The Plan for a New Anglo-Swedish Antarctic Expedition

Author(s): L. Palander and Otto Nordenskjöld

Source: *The Geographical Journal*, Vol. 43, No. 5 (May, 1914), pp. 554-558

Published by: geographicalj

Stable URL: <http://www.jstor.org/stable/1778303>

Accessed: 27-06-2016 03:26 UTC

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://about.jstor.org/terms>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

The Royal Geographical Society (with the Institute of British Geographers), Wiley are collaborating with JSTOR to digitize, preserve and extend access to *The Geographical Journal*

to which we have listened, and I must congratulate Mr. Griffith Taylor on the very concise, scientific, and systematic way in which he dealt with every aspect of the case, illustrated by photographs and diagrams which left nothing unexplained. There is one point, however, that I should like to ask about, and that is the question of vegetation—a very important one for the amenities at any rate of a future capital. He showed us in some of his pictures, groups of the Australian eucalyptus, and in a few cases, round the sheep stations, specimens of English trees; but he gave us no particular idea of the vegetation with which the new capital—in its avenues, its groves of timber, and the drives in its parks—is going to be adorned. He also said nothing about the type of architecture to be adopted. I hope it may be as little like the specimens of buildings which he showed upon the screen as possible, and if we are to have a new city, that it may contain official buildings, streets, and even private houses worthy of the purpose. And, thirdly, he said nothing, perhaps wisely, either as to the length of time over which the building of the capital will be spread, or as to the cost. No doubt those are questions which did not concern him as a geographer, but they are very pertinent questions, and we should like to hear from him what is the idea as to the number of years that will elapse before the capital is built, and to what extent it will be necessary to dip into the pocket of the people. I have nothing more to add except to make myself the vehicle of your thanks and congratulations to the reader of a most excellent paper.

Mr. TAYLOR: With regard to the vegetation, the country, as I said, has been occupied for many years by sheep stations, and one of the provisions that obtains in Australia is that when you take up a Government plot you must “improve” it, so that the trees have all been ring-barked and died. There is no timber except on the ridges, but, as I think I showed, there is no earthly reason why there should not be many trees there in the future, and we have nurseries instituted. We are doing very well indeed, considering we are only about a year old! With regard to the architecture and to the time the capital will take to build, I think, my Lord, you expressed it well when you said that nothing appears to be known.

THE PLAN FOR A NEW ANGLO-SWEDISH ANTARCTIC EXPEDITION.

By Admiral L. PALANDER and Prof. OTTO NORDENSKJÖLD.

ALTHOUGH the Polar regions to the south of South America have been visited several times by expeditions, still they belong in many respects to the least known parts of the globe. The coast which has been carefully explored by Dr. Charcot, is somewhat monotonous in its nature. The Atlantic coast and the South Shetlands, which lie off it, are still, in spite of their accessibility, comparatively unknown. The coast opposite South America from a scientific point of view, is known almost exclusively through the Swedish Antarctic Expedition of 1901–1903. But it is this last-named tract that is of particular interest, its nature, in comparison with the other parts of the Antarctic continent with which we have any acquaintance, being of such a varied and abundant character. There is a considerable

extent of land that is free from ice, while the ice itself offers remarkable variety in structure and formation. The climate is a very interesting transition climate, at times mild even in winter, under the influence of northerly winds from the sea, but mostly very cold, owing to the violent south-west storms that prevail. Of particular interest were the geological discoveries made by the expedition. While all the other South Polar regions known to us are very poor in fossil remains, here these were discovered in great abundance in strata belonging to four geological systems : the Jurassic, Cretaceous, Tertiary, and Pleistocene. About 300 species taken from these strata, most of them new to science, have been described. Special interest attaches to the plant remains from the Jurassic and Tertiary Periods, the latter being of South American character, as well as to a number of vertebrate remains, also from the Tertiary Period. These discoveries now make it possible to follow the development of life in the South Polar Circle during recent geological periods, and they have proved that in the matter of structure there is a strong analogy between South America and this part of the Antarctic continent.

But also living nature in these parts, although only in the sea, revealed a wealth that was quite unexpected. It was shown that in the cold water on the broad continental shelf off the east coast, as well as in the deeper cavities in it that the expedition discovered, there flourishes a rare and varied fauna, to a greater extent than seems to be the case elsewhere off the Antarctic coasts. The algal vegetation, too, is very luxurious in places. Unfortunately, only a small part of the large collection that was made by the Expedition was destined to serve the cause of science. The greater part by far found the depths once more when the vessel of the expedition, the *Antarctic*, was crushed by the ice in February, 1903, and sank in the Erebus and Terror gulf.*

In another and unexpected way, however, the biological observations of the Expedition were to be of very great importance. The abundant animal life, which has just been referred to, supports great shoals of whales along this seaboard, and this induced the captain of the *Antarctic*, Mr. C. A. Larsen, to found a whaling-station soon after his return home, not precisely here but on South Georgia. As the undertaking proved a success, other companies, tempted by the descriptions furnished by the expedition, moved their stations to the South Shetlands. Now a flotilla of about 40 vessels meets here every year, and the value of the yield during the years that have elapsed amounts only in that district to about two million pounds sterling. By this means an Antarctic territory has for the first time become of considerable practical value, and the whole of this domain, as well as the stretches of east coast which the Swedish Expedition was the first to explore, have now become, as is well known, attached to the Falkland Islands Colony.

* For the results of the expedition, cf. the article in the *Geogr. Journ.*, vol. 38, p. 278.

It is only natural that after these discoveries much interest was aroused in Sweden for another expedition, which should be able to continue what its predecessor had begun in the way of examining a tract that held out so much promise, while at the same time it should provide science and the museums with fresh material from the treasures discovered. On the initiative of Professors J. G. Anderson and Otto Nordenskjöld a committee was appointed in 1913, with Admiral L. Palander as chairman, which committee has now drawn up plans for a new South Polar expedition to the same locality. It is the details of this plan, as laid before the Swedish Anthropological and Geographical Society, that we will set forth in the following.

In order to make a great effort, once and for all, thoroughly to explore this vast and varied territory, as yet but little known, the best plan seems to be for the proposed Expedition to be at work for a sequence of years, say five. A fixed station would then be established sufficiently far north to be able to count on coming into contact annually with the chief station of the whaling companies at Deception island, but at the same time so placed that exploring expeditions could be sent to the east coast with the least possible delay and difficulty. In order conveniently to move about among the islands, and to explore the adjoining waters, the Expedition must command a fairly large vessel, preferably one of the Norwegian bottlenose whaler type with oil motors. If possible, therefore, the station should be established in a harbour that can accommodate the vessel. From the experience gained during the last Expedition it seems improbable that any such harbour exists along the mainland, but probable that one can be found in the straits between Joinville island and Dundee island. Here a biological laboratory is to be placed and all the necessary apparatus set up for investigating climate, terrestrial magnetism, tides and so forth, and all collections are to be brought together here that have been made in the district. During the summer the biologists of the Expedition could be at work uninterruptedly, either on the vessel or in small boats, investigating the life in the ocean and collecting specimens from it. As we know how abundant that life is, and how great are the variations in the temperature of the water, in the sea-bottom, etc., it is safe to predict that these collections, if they can be brought back intact to Europe, will be far more comprehensive than any as yet brought home by a polar expedition. The intention is also to study closely the biology of the whales, and this would best be done by collaboration with one of the whaling companies.

The whole region will be mapped down, in part from the vessel, in part by means of sledge expeditions, which could very well be carried out in the summer on the land-ice. This would also afford good opportunities of making geological collections. It is by no means probable that the previous Expedition found all that is worth collecting in this respect; very possibly there may be other geological systems in the nunataks of the

folded mountain chain, and certainly valuable collections of new material can be made, while in the horizontal strata of the east islands there is practically an unlimited field, with great promise to the scientist.

When the whole area about the main station has been studied, it might be advisable, later on, to equip a branch expedition which would spend some considerable time, perhaps overwintering, further south, either at Seal island or more southerly still, in order to examine these parts of the coast. But once such an expedition has been equipped, it should be in a position, if occasion offers, to push afield and add considerably to the details of a South Polar Chart. The great question that still remains to be solved in the South Polar regions, is the connection between this West Antarctic territory, Graham Land and its environs, on the one hand, and the True Antarctic continent, which seems to be situated for the most part in the eastern hemisphere, on the other. This was the question that Lieutenant Filchner's German Expedition set itself to solve, and which is also the object of several other large expeditions now preparing, with their base at the south of the Weddell sea. And it will be one of the objects of the present Expedition too. As soon as a summer with very favourable ice-conditions offers, a large depôt will be moved as far south as possible, and, with this as base, a sledge party will attempt to find in what direction the coast of Graham Land continues beyond what is already known.

The vessel is to be equipped for oceanographic investigation, both about the station and further afield. Among the most important of the investigations at the station will be a study of the ice. We now know that it is the ice that determines the unique character of the Antarctic climate, and the last Swedish expedition commenced some interesting investigations in this province. In this respect the station, being established for several years, will give unprecedented opportunities, with which no North Polar station can compete, as it is precisely the study of the region of ice-accumulation that is so important. The results obtained should also be significant, for our knowledge of the Glacial period in our own hemisphere. Nor can it be doubted that in many other respects as well, this first attempt at a detailed study of Antarctic nature will be valuable to other provinces of science.

The staff at the station is to consist of about twelve persons, half of it being composed of the captain and crew of the vessel, who will of course also co-operate in the work on land, the other half of scientists, presumably a geologist, two biologists, a cartographer, a meteorologist and geophysicist, and a doctor. But this staff is not to be permanent all the time; those who wish it can arrange to return home by one of the whalers, and their places will be filled by others. The advantage of this scheme is that various branches of science can be represented at different times, and later on, when the general work is well on the way, there will be nothing against specialists coming out to put in some work during the summer months.

The Expedition shall have at its disposal a good, roomy building, and be generally as well equipped as its means will allow. Self-registering meteorological apparatus for the comparative study of the climates at different levels and localities will be set up in various places, and the outfit for biological collections will be of the best. A number of Greenland sledge-dogs will be taken, and, if possible, the plant for wireless telegraphy.

The plan proposed is that the Expedition shall leave Europe in August, 1915, and the part of the outfit that cannot be conveyed by the vessel will be taken by one of the Norwegian whaling companies, and left at Deception island to be fetched. The whalers will also from time to time in the following summers convey the necessary food and other stores that will be wanted. The first summer will be devoted to setting up the station; but if the ice-conditions permit, a reconnoitring trip will be made southward on the vessel to visit the depôts that were left by the last expedition on Snow Hill island, and to prepare for future sledge-expeditions. For the rest, the winters will be principally utilized to study the environs of the station, whereas spring and autumn are suited to sledge expeditions; during the summer the staff will be busily employed especially on scientific work upon the vessel. The Expedition is timed to return in February, 1920.

The expenses of purchasing a vessel and the initial erection of the station have been estimated by the committee at about £4000, the greater part of which has already been promised by two Swedish patrons. The annual expenses of maintenance, provided the co-operation of the whaling companies in transporting plant, and in keeping the station in touch with the outer world, is realized, have been estimated at about £3000. Half this amount the committee hope to obtain by a grant from the Swedish Parliament. In procuring the other half, the enterprise has met with the heartiest support in England. The trustees of the British Museum have promised an annual grant of £500 for five years, the Royal Society has granted £500 for the first year, and to judge from news lately received by the Committee, England's share in the undertaking gives promise of equalling Sweden's. There is every prospect, therefore, of the expedition starting at the appointed time.

It is intended to divide all collections made between English and Swedish museums, and two places on the staff will be reserved for English scientists, thus making it an Anglo-Swedish Expedition. The collaboration thus entailed will certainly be of the greatest benefit to the Expedition and its aims, and we hope that this undertaking, beside using the opportunities of penetrating to areas still unknown, will inaugurate a new phase in the history of systematic and detailed South Polar exploration.