# Biologisches Centralblatt

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Inhalt: Ohlin, Zoological observations during Peary Auxiliary Expedition 1894. — Haacke, Die Bedeutung der Befruchtung und die Folgen der Inzestzucht (Schluss). — Wasmann, Kritisches Verzeichnis der myrmekophilen und termitophilen Arthropoden. — Nagel, Erwiderung.

Zoological observations during Peary Auxiliary Expedition 1894.

Preliminary Report

#### by Axel Ohlin,

Zoologist of the expedition,

In the following short notices I want only to enumerate mammals and birds observed by the members of the expedition and to give a brief account of the working with the dredge and the surface-net. When the material of fishes and invertebrated animals collected by these methods is worked up, I hope to be able to contribute with a great many species to the knowledge of the fauna of Baffin Bay and Smith Sound hitherto so little known. Before entering on the main subject of this paper, I think it is well to give a short narrative of the route of the expedition.

Peary Auxiliary Expedition 1894, whose purpose was, chiefly, as the name implies, to bring Lieutenant Peary and his party home to the United States from their winterquarters at Bowdoin Bay on the northern coast of Inglefield Gulf in lat. 77° 40′ N. and long. 69° W. consisted of seven members, the leader being Henry G. Bryant. We started from St. Johns, New-Foundland, on board the steamwhaler Falcon July 7 and arrived after a pleasant journey favoured by fine weather at the Danish settlement Godhavn on Disco Island July 16. After a stop here until the evening of the next day Falcon started again and passed Sandersons Hope inside of which is situated Upernivik, the most northern Danish colony in Greenland, at 8 p. m. July 19.

XV.

The same day we met with the first floeice increasing in thickness the more northward we proceeded. Crossing Melville Bay pretty near the coast and having been nipped several times in its vast packicefields, we reached Cape York in lat. 75° 55' N. July 23; there a short stop was made and the Eskimo-settlement visited. Carey-Islands having been explored the next day for the purpose of finding traces of the missing Swedish expedition of Björling and Kallstenius we arrived on Jalv 25 at the entrance of Inglefield Gulf. Trying in vain to get through the winterice, with which the whole bay was filled, we started on August 5 for Ellesmere Land having taken on board four of Peary's companions and an Eskimo with a dogteam. On the American side of Smith Sound we landed at Cape Faraday in lat. 77º 38' N. August 7 and at Clarence Head situated about 60 miles (Engl.) further south in the evening of the following day. No relies or cairns from the Swedish expedition having been found and the floeice surrounding the coast very far out in the sea, we did not stop at any more places on this inhospitable shore. Then we tried to penetrate Jones Sound, but finding the ice and weather as



unfavourable as before, we returned August 12. Baffin Bay crossed once more, Falcon succeeded, at last, one week later, in reaching Peary's winterhouse at the inner end of Bowdoin Bay. Here Peary's party, except Peary himself and two others who are going to stay

another winter, went on board. August 26 we left Inglefield Gulf to return and having stopped once more at Cape York, we reached Godhavn September 2. On our homeward trip we took a more westerly route across Melville Bay finding that part of the sea now quite free from packiee. In Godhavn I took passage home to Sweden with a Danish vessel and arrived at Copenhagen October 19. Falcon returned to St. Johns September 17. For those not quite familiar with the geographical configuration of Baffin Bay I have thought it useful to give a map of this region with our route marked thereupon.



Although no new species of mammals and birds were observed on our voyage, 1 suppose it will be interesting in regard to the geographical distribution to mention those 1 had an opportunity to see in the Strait of Davis and its continuation farther north.

#### Mammals.

1. Vulpes lugopus. — Only one specimen of the Arctic fox was shot; it was at Academy Bay. According to the members of Peary's party, however, these foxes seem to be fairly numerous along the whole coast from Cape York to Humboldt Glacier where the conditions are favourable for its existence.

2. Ursus maritimus. — On our northward trip three specimens were obtained just when we had passed Sandersons Hope and got into the first packice of Melville Bay on July 19. All were males.

 $11^{\pm}$ 

The biggest one measured 8 f. 9 inch. in length. The following day another was seen, but we did not shoot it. In the floeice off Clarence Head we were successful enough to get two polarbears, and here as well as at the entrance of Jones Sound we observed several others. On our return, one old female and two cubs were shot from the vessel not far from Cape York on August 27. In Inglefield Gulf the polarbear is very rare; no specimen was killed here during Peary's two expeditions. According to former observations it seems to be most common among the vast packice-fields of Melville Bay and on the western side of the "northwater" of Baffin Bay. Indeed, it is very strange that it should be so rare on the Greenland coast north from Cape York, and it is difficult to give a satisfactory explanation of this fact, the supply of seals here being, certainly, as good as, or, perhaps, better than on the coast of Ellesmere Land. Probably, the Eskimoes whose remains are still to be seen at so many places along the whole coast of Grinnel- and Ellesmere Land from the 82nd degree of latitude to Laneaster Sound, have abandoned their old "igloos" on this shore just because the seals are less numerous here than on the eastside of Smith Sound. One might expect that the polarbear whose food is mainly the same as that of the "huskies" should follow their example and move eastward, but that does not seem to be the ease.

3. Phoca hispida. - Although only one specimen was brought on board for examination, I have no doubt that this seal is the most common in Smith Sound and its northern continuation from Cape York to Cape Union, where it was observed during Nares' expedition; probably the seal called "pooshi" by the natives around Inglefield Gulf is identical with this species. - In regard to the seals it is much to regret that we could procure but very few specimens although a great number of them were shot, the reason being that they sink immediately in the water, if struck severely or killed by the ball. Even if met with on the ice and wounded, they were generally quick enough to jump down into one of their blowholes and disappear. In most cases. I was thus compelled to base the determination of the seals on the description I received from the members of Pearv's expedition or from the Eskimoes as it is almost impossible to deeide with any great degree of certainty to what species a sealhead belongs which looks up for a few minutes above the water and is observed at a not very short distance. Therefore, my notices about these animals are to be taken with a little criticism. Yet I am convinced that the seal most common in Inglefield Gulf next to the precedent one is

4. *Phoca barbata.* — We did not obtain any specimen of this big and characteristic seal during our short summertrip, but according to Peary's party, the bearded seal or "oogsook" as the natives call it, is not uncommon along the eastside of this part of Baffin Bay and Smith Sound, for a great many individuals were killed last winter in Inglefield Gulf by Peary's companions. Here as well as in the packice off Cape York we observed several seals of which I am quite sure that they belonged to this species.

The third form of the genus Phoca which, I think, is not very rare in Baffin Bay is

5. Phoca groenlandica. — The Greenland seal seems to like, in these regions as well as in other seas which it frequents, the vast packice-fields far from the coast. On our northward trip in Melville Bay and on our passage to Carey-Islands we saw many great herds of a seal belonging, without doubt, to the saddleback. Also, in the packice along the coast of Ellesmere Land from Cape Faraday into Jones Sound so far as we penetrated it, i. e., some few miles west from Cone Island in lat. 76° 20' N. and long. 81° 40' W., we met with the "harpseal" as this species is called by the sailors from New-Foundland.

6. Cystophora cristata. - Although this large seal does not frequent Baffin Bay or Smith Sound, I mention it, because, on our northward trip to Disco, we killed five specimens all of them being old males. This summer, in the midst of July, the hooded seal was to be met with in considerable number in the East Greenland ice or "stor-is" as is the Danish name of that kind of ice which, as is well known, is floating with the cold arctic current along the East Greenland coast through the Strait of Denmark round Cap Farewell so far north as to Holsteinsborg in lat. 67º N. This big ice occurred for the first time when we sighted Greenland July 12 in lat. 60° 23' N. off Cape Desolation some miles northwest from Cape Farewell. In this ice we steamed for two days not very far from the coast, and everywhere we saw the "klapmyds" of the Norwegian whalers sleeping in the bright sunshine on the heavy icefloes. Now again the question rose in my mind how these animals are able to climb the steep and high walls of this ice, a fact that struck me the first time I visited the sea around Jaen Mayen in the year 1891 on board a Norwegian whaler. Nobody has yet observed them, when boarding such an icefloe, the walls of which will, sometimes, rise five or six feet or even more above the water and have no rough borders or steps anywhere.

7. Odobacnus rosmarus. — Walruses were seen by us in several places as in Melville Bay in lat. 75° 50' N. July 21 and in the "northwater" of Baffin Bay on our passage from Wolstenholme Island to Carey-Islands July 24, but in greatest number it occurred among the flocice in a little bay west from Cape Faraday. Here the vessel was accompanied by walrus-herds each containing 10—12. Unfortunately we did not succeed in capturing them having no harpoons. The bottom of this bay was sandy and had a luxuriant vegetation of

big Laminaria and Fucus, and I obtained here, in five fathoms water, Mya and Glyptonotus in considerable quantities. According to what Peary's companions told me, the walrus or "avook" (Esk.) is very abundant on some favourable places in Inglefield Gulf, where it finds a rich supply of food in the shallow water. The winterfood of the Eskimo-dogs is, mainly, walrusmeat with which Peary's stock of dogs was provisioned by the natives.

8. Lepus glacialis. — The polar hare is besides the lemming the terrestrial mammal which goes farthest north, its traces having been observed by Lockwood during Greely's expedition in lat  $83^{\circ}$  24' N. It was found by us at many places, e. g. on the south coast of Ellesmere Land at a cape opposite Smith Island, where we landed August 10, and on Northumberland Island, where five individuals were shot. In some valleys around Inglefield Gulf its tracks were seen. The killed specimens were all quite white except the tips of the ears, which had a black stripe about one inch long, and the underside of the feet, the hairs of which had turned reddish-brown through rubbing.

9. Rangifer tarandus. — The reindeer is very common in the valleys and high-plataux around Inglefield Gulf and a sure proof of this is the fact that no less than 200 odd were killed last year by Peary's party, the expedition thus being supplied during the whole winter with fresh meat. Before leaving Bowdoin Bay we visited some places in the inner half of Inglefield Gulf for reindeer-hunting; unfortunately we got only four or five. Its best feeding-places are valleys and the slopes of the mountains, which it ascends 1000 feet or more. I learned from Peary's companions that they had killed reindeers on small "noonataks" situated some miles from the border of the inlandice, this animal non hesitating to cross glaciers.

10. Ocibos moschatus. — Although we did not meet with any of these interesting mammals I put the musk-oxen on this list seeing that several bones of it have been picked up by members of Peary's party in the neighbourhood of Inglefield Gulf. As is well known, its geographical distribution is highly interesting: I do not think it is necessary to enter fully on this matter here. For further information I refer to Nares' and Greely's expeditions. I only want to say that, in regard to the present range of the musk-ox, we are still before a problem not solved. Its occurrence on the eastcoast of Greenland first discovered by the German expedition and, recently, stated again by the Danes is not strange at all now since Peary's and Astrup's sledge-journey in 1892 to Independence Bay in lat.  $81^{\circ}$  37' N, and long.  $34^{\circ}$  5' W., where they observed about twenty, some of which were killed. Thus, the way the musk-ox has taken to reach East Greenland, is fully clear; from Grinell Land across Kennedy or Robeson Channel he has wandered along the northern coast of Greenland in the valleys of which he has found good feeding-places as a comparatively rich vegetation covers the slopes of the mountains of Independence Bay at the border of the large inlandice. R. Brown's opinion that Greenland must end in lat. 82° or 83° N, was thus proved to be right by Pearv's important discovery. Still we cannot in a satisfactory way account for the disappearance of the musk-ox along the whole eastside of Smith Sound from lat. 82° N. as far south as to Cape York on which coast his bones have been found also by Nares' and Peary's expeditions. Feilden<sup>1</sup>), naturalist on board Alert, one of Nares' ships, believes that the Eskimoes exterminated them<sup>2</sup>): ...for I imagine few animals are less fitted to elude the wiles of the hunter". Still he says on the next page: "When thoroughly frightened they take to the hills, ascending precipitous slopes, and sealing rocks with great agility". This seems me to be a little contradictory; other travellers are always speaking of how dangerous is the hunting of the musk-ox and how furiously the old bulls attack the hunter, if he fires at the herd. I do not know what may be the ease, but I suppose that the Eskimoes eannot kill the musk-oxen easier than they do the reindeer; the latter animals are very numerous, although they have been hunted by the natives for many years in the same localities where the musk-ox is now totally extinguished. Perhaps the disappearance of the musk-ox can be accounted for even by its competition with the reindeer for the scarce vegetation which hardly will supply one large herbivorous animal with food. The explanation of the fact is, in any case, very difficult and in trying to solve this problem as well as the one I mentioned regarding the polarbear I think we have to count with factors not vet appreciated by former authors and still fully unknown.

11. Balaenoptera musculus. — During our stay at Godhavn on the northward trip, the Eskimoes sighted far out in the sea the floating body of a big whale. Then Falcon steamed out and brought the careass into the harbour. It belonged to the above species. — North from Disco I did not observe any right-or finwhales, but on my return to Denmark I saw finwhales several times; the determination of the species being impossible, it is unnecessary to enumerate the localities.

12. Hyperoodon rostratus. — When eruising in the East Greenland packice off Fredrikshaab I saw some bottlenoses among the iee. As I have supposed once before<sup>3</sup>), this whale and, probably, all the

1) G. S. Nares, A narrative of a voyage to the Polar Sea etc. London 1878, Vol. 2, p. 199.

2) l. c. p. 200.

3) Ohlin A., Some remarks on the bottlenosewhale (*Hyperoodon*) in Kongl. Fysiografiska Sällskapets i Lund Handlingar, Band 4, Lund 1893, p. 6.

others except a very few, are not dependent in their distribution on the temperature of the water as formerly was believed by many authors. In Baffin Bay or Smith Sound we did not observe the bottlenose.

13. Beluga lencas. — "Kaa-ja-gaktoo" (Esk.). The whitewhales seem to be very numerous in Inglefield Gulf and on the Greenland side of Baffin Bay. Many times, when trying to get through the ice in Murchison Sound and Bowdoin Bay, we had the pleasant chance to observe great shools containing, sometimes, surely a hundred individuals of this nice whale swimming and blowing quite near the vessel. The weather being fine I observed during one week of August nearly every evening the "whitefishes" approaching the shore. Young and old ones were always going in the same shool. I never heard any sounds from it, as it is told by some authors.

14. Monodon monoceros. — "Kellelooah" (Esk.). I believe the narwhale is also very abundant in Smith Sound and the "northwater" of Baffin Bay as we procured narwhale-tusks in every Eskimo-settlement we visited from Cape York to Inglefield Gulf. Several evenings in August I saw here herds of this remarkable whale coming close to the ship showing but their marbled backs, but never their horns above the water. Yet the shools did not contain so great a number as those of the "belooga", and they seemed to keep more separate from each other. Like the whitewhales they were always to be seen in the clear strips of water or "leads" between the icefloes. Farther south we did not meet with any. The narwhale, whitewhale and Greenland whale are probably the only real circumpolar whales. The natives, when asked about the function of the tusks, had no opinion of that, and none of the views I have seen hitherto about that matter, may be regarded as satisfactory.

#### Birds.

Before enumerating the birds observed during the expedition I want to remark that the small number of birds belonging to the land is to be accounted for by the rare opportunities we had to land, as we were almost the whole time on board the vessel or making excursions on the ice. By Peary's companions a few small birds of the orders *Passeres* and *Grallatores* were described as living in the vicinity of Inglefield Gulf. However I was not able to identify them after that description: therefore I have enumerated here only the birds observed by myself excluding those seen south of Cape Farewell, as they belong to the Atlantic Ocean.

1. Falco candicans. — I had the opportunity to see this magnificent bird only in Godhavn the first week of September, when waiting

for the Danish vessel. Peary's companions say they have observed the Greenland falcon several times in Bowdoin Bay.

2. Plectrophanes nivalis. — When arrived at Peary's winterhouse August 19, I saw small flights of snow-buntings among the hills and rocks, which were covered with a scarce vegetation of minute specimens of *Papaver nudicanle*, *Potentilla*, *Silene*, *Pyrola* and other plants. In Godhavn this little pretty bird was very common.

3. Saxicola oenanthe. — This bird I observed only once; it was in Godhavn, when stopping there on our northward trip.

4. Corvus corax. — We shot one raven Juli 24 at Dalrymple Island situated in the mouth of Wolstenholme Sound. Then at the end of August I observed some others at the entrance of Bowdoin Bay.

5. Lagopus rupestris — is very common everywhere in the Danish Greenland. Farther north I did not see any, but the ptarmigan frequents in great numbers the coast of Inglefield Gulf according to what I heard from Peary's party.

6. Sterna macrura. — Some specimens were observed in Murchison Sound and other parts of Inglefield Gulf. Nowhere, I think, the Arctic tern is breeding here in great number, as we saw but few of this species.

7. Pagophila eburnea. — The ivory-gull I met with the first time during the journey July 21 in the packice of Melville Bay. The only specimen obtained on our expedition was shot in Murchison Sound July 26. I did not see any more of these pretty birds in Inglefield Gulf, so I think it is rather rare here. During our stop off Clarence Head I saw 3 or 4, but nowhere else on the coast of Ellesmere Land.

If one must consider the ivory-gull as very scarce in Baffin Bay, I suppose

8. Rissa tridactyla — is the most common gull here as everywhere in the Arctic and North-Atlantic seas. On our passages through Davis' Strait and Baffin Bay, the ship was nearly the whole time followed by the kittiwake although I am rather inclined to believe that it decreases in number the farther north one proceeds in Smith Sound according to observations made by former expeditions.

9. Larus glaucus. — This big gull occurred nearly everywhere in Baffin Bay and Smith Sound. On the south-east Carey-Island we found the glaueous gull breeding, but only a few pairs. Yet it was not observed in so great a number as in Nova Zembla, Spitzbergen and other parts of the Arctic Ocean.

10. Lestris parasiticus. -- The skua was to be seen on both sides of Baffin Bay and several times on our passages through the Strait of Davis, but never in great number.

11. Procellaria glacialis. — From my leaving St. Johns July 7 until I came, on my return voyage, into the North Sea in lat. 58° 24' N.

and long. 2° 5' E., I saw the fulmar nearly every day, whilst sailing in open water. On the contrary, when the ship was nipped in the packice of Melville Bay or Inglefield Gulf, the fulmar was not to be observed at all or very few individuals. The same fact I had to state in 1891 in the East Greenland ice around Jaen Mayen. The "mallemuck" does not seem to like to go any distance into the packicefields as it always disappears at their borders.

12. Mergulus alle. — The little auk is very abundant among the icefloes of Melville and Baffin Bay. Never before I have seen this little bird in such countless quantities as here or in Inglefield Gulf. Surely, one must estimate their number at many thousands seen in one day only. The natives are very skilful to eatch them. The flesh is a delicacy and the skins with the feathers turned inwards give a warm clothing.

13. Uria grylle. — The black guillemot or "seapigeon", as our sailors called this bird, was found nearly everywhere in the packice of Baffin Bay and Smith Sound, although, of course, it did not equal in number the little auk or the following species.

14. Alca Bruenichii — is very common on both sides of Baffin Bay. In the packice of Melville Bay and Inglefield Gulf we got many chances to shoot the loom which frequents these waters in considerable quantities.

15. Mormon arcticus — was seen only once off Disco Island on our northward trip July 18.

16. Somateria mollissima. — The eiderduck may be regarded as one of the most common birds along the whole coast from Disco Island to Inglefield Gulf. We shot it several times during the journey; most successful were our hunters on our northward trip at a little island, Dalrymple Island, at the entrance of Wolstenholme Sound, where they killed more than fifty, all females, in one hour. I found a great many nests of this bird on Carey-Islands and at many places in Inglefield Gulf. On the coast of Ellesmere Land the eiderduck was also to be found.

In regard to invertebrate animals I will remark, at first, that I had no chance to collect insects or spiders. Our botanist, Dr. We therill, surgeon of the expedition, had opportunities on his excursions to pick up a few of these animals. That collection being at present in America, I am not yet able to say anything certain about the species obtained by him.

On the contrary, the whole collection of marine animals was brought home by me, and having just finished a rough classification of these. I suppose it is worth while to say a little preliminarily about it. Most of the animals belonging to the sea were obtained by

the dredge or the surface-net in Inglefield Gulf. It is much to regret that I got no opportunity of dredging at other places except in the harbour of Godhavn and at Cape Faraday, the chief reason being that weather or ice did not permit it. Besides at the two above stations I had opportunities to dredge only in five places in Inglefield Gulf and Murchison Sound. In the subjoined map I have marked these stations together with the depths of the sea and the nature of the bottom. As will appear from that, I dredged in no water deeper than 50-60 fathoms. Therefore one cannot expect to find true deepseaforms among my collections; yet I feel rather satisfied with the results compared to the very few chances of dredging. On the whole Inglefield Gulf must be considered very rich in animal life which is, as I believe, to be accounted for chiefly by the great variety of the bottom within short distances. Especially favourable for highly interesting and numerous forms I found the bottom below the glaciers. In Murchison Sound I tried once to dredge with the little hand-dredge on muddy bottom in 25 fathoms water just where a river from a recedent glacier was flowing out into the sea, the water being here to a considerable distance from the shore very brackish. Still I believe this dredging was the most successful one on the expedition as regards both the number of the species and the individuals. In great quantities I obtained here 4-5 species of amphipods, Mysis, Arcturus, 3-4 of palaemonids and some other crustaceans, 3-4 of ophiurids, Antedon, probably, Antedon Eschrichtii, seastars, some gastropods and bivalves as Leda and Yoldia, chaetopods and other animals not yet worked up. Also, rocky bottom mixed with mud or sand was very good. Among the crustaceans which here as everywhere in the Arctic Sea are playing a very important part in the animal life, 3-4 species of crangonids and some palaemonids were very numerous; besides these, amphipods came up in great number of species and individuals. Fishes were also caught in the dredge mainly slow bottom-fishes as cottids and blenniids. In no less number were dredged on this bottom ascidians and polyzou, some characteristic gastropods and bivalves, Strongylocentrotus droebachensis, ophiurids and Antedon. More rarely occurred Waldheimia, a little cephalopod probably Rossia, 2 species of pyenogonids, a caprellid, a few seasturs; a big lucernarid, some hydroids, Cyclopterus, a nemertin, Piscicola, and Myzostoma on Antedon.

The only place on the coast of Ellesmere Land where I got a chance to dredge was Cape Faraday. In 5–7 fathoms whater and from a sandy bottom covered with a rich vegetation of Laminaria and Fucus I obtained a few animals not before met with on the Greenland coast of Smith Sound e. g. an *idotheid* probably  $Gly_{I'}$ tonotus Sabinii, 2–3 species of gammarids, and Liparis.

On my northward trip I also took the opportunity to dredge in

the harbour of Godhavn; the result was very poor and the few forms obtained have, no doubt, already been described.

I used the surface-net at six stations during the voyage: in the Strait of Davis off Fredrikshaab in lat. 62° 30' N. July 13, off Tasiusak, the most northern "Udliggersted" of Danish Greenland some miles north from Upernivik July 19, at Dalrymple Island July 24 and three times at different places in Inglefield Gulf. The result of the surfacegatherings off Tasiusak and Dalrymple Island was next to nothing; only some dinoflagellats, diatoms, copepods and other entomostraca were secured. On the contrary, off Fredrikshaab the net was filled with Limacina, copepods and ostracods, Zoea- and Mysis-stages of decapods in great quantities. Not so numerous were small Clione, Cydippe, craspedot medusae, Salpa, Appendicularia, one hyperid and Ceratium.

The "plankton" of Inglefield Gulf was very rich. I found the evening to be the best time for using the surface-net; at that time and, probably, the whole night, if I may use such a word for that part of the day when the sun is lowest at the horizon, innumerable masses of pretty-looking animals rise to the surface. The best way to find out where to expect the richest life was to follow the thousands of little auk feeding on those organisms. In greatest amount were Clione and Limacina, copepods and ostracods, 4-5 species of ctenophors, 5 of craspedot medusue, one hyperid, 2 or 3 other amphipods and some larvae of decapods. More seldom I observed in the plankton Sagitta, palaemonids, schizopods, one polychaet, 2 small fishes, hydroids on floating seaweed and Ceratium. Unfortunately I had no good opportunity on board the vessel to preserve the fine coelenterats. Thus, now, most of them are much contracted and, of course, without their beautiful colours, so as not to allow of a sure determination. Nor had I time to describe or pieture them alive.

Although, of course, the collection secured through these few dredgings and surface-gatherings is not yet worked up, I suppose it will be interesting to see the following list of *some* of the animals brought up in the dredge. By a very rough selection and examination I have been able to make up such a preliminary account of species surely distinguished. To this list there will be added many more, when all the classes and the pelagie forms have been worked up by specialists. Thus I have obtained from the dredging-material:

Pisces								10 s	peeies	(at least)
Crustacea:	Decapoda							10	77	22
	Schizopoda	ι.			•			2	27	,,
	Cumacea							2	•7	>>
	Isopoda .							5	77	"
	Amphipode	ί.						20	,-	,,
						Τo	tal	49		

Pycnogonic	ta								2	species	(at	least)
Mollusca :	Cephal	opoda							1	- 77		77
	Gastro	poda							15	,,		77
	Lameli	ibranci	hiata	•					11	22		77
Tunicata .								•	6	17		77
Brachiopoa	la	• •			•				1	27		77
Vermes .					•	•		•	15	57		27
Echinodern	nata:	Crinoi	dea						2	۲۱.		77
		Astero	idea	•	•		•		4	27		77
		Ophiu	ride	a .	•		•	•	8	"		22
		Echin	sidee	ι.	•	•	•	•	1	27		27
						-	Te	otal	66	77		27

Polyzoa, hydrozoa and spongiae are to be added to this list besides all animals obtained with the surface-net or in some freshwaterpools at Godhavn, which I found to contain great numbers of *Branchipus*, Apus, copepods, ostracods and other organisms not yet examined.

If the number of species already classified, which will be highly increased after a more careful and detailed examination of the whole material, is compared with a list of the collections brought home by Nares' expedition 1875-1876, one must feel surprised to see that my material obtained in a few dredgings and almost exclusively at one station only, viz. in Inglefield Gulf, will, probably, exceed that collection in number both of species and individuals. It is true that Nares' collection was obtained farther north from lat. 78° to 83° N. within an area where one might possibly expect the fauna to be poorer on account of the geographical position in higher latitudes. Nevertheless, considering the great number of dredgings and the vast circuit within which they were earried out, the difference in regard to number of species and individuals secured during both expeditions is a remarkable one. Therefore it would be interesting for future naturalists, visiting those regions, to decide whether the fauna is actually so much poorer at localities situated but 2-3 degrees farther north. For the sake of comparison, it will be of interest to look on Nares' list<sup>1</sup>).

Pisces		•	10	speci	ies (at least) (incl. 3 freshwater_forms)
Crustacea:	Decapoda .		9	"	(1 with?)
	Schizopoda		1	27	
	Cumacea .		Ū.	77	
	Isopoda		5	27	
	Amphipoda	•	12	22	

1) l. c., Vol. 2, Appendix.

Pycnogonia	la .					2	species		
Mollusca:	Cepho	alopo	da			0	22		
	Gasti	opod	a			19	**	(1	with?)
	Lame	libr	anci	hia	ta	16	27	( 2	2 with?)
Tunicata	3 •					0	,-		
Brachiopod	a .					1	"		
Vermes .						23	7)		
Echinodern	nata	:Cria	noid	lea		2	,,		
		Aste	roie	dea		8	22		
		Ophi	iuri	dea		8(	(7),,		
		Echi	inoi	dea		1	27		
		Hole	othu	rio	ide	1			

#### Total 118 (110) species

Other classes are also enumerated in Nares' list, but not having as yet the material of the corresponding groups separated, I cannot give, here, even provisorily, a paralel series. No doubt, the material brought home by Nares' expedition was the completest collection of marine fauna from Baffin Bay and Smith Sound or, perhaps, the only one. Since that time Greely's expedition is the only one that has visited those regions before Peary; Greely's and Peary's first expeditions did not bring home any valuable collections as no dredgings were carried out. I have thought it proper to publish even now this preliminary report to show how rich is the animal life in those waters, how little is known about the fauna and what a fertile field for further explorations in zoological respects these seas are which have hitherto been sounded so few times.

The material will be worked up by specialists as soon as possible and I hope then to be able to publish a full account of all forms obtained during the expedition.

Lund, Sweden, November 25th 1894.

Die Bedeutung der Befruchtung und die Folgen der Inzestzucht.

#### Von Wilhelm Haacke.

(Schluss.)

Meine Theorie der Inzestzucht lässt sich am besten an der Hand von Beispielen erläutern.

Wir gehen aus von einem aus nicht miteinander verwandten Stücken, deren jedes gleichfalls von nicht miteinander verwandten Eltern gezeugt ist, bestehendem Pärchen von Tieren erster Generation, dessen erstes Stück aus der Plasmenkombination ab besteht, während das zweite die Plasmenkombination cd enthält. Diese Tiere erzeugen

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