice-Governor, with whom we had a pleasant interview, and he promised us two circular letters (duplicates) to the Ispravniks of the towns and villages along our route. Also at the same time, Carl Ivanovitch (Charles Birse) met the chief medical police-inspector, who kindly promised to assist me in procuring trustworthy medical information about the Samoyèdes.

The Vice-Governor distinctly stated that, 'without exception,' the birds in the museum here were all shot in the Archangel Government.

I shot a Hawfinch yesterday in the German Cemetery. Its feathers were perfectly loose, and came off in showers. No disease was observable. It had been feeding on rye, or some grain picked up at the foot of the windmills.

The Common Sparrow in Archangel supplants the Tree Sparrow, though in the villages southward to Vologda and to Kargopol (on the St. Petersbourg route) the latter bird seems to be the most common.

March 25.

On Thursday, the 25th of March, we examined, with Mr. Shergold, a collection of mineralogical and geological specimens—2,500 of them *numbered*, and say half as many more unnumbered—belonging to a widow, Mrs. Katzoff, collected by her late husband. They were principally Siberian, and many of them were once in the Imperial collection (we were not supposed to be too curious as to their present possession or how they were come by). Many are also from various parts of the world. They are catalogued with dates (?) and localities, and the collection is complete as originally formed, none having been parted with. Mrs. Katzoff wishes to part with them, and when a Latin catalogue—the present one being in Russ—is made out, I have promised to write to England about the sale of them.

March 26.

On Friday, the 26th of March, a Samoyède came, from whom we got the following information, Mr. Birse translating for us:—

His Samoyède name is *Parmi*, named from a Cape in Kañin. His Russ name is André. He has a small moustache and imperial, straight black hair, and typical features. His age is above 50 (*i.e.*, according to the Russian way of counting, 'in the sixth ten').

We got him to sing, a most monotonous chant. The

subject of the song was that they would go with Reindeer, choose the four fleetest Bulls, and lead the party, and go and get vodky; also that they would go and barter, and hoped not to be cheated in their bargain.

They *have* traditions, and can relate matters regarding the possessor of any old choom. Parmi himself remembered his grandfather on his mother's side.

They have a chief residing in the Ural Mountains, but Parmi has never seen him, and does not even know his name. This chief is answerable to the Emperor for tribute. If the chief's son is worthy he is elected to succeed; but if not, another is chosen by ballot, putting chips of wood or any small article into a 'pimugh' * (the Samoyède box) or other receptacle.

They have had many battles amongst themselves. These were caused by want of food in hard seasons, when, as far as we could gather, might becomes right. Sometimes individuals 'run amuck,' like Malays, and are then said, or believed, to be possessed by a devil.

As to illness, if it happens that God so smites them, it is God's will, and no cure is applied. They have no doctors, and use no medicinal plants, but they apply goose or swan fat for frost-bites. Some Christianised examples still cut themselves with knives, imagining that they are possessed by devils.

As to their idea of religion, if they make a promise to one god, and then again to another, then neither god will believe them.

The twelve months of the year have each a separate name, and they speak of the 1st, 2nd, 3rd, or 4th quarter of the month.

They count up to a million. 'One' is 'opoi,' 100 is 'your.' After 100 they say 'one above 100,' thus: 'your vota opoi.' 1,000 is 'your-your.' 10 is 'you',

* Or pimi? The *ugh* is guttural.

and 9 is 'habé you,' 'habé' meaning (that) 'before the ten.'

Parmi has heard of an unchristianised Samoyède east of Petchora with seven wives. These are kept apart in separate chooms.

A man is seldom seen among them of Birse's height, say 5 feet 11 inches.

Parmi seemed easily and readily to understand how to exchange words of Samoyède and Russian, and we had no difficulty in writing down a few corrections and additions to our former vocabulary received from Father Inokentia.

After about an hour of this questioning we all dressed in our furs, etc., Birse, Piottuch, Seebohm, and myself, and sledged with the Samoyède's Reindeer across to Moses Ostrov, where, in summer three years ago, Alston and I, found many Terék Sandpipers. Getting on snowshoes we stayed some time there, but all we shot were two Northern Marsh Tits and one Mealy Redpoll. The Reindeer—eight in number—in two sledges were females, and small. Parmi possesses about fifty Reindeer, which are at present at the choom, about fifteen versts from Archangel.

March 27.

Saturday, the 27th of March, was a somewhat idle day. I bought two more crosses for which I paid 4 roubles 16 kopeks.

March 28.

On Sunday, the 28th of March, Mr. and Mrs. Birse and Seebohm and I drove over to a village on the near islands of the Delta, and there met two Miss Kelsons, English ladies long resident in Archangel.

Seebohm and I went out for a couple of hours on snow-skates, and shot a Lesser Spotted Woodpecker, three Redpolls, and two Bullfinches.

We then lunched at a peasant's house, and after lunch the party drove 5 versts further to old Nicholai's village—Pustoidvor. We found both him and Jacob; and Nicholai's wife treated us to tea and milk. I found the photograph of our party in 1872 hung in a place of honour amongst the family images and 'gods' in the corner.

We drove home about six o'clock, and the Miss Kelsons dined and spent the evening with us at Mrs. Birse's.

March 29.

On Monday, the 29th of March, two Samoyèdes came, but we did not get much information either at the house or at the museum, where we took them to look at the birds. One of them had been ten years on the Timanski Tundra, and at the mouth of the Petchora.

We got from them the following names of birds:—

Oystercatcher—Veterinitza (Russ).

Kuleek or Sandpiper—Suilar.

Willow Grouse—Hondjè.

Goose (?)—Yebtān.

Black Goose—Pardén Yebtān.

This last species goes East of Ural Mountains to breed.

Two species of Swans—Chauàrī.

The smaller species is, they say, scarce, and only seen in autumn (?)

They mentioned that the Swans first haunt the small woods on arrival about the 15th of May. Ringed Plover are found on Timanski Tundra and sandy coast, and the Snowy Owl on the Tundra.

April 1.

On Thursday, the 1st of April, Nicholai called and we tried to enter into an agreement with him about collecting eggs; but he was very greedy and we could not come to terms at all.

He wanted for eggs of Eagles—'Orëol'—50 kop. per egg.

For Yellow-breasted Buntings, 10 kop. per egg and nest, and bird 20 kop.

For 'Kooksha'—Siberian Jay—1 rouble per egg, 30 kop. per bird.

For 'Yastrib'—Hawks—50 kop.

For 'Sovëë'—Owls—50 kop.

For 'Diattil'—Woodpeckers.

For 'Jouravil'—Crane.

For 'Sveerastil'—Waxwing.

And we excepted Tschaiké (Gulls), Kraevké (Terns), Ootké (Ducks), Drosd (Thrushes), Lastitchké (Swallows), Varabé (Sparrows), Veroné (Hooded Crows), Galké (Jackdaws), Golubé (Pigeons) and Serouské (Redpolls). He wanted 20 roubles to account, then asked 10 roubles, and finally came down to half a rouble (begged, in fact) but I told him he was so greedy we would give him nothing. This is, however, always the method of *trying to make a bargain!*

The photographs are on the whole a success, though the group is not nearly so good as our summer one of 1872. In 'Schoub' mine is fair, but bad in 'Mälitza.' Seebohm's are much more successful.

April 2.

The following are the birds we have observed about Archangel:—

House Sparrow. Not the Tree Sparrow at all, though it is the commoner species in the villages between Vologda and Archangel. At a village on the Delta of the Dvina, which we visited on Sunday last, only House Sparrows were seen.

Hooded Crows are very tame, and feed in the market-place quite amicably along with the pigeons.

Pigeons are in large flocks in the market-place, where they are fed by the market people, and are very tame. They look like Rock Doves, they have two black bars on the wings and white on the rump, and some appear somewhat larger than others. The white on the rump is absent in some.

Jackdaws and Ravens are common in the town.

Magpies, which are not uncommon in the town, are now being shot for feathers for ladies' hats in St. Petersbourg.

Marsh Tits are common.

Redpolls are not, apparently, so common as the last.

Bullfinches are still less common, but may be more abundant in the pine-woods.

Waxwings. A peasant from Ijma brought some alive to the town, and said they were amongst the first caught-alive here. He wanted 8 roubles per pair, and of course we did not buy. We are told that these birds remain up to the end of November.

White-winged Crossbills. The same peasant had also two of these birds alive, and Piottuch has two.

I got the following birds from Piottuch :—

1 Purple Sandpiper	...	...	...	1s.
1 Hazel Grouse	...	...	...	2s.
1 Spotted Crake	...	...	...	2s.
1 Goshawk	...	...	...	4s.
2 Rustic Bunting at 1s. 6d.	...	...	...	3s.
1 Hawk Owl	...	...	...	2s.
3 Pipits at 1s.	...	...	...	3s.
				17s.

The following is a rough calculation of our estimated expenses out and back from Archangel. The items are exactly calculated and a margin allowed besides :—

To Ust Zylma, 900 versts, at 13				
kopeks per verst...	...	...	£20 = 150 roubles	
Back by boats...	...	...	£20 = 150	„
Piottuch	...	...	£45 = 325	„
Food	...	...	£20 = 150	„
Boat and men	...	...	£20 = 150	„
Sundries	...	...	£20 = 150	„
			<hr/>	
			£145 = 1,075	

On Friday, the 2nd of April, we ran to see a fire which had broken out in our quarter of the town, and which was signalled from the watch-tower near the house. The firemen arrived about the same time as we did. We quickly occupied a commanding position up a tree, but soon descended again, as the fire was not large enough to make it worth our while to stop.

A thaw has continued for the last few days, the thermometer being at zero on Thursday, and gradually rising to + 2½° Reaum. of thaw.

April 3.

On Saturday, the 3rd of April, we called on Mr. Rusánoff and Mr. Nartoft, and thanked them for allowing Piottuch to accompany us. Mr. Rusánoff has only just bought a house near Archangel, and arrived from St. Petersbourg a few days ago. Mr. Nartoft is the manager or managing partner at the Maimùx Mills. Both were most kind and pleasant. Mr. Rusánoff only spoke Russ, but Mr. Nartoft knew German. We were treated to champagne and had about three-quarters of an hour's chat.

Thereafter we kept an engagement at Mr. Gellerman's at Solómbola, at eight o'clock, and spent the evening playing whist. These late hours and mixed eating and

drinking, we found to play much mischief with our digestions.

April 4.

On Sunday, the 4th of April, the thaw still continued. We got a carpenter to fit up the sledge with rings and pockets, the former to pass ropes through to lash down our heavy baggage, as it is dangerous to travel without doing so.

Dr. Erschoff, Government Inspector of the Medical and Surgical Department of the Archangel Government, called to-day and gave us letters to his subordinates, a doctor at Cholmogory, and surgeon-assistants at Mezèn and at Piñega, with directions to lend us every aid we may desire, and in case of illness to take most particular care of us.

Dr. Erschoff has also kindly undertaken to procure as much medical information about the Samoyèdes as possible. He said that had he known beforehand of our going to Petchora, he would have applied to the Government for a grant of money specially to be laid out in collecting all information on the Samoyèdes. Seebohm and I to-day received a letter from Mr. Dresser, enclosing one from Mr. Henry H. P. Howorth, of Eccles, Manchester, asking for information about the Samoyèdes, and for any collection of rude implements made and used by them.

Dr. Erschoff also gave us some medical advice, and a prescription for cholera or diarrhœa medicine.

Some White Sea fishermen came to-day to speak to Mr. Birse about getting English rifle-barrels for their seal-hunting. They were also interested in the ' pemmican ' supplied to the Arctic Expedition, and one of them, who has considerable wealth in Reindeer and roubles, said he would go as far as one hundred roubles in experimenting if he could get a bag of it.

The principal spokesman promised to get a large Seal's skeleton during the next fishery, in about a month. He wanted us to accompany him to-night to his village with his sledge, and he would take us on to Mezèn, but we think it better to leave this for another occasion. He is the possessor of Reindeer, and he offered to buy two hundred at 4 roubles each if we brought them back from Petchora.

April 5.

On Monday, the 5th of April, Herr Richter, who, twenty years ago, accompanied Heinké and Grâf Hoffmansegg to the Petchora, gave us some little information. He told us that they collected there for twelve months, and were three months at Ust Zylma. They secured the services of a number of boys to collect eggs at the different places they stopped at, especially at Kuja, where the priest, Father Gregòrie, greatly assisted them, and for three years got the boys to collect eggs, which were sent to Heinké or Hoffmansegg at Archangel.

Mr. Schmidt, of Solómbola, who is well known to all people along our proposed route, gave us a letter to a person at Kuja, Gospodeen Aristarchus Ivanovitch Koriapànoff, who knew Father Gregòrie when he lived at Kuja, and who may be able to tell us where he is now, and also to introduce us to the new priest. Koriapànoff is the principal man, the richest peasant, at Kuja. He sends his Reindeer to Varandai. We must, at the earliest opportunity, send down this letter to him by the winter road from Ust Zylma.

When Heinké and Hoffmansegg arrived at the Petchora they were taken for 'Cholera-men,' and the people will remember that they were so called if we speak of them.

They also got the men who keep the huts on the 240 versts of forest road south-west of Ust Zylma to collect eggs.

Wherever we stop to collect it is advisable that we should call for the priests, as they alone will be able to get the boys to bird's-nest for us.

Viski was noted as a good place to stop and collect at. There are numbers of small islands not marked in the charts. There are high rocks on the Tundra, whence the Samoyèdes brought them eggs of two or three species of Eagles.

The *Indigo* River on the coast of the Timanski Tundra is most easily reached by boat from Mezèn. The rocky banks and coast are a continuation of the Timan Mountains.

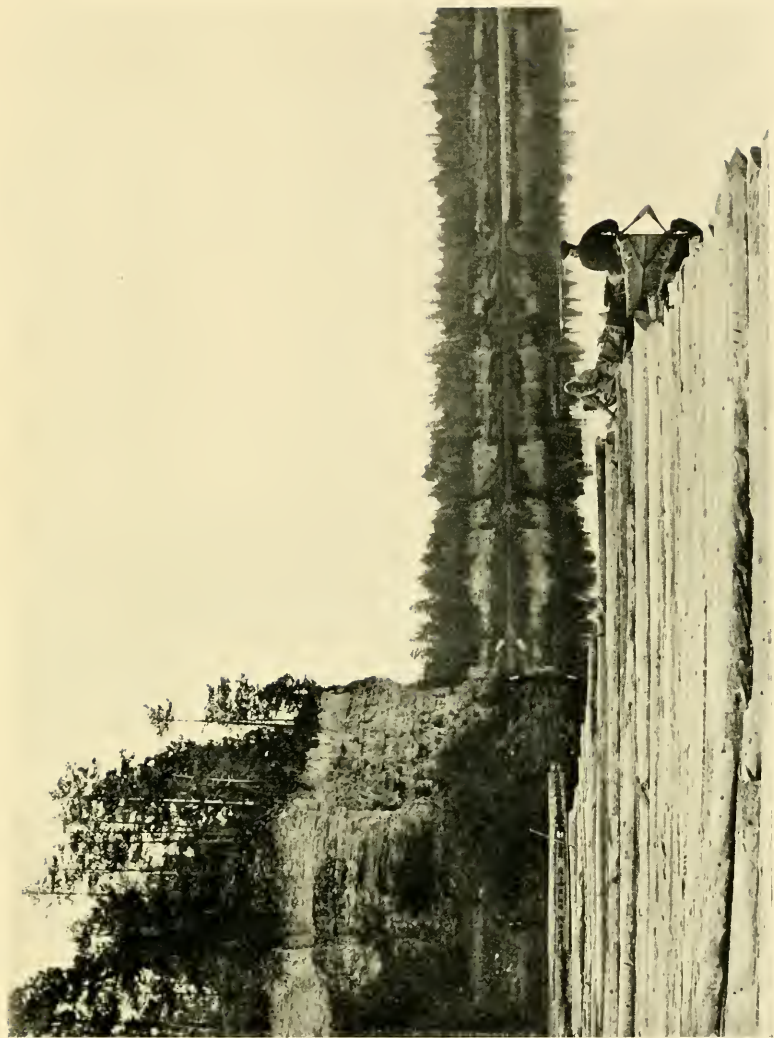
Heinké and Hoffmanségg found on the Petchora all the Gulls they found here at Archangel, and all they expected to find. *They did no writing, they only collected hard.*

At Ust Zylma they found the Rustic and the Little Bunting, and on the islands the Yellow-breasted Bunting. On small rivers, which run into the Petchora between Ust Zylma and Kuja (or the delta), they found a bird which Richter calls 'Evolga,' breeding in willow thickets high up in bushes or willows—'some red and some yellow'—about the size of a small thrush; longer and narrower than a thrush, but otherwise resembling them. It is rare, only found on the Petchora; never seen at Archangel. The nest is like a thrush's.*

All the islands are good for 'Kuleeki' (*i.e.*, Terék Sandpipers), wherever small rivers run in and small bushes or trees grow. Swans breed in the interior of the islands, out of the track of the boats, in shallow marshes. Also Cranes are common.

Richter lost his vessel once at Varandai, and in consequence it took him a month to reach Kuja from that; but if we get Sidóroff's steamer the run can be accomplished in a short time.

* We never could hear about this 'Evolga'—!!.



ON THE DVINA RIVER (SUMMER), NEAR UST PINEGA.

From a Photograph obtained at Archangel.

At Varandai, Richter saw 'small Black Geese,' the young unable to fly, and the old moulting and also unable to fly.

April 6.

On Tuesday, the 6th of April, we concluded our preparations, including the purchase of a second sledge, and left Archangel at ten o'clock at night. The Birses, Herr Holla, and Franz Franzovitch Craemers accompanied us 8 versts to the first village, where we had tea. Songs were sung, and at 1 a.m. we bade adieu to our kind friends.

April 7.

On Wednesday, the 7th of April, between Kosgogorskaia and Cholmogory, we saw two flocks of Snow Buntings, and before reaching the next station, Ust Pinegskaiia, we saw another large flock and killed two birds out of it with my stick-gun.

The road after Ust Pinegskaiia passes through forests and along the frozen Piñega river for some distance. The river banks rise about twenty feet above the water, and both sides are clothed with forest consisting of spruce fir and pine—the former here predominating—mingled with larch, poplar, and birch. The only birds observed were a few Crossbills which flew across the road. The road was very bad, a deep rut having been worn by the horses' feet during the fair-time at Piñega, and the sledge-way in consequence stood a foot or more above that level.

At Nijnaya-Palengskaia, the next station, a black dog joined company with our sledges, and accompanied us all the way to Mezèn.

Our last station to-day, Leunovskaia, was reached at 11.15 p.m. after a tiresome stage of 23 versts, which occupied no less than five hours.

We were travelling with two sledges, three horses in our sledge and two in Piottuch's.

Keen frost set in after the thaw, which, in ordinary circumstances, would have facilitated our travel. But owing to the deep rut in the centre of the road, and the outriggers of our sledge being set rather lower than usual, one of our runners was up on the sledge-way and one down in the rut, and consequently the outrigger on the low side 'scrunched' through the hard snow and greatly retarded the speed of the horses—acting, in fact, as a sort of drag or brake.

April 8.

On Thursday, the 8th of April, we got over our next stage more quickly, as the winter road lay for the most part over the River Piñega.

Near to Kousonemaskaia we saw Tree Sparrows engaged in building their nests in the chinks of the houses. Here also we saw the Common Sparrow, this being the only village we have seen it in since leaving Vologda Government. (In *Archangel* I have omitted to mention that we observed a few specimens only of the Tree Sparrow.)

On the last stage before reaching Piñega we shot a Great Spotted Woodpecker, and tried in vain to get at two Siberian Jays. We found it, however, absolutely impracticable to attempt any work in the woods without snowshoes, and soon gave up attempting it.

At Piñega, which we reached at 2 p.m., we saw twenty Samoyède sledges and about eighty Reindeer (at four deer to each sledge). They were from Kañin. We left our letter for the Ispravnik of Piñega, as he may possibly be useful to us on our return journey.

Our route to Kuloiskaia, a 34 versts' stage, lay principally along the Kuloi River from near its source, on the right bank, amidst beautiful scenery. A low range of what Seebohm recognised as Oolite skirts the river-side, and is covered with weird forest of lichen-covered larches and pines and spruce. The tall larches were most



VIEW IN PINEGA—STATION HOUSE.

prominent, and the spruce most plentiful. The road winds sharply in and out among the trees and over or round the undulations of the ground, becoming very narrow at places, or, again, takes a straight course across some open glade in the forest. In many places the river was free of ice, and we could see that there was a considerable current. A few Wild Ducks were haunting the open water, and Piottuch made several vain attempts to approach to within shot of them. We shot one Crossbill, and found dead and partly eaten a Common Redpoll.

We can easily picture the enjoyment of floating down the Kuloi River in a boat, lazily lounging on mattresses and spring seats, as described by Mr. Rae in his 'Land of the North Wind.' In summer the banks of the Kuloi River must be doubly beautiful.

Our next two stages—to Berezovskaia, 20 versts, and to Ginsegorskaia (Malo-Nemungskaia), 24 versts—were done in good time, and we slept soundly by the way.

April 9.

On Friday, the 9th of April, 1875, the runner of Piottuch's sledge having been broken, we got it replaced at Chejegorskaia, and breakfasted there. We left after breakfast in company with a large number of Samoyèdes, doubtless *en route* for Kañin. We counted up to twenty sledges, but more were still coming up as we drove out of the town before them. It is possible that they may be part of the same company that we saw at Piñega, but it is, we think, scarcely likely that they could have overtaken us with only the one complement of deer.

We soon entered a great forest bearing the marks of an old conflagration, the gaunt barkless stems rearing themselves high above the younger growth of pine. Wind, too, had had its share in the destruction, as every here and there through the forest the upright roots of over-

thrown trees appeared, each bearing on its summit a cap of the purest snow a foot or more in depth, adding considerably to the great weirdness of the scene. It reminded me most strikingly of one of Millais's pictures, in which latter, however, the Ravens gave some appearance of life to the scene absent here.

The only birds we saw during the long drive through these great forests were a few Snow Buntings—one of which was distinctly seen by us all to perch in a spruce fir—and three Siberian Jays, and one fine old Capercaillie Cock.

Passing for a time out of this vast forest tract, we crossed a great level snow-covered plain, having here and there a small stunted pine growing. Far as we could see, right or left, in an easterly and westerly direction, the plain extended, and before us, to the north, the forest again appeared. We supposed that this great plain was a swampy tundra in summer, doubtless with the delicious Arctic Bramble growing upon it in abundance.

Once more entering the forest, we found the land again uneven and even hilly in places—a remarkable contrast to the unbroken surface of the plain we had just left.

About one o'clock we drove down a steep bank of the Pëza River, and rapidly crossed it to the last station before reaching Mezèn—Lompozhenkaia—where also our route to Ust Zylma branches off. The Mezèn is a fine sweeping river, and in general appearance at this point resembles the Dvina.

We arrived at Mezèn at four o'clock p.m., seeing several flocks of Snow Buntings, a number of Magpies, on one occasion eight together, Hooded Crows, a few Ravens, etc.

Mezèn is situated on the right bank of a 'kouria'* of the river. Round the town is a bleak bare country without trees, and the nearest forest appears to be on the further

* A 'kouria' is a creek or backwater of the river.

or western side of the river. The kouria begins its existence in a marshy piece of ground above the town, and continues about 10 versts to the sea. Opposite is a long island, then another branch of the river, then islands covered with small trees, and then the main channel of the Mezèn, with the far shore clothed in forest. The total width is about 6 versts. At present all is, of course, clothed in white, and it is impossible for us to distinguish between the river and the low-lying islands.

We unpacked all our luggage and took it into the station-house, and in the evening we called upon the Ispravnik—M. Taratin. He showed us Rae's photograph, and gave us letters to the Ispravniks at Ust Zylna and at Ijma. M. Taratin informed us that he had heard of M. Pölzam's visit to the Petchora last year, and said that he collected principally fossils, but also a few birds.

There are one or two fine flocks of Snow Buntings close to the town, feeding apparently on the great waste heaps of manure which are thrown out and form a steep bank between the town and the kouria. There must be many hundreds of pounds' worth of manure thrown away here, unless in summer vessels come into the kouria to take it away.

April 10.

On Saturday, the 10th of April, we shot a few of the Buntings and bought another from a boy who was engaged in snaring them, and we were told that a fortnight later we could buy a hundred of them for a rouble.

To-day we were invaded by numerous Mezènites, and I arrived at the following useful conclusion for travellers:—
'Take as much luggage and as many curios as possible on a long journey. There is infinite pleasure in having,

en route, to pack and unpack them for the edification of those to whom we carry, and also of those to whom we do *not* carry, letters of introduction.'

There is now a regular snowstorm, and it may be advisable to delay our departure from to night till to-morrow morning. But then there are still many Mezènites who have not seen our hammocks and our canteen, our 'fusils' and our revolvers, etc., and we may find it advisable to remain even yet another day. And we are informed by the Ispravnik that there are 800 inhabitants in Mezèn.

We watched the Snow Buntings to-day, and saw them distinctly both run and hop. They uttered their *tinkling* note as they flew overhead, drifting like snow-flakes down wind or making their way against it with dipping or butterfly flight.

The boy who was catching them set horse-hair nooses fastened to a straight, or to a triangular set of straight, flat boards, which he sunk in the snow or ground, allowing only the nooses to appear above.

April 11.

We left Mezèn at nine o'clock on the morning of Sunday, the 11th of April, and on arriving at the first station—Lompozhenkaia—we found that we had distanced 'Cocksure P.' by at least 3 versts, and we had to wait an hour for his arrival. He did not succeed in selling his gun at Mezèn, though he was offered a good price—£15—and a muzzle-loading gun besides. His breech-loading gun is 10 gauge, and he finds it difficult to get cartridges.

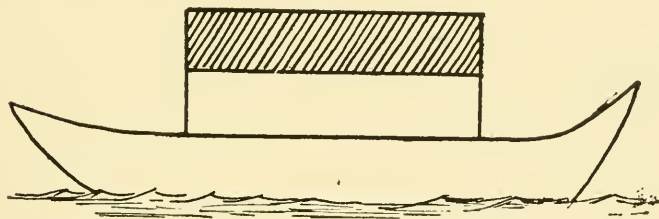
On arriving at the station he confessed to having had a wee drop too much of (sweet?) champagne with his Mezèn friends last night, and certainly he looked very 'katzenjammerisch' this morning.

Leaving Lompozhenkaia, we drove through a park-like country among isolated groups of spruce, skirting the denser forest on our left, and with willow bushes between us and the Mezèn River on our right. In the opener parts the sledging was smooth and good generally, but bad when we entered the forests or willow-covered ground.

On the river, as we crossed or followed its course for some versts at a time, the sledging was also usually good.

In our third stage—between Zaozorskaia and Zheroskaia, and about 50 versts from Mezèn—we plunged down an almost perpendicular bank and dashed out upon the Pëza River and crossed to the other side. The Pëza here, close to its juncture with the Mezèn, appeared to be about two-thirds of a verst in width. We expected to make closer acquaintance with the Pëza on our return journey from Ust Zylma (a return journey which we did not make!).

We observed the small boats which will probably be



our means of descending the Pëza—scallop-shaped, with rough cabins amidships.

As we passed on we found at the stations that the natives turn out *en masse* to witness our arrival and departure. We are evidently approaching less beaten tracks, as their increasing curiosity shows plainly enough.

At several points along the banks of the Mezèn River, but perhaps most prominently between Jerdskaia and Pogorelskaia, are singular red or dark purple cliffs of what appears to me to be marl, crumbling into earth in places and hardening into distinct rock-strata in others. These cliffs are about a hundred feet high, more or less, and are cut by gullies at regular intervals down to the



water edge. Apparently these gullies are caused by surface water. The strata do not dip at the gullies. Seebohm is of opinion that it is a *red chalk*.

Soon after leaving Pogorelskaia we came rather suddenly to grief. The thaw and fresh snow had softened the upper crust on the road at places, and close under a steep bank all three horses of our sledge broke through and sank up to their bellies. Quite an hour was lost in unharnessing them and getting the sledge on to a firmer part of the road. We offered the four men each a small drop of rum, and were somewhat surprised that two of them refused to take it. According to all accounts received we should judge that they are rare exceptions.*

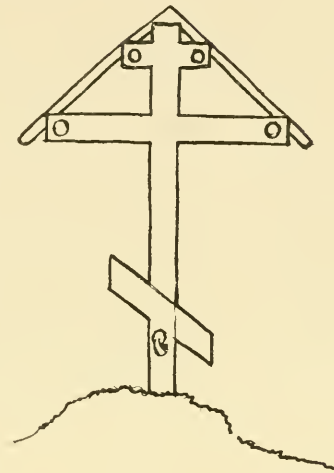
Along our day's route we have observed that the crosses by the roadside are much more numerous, far more conspicuous, and more elaborately carved than those usually seen by us south of Mezèn. We hope to have time yet to sketch one or two along with the elaborate carvings, letters, figures, etc.

* They were probably "Old Believers."

Many houses in the villages were richly coloured and ornamented under the eaves, principally in red, blue, brown, and white jujube spots.

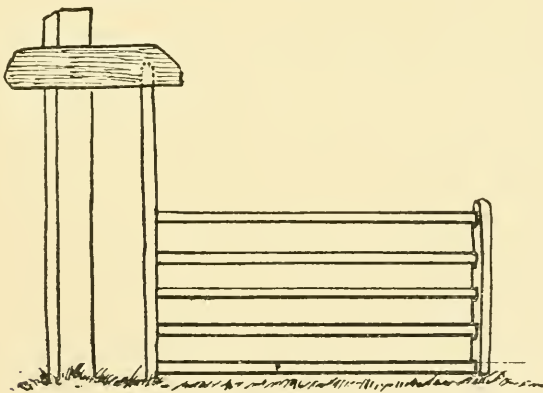
The curious clumsy hinges of the gates also attracted our attention. The upright post of the gate turns in the hole in the block which is firmly fixed in a strong supporting post alongside.

We slept well during the night, which was cloudy and not cold; and at 6.15 a.m. we arrived at Bolshànissagòrskaja.



April 12.

On Monday, the 12th of April, at Bolshannissagòrskaja, we found in the station-house the Government official



of whom we heard in Mezèn (from M. Taratin, the

Ispravnik, and M. Bronza, the Polish priest), viz., M. Rosenthal, who is engaged in measuring M. Rusánoff's co-accession of the Mezèn forests, which extend to 14,000,000 acres of pine and other wood.

M. Rosenthal told us that at the next station fourteen wild Reindeer had been shot lately.

Our list of stations now somewhat misleads us, and we found two additional stations not in our list. Our list and map are from the postal authorities at Archangel, but the Ispravnik at Piñega has, Piottuch says, changed all the stations for his own amusement—*son fantasie*—and that the other Ispravniks do the same. Possibly, I think, the peasants bribe them and are so favoured.

At Celechenskaia we bought twenty Snow Buntings for 10 kopeks. Here also we saw a couple of Samoyède sledges and deer.

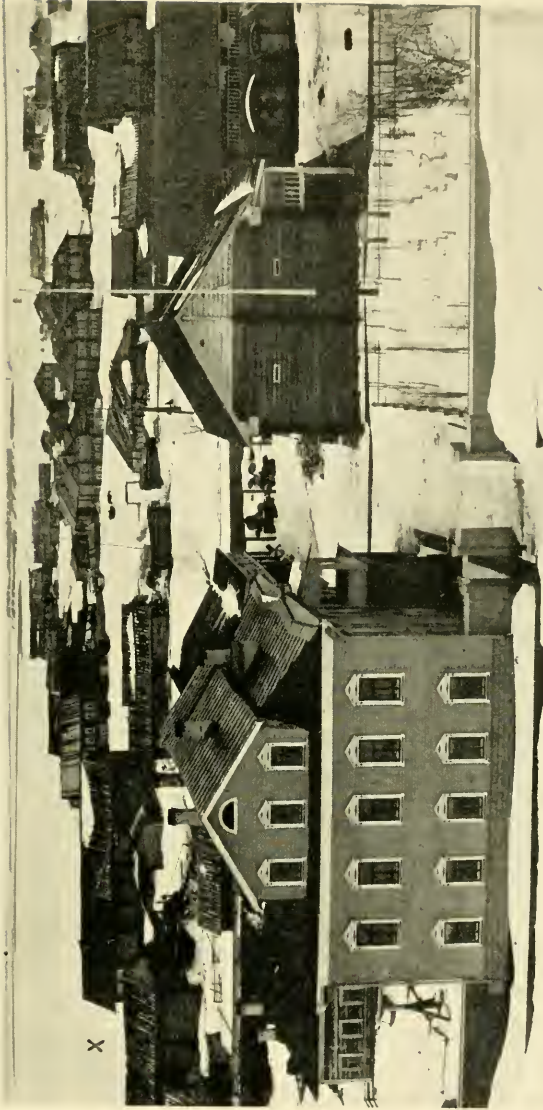
During the next stage we sledged as before up the course of the Mezèn River, from time to time diving into the forest and cutting off the corners.

April 13.

On Tuesday, the 13th of April, soon after leaving Koinaskaia, about seven in the morning, we drove through a forest of immense larches—120 to 130 feet in height—by far and away the largest we have as yet seen in Russia.

After leaving Ledskaia we passed from the main valley of the Mezèn River to that of the Pischma, the *Mezenski* Pischma (to distinguish it from the Petchorskai Pischma), along the banks of which we saw magnificent spruce-firs, rivalling in height the larches I have just mentioned.

M. Rosenthal had told us of a dangerous river on our route, but he could not name it nor point it out on our map. We soon concluded that the Pischma was meant, as the water had in many places risen above the ice and converted the snow into deep half-frozen sludge, and at one



X

MEZEN.

X The Station House where we stopped (See page 250).

To face page 250.

place the runner of our 'pavoska' passed within a few feet of open running water.

At our next long stage of 32 versts from Vosjégorskaia to Promorskaia, leaving the former at 3.30 p.m., we experienced some trouble and delay. The fresh snow had almost obliterated the track, and the driver of Piottuch's pavoska, which was ahead, made a cast to the left, and got through the sludge after a struggle. Our heavier pavoska was not so fortunate, and our three horses were soon floundering up to their bellies and quite unable to move the pavoska one inch. As it was now freezing, the sledge rapidly became frozen round the runners and the ice had to be cleared off with the axe. Of course we got out, and then the men and ourselves at last succeeded in forcing up first one runner and then the other. The horses were then yoked abreast, and after a sharp hard struggle they at last bravely pulled the sledge out of the 'slough of despond.' We lost nearly an hour over this business, and for the 32 versts took six hours, arriving at the hut-station at 9.30 p.m.

This is the first of the hut (or temporary) stations on the 240 versts winter road (and dirty enough they appear to be) between Nojgorskaia and Ust Zylma.

Again, on offering the men some schnapps, one refused. 'Na peòta tam' ('He doesn't drink'), the others said.

April 14.

On Wednesday, the 14th of April, our next stage, from Skegmaskaia to Cheblaskaia, we named the 'Vià Diabolica.' We went at a fair pace through the forest, the motion of our pavoska exactly answering the description given, I think, by Erman ('Travels in Siberia'), who says it cannot be more aptly compared than to the motion of a heavy boat in a chopping sea. The thumping of the runners on the uneven track, and the lurching from side

to side, or the up-and-down motion, most closely resembled the noise and unsteady heaving of the bows as they fall from the crest of one wave on to the side of the next, whilst the 'scrunching' of the outriggers finds its parallel in the rushing noise of the water under or along the sides of the boat. Shut one's eyes and imagine a great sea instead of a forest, and the deceptive feeling is complete.

The men in the hut-stations seem to occupy their spare time in making nets and playing draughts on rude boards made by themselves on their wooden benches. These huts are dirty unwashed places, and some of the men appear to be the very types of dirty Russians. Only four horses are kept at these forest-huts, and in consequence we had some difficulty in getting on, especially as the post from Ust Zylma was already *en route*.

The 2.0-3.30 p.m. stage was a laughable one. One of the horses in Piottuch's sledge jibbed a good deal, and at last got off the hard track into the deep snow. I awoke from a nap, and beheld poor Piottuch's sledge prostrate, and Piottuch and the men struggling in the snow up to their waists. Piottuch, who sleeps immoderately, looked completely as if he had been caught napping. After the sledge was righted the horse managed to pitch its rider head first again into the soft snow. No one was seriously hurt, and Seebohm and I laughed until tears ran freely.

Shortly after this episode we crossed the Jam Lake, from which, I believe, both the Pischma rivers flow (?). It is a pretty extensive sheet of water, about three versts long by two wide. The sunset at its far end was fine.

The next stage, over tundra and through forest in alternate belts, the former rather exceeding the latter, we sledged at a merry pace. Fifteen degrees Reaum. had rendered the roads wonderfully firm, and we had a clear moon—and star-lit sky.

April 15.

We had keen frost during the night which ended on Thursday, the 15th of April. Seeböhm felt additional comfort and warmth from a pair of my Shetland stockings, pulling up above the knee. These are certainly excellent for a sledge journey. My eyelids got fast together for a second or so, but did not cause any inconvenience.

At Umskaia, in some tall bare larch-trees close to the hut, we distinctly saw Snow Buntings, five or six in number, fly from one tree to another, and alight, and this repeatedly. To put all beyond a doubt I shot one from the top of one of the trees with my stick-gun. We think we remember some one* being severely criticised in the 'Zoologist' for mentioning the Snow Bunting's perching habits.

We found here only two horses; and we have still two long stages—of 33 and 21 versts—to Ust Zylma. At 10 a.m. Piottuch went off with the two in order to forestall the post, and we arranged to follow with two others which will have arrived and rested by that time.

We shot here five Siberian Jays, four Bullfinches, five or six Redpolls, and a Snow Bunting. The note of the Bullfinch here is louder and harsher than our birds, and that of the Redpolls appeared more Greenfinch-like than ours.

Pushing on at twelve noon, we got horses more easily than we expected at the next station.

On our last stage we passed down a part of the Petchorskai Pischma (not so treacherous as the other) on to the Zylma River, and crossed the Great Petchora, I singing aloud (roaring rather than warbling!) in the joy of my heart, and Seeböhm sitting higher out of his *mälitza*, adding an inch—if not a cubit—to his stature, as being

* Myself, I think, and as long ago as 1860!

the first English traveller who had gazed on the long straggling town of Ust Zylma, in Siberia-in-Europe.

We drove up to the house of a rich peasant, M. Alexi Bouligan, where Piottuch was awaiting us, and where (as old Purchas says) rooms were 'appointed to us to dwell in.'

Later, M. Znaminsky—the Ispravnik—called, and it was late before we got off to sleep. Our luggage is still in great confusion, but to-morrow we hope to get things more ship-shape.

April 16.

We spent most of Friday, the 16th of April, with M. Znaminsky, took coffee and dined with him, etc., and afterwards got our many packages of luggage etc., arranged. We have two large rooms at 10 roubles per month, which includes samovar and water, but our cooking, etc., is done outside.

