Chapel Hill, as they are lively creatures and seem to offer interesting objects for study as to habit, food and architecture. But as this article is already long, and I wish to make farther collections and study their habits more closely in captivity, I will reserve the subject for a future time.¹

EXPLANATION OF PLATES.

PLATE XXIII.

Fig. 1.—Spider, natural size, dorsal view.

11 2 .- 11

ventral "

11 3 -- 11

side "

- " 4.—Spider in the act of unloading a pellet of earth while excavating the tube.

 a, pellet of earth.
- " 5.—Spider applying viscid liquid to the freshly placed pellet of earth. a, spinnerets.
- " 6.—Spider applying viscid liquid to the edge of the partially constructed door.

 a, spinnerets; b, door; c, pieces of moss.

"7.—Spider in the act of fitting to edge of the door a pellet of earth, a.

"8.—Trap door showing eight concentric rings which represent the successive additions to the edge of the door corresponding to the enlargement of the tube. a, hinge.

PLATE XXIV.

FIG. I.—Natural size of nest in which the spider was caught.

"2.—Trap door open. a, bands of silk which tend to close the open door; b, claw and fang marks of spider made while holding down the door.

"3.—Nest made in glass test tube. a, hinge; f, bag of silk; d, cork bottom;

g, pieces of moss and earth.

" 4.—Spider in act of holding down the door while in the nest. All natural size.

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A FEW LEGENDARY FRAGMENTS FROM THE POINT BARROW ESKIMOS.

BY JOHN MURDOCH.

DR. Rink, in his "Tales and Traditions of the Eskimo," has already called attention to the fact that among the rare cases that we have of any Eskimo tradition from the western regions, in what is now the territory of Alaska, there is one legend, that of the sun and the moon, which is identical with a well-known Greenland tradition (p. 237), and from this draws additional evidence of the identity of the Eskimo race over this extensive region.

The following fragments of stories were collected by the writer

A description of these spiders I reserve for a future time when a fuller collection is made and habits more clearly observed.

and other members of the United States International Polar Expedition from the Eskimos of Roint Barrow, Alaska, which is the extreme north-western point of the continent of North America, during a stay of two years (from 1881 to 1883). The fact that several of them show features indicating a relationship with well-known Greenlandic stories seems to the writer to render them, scanty as they are, worthy of publication.

Two or three of them have already been published by Lieut. Ray, the commander of the expedition, but as they appeared in a government publication, perhaps not accessible to all readers,

it will not be out of place to repeat them here.

Occupied as our party was with the manifold routine scientific work of the station, it was exceedingly difficult to get hold of any of the traditions of the natives, though they showed no unwillingness, from superstitious or other reasons, to talk freely about them. In the first place there were so many (to the Eskimos) more interesting things to talk about with us, that it was difficult to bring the conversation round to the subject in question. Then our lack of familiarity with the language was a great hindrance to obtaining a connected and accurate version of any story. The jargon, or kind of lingua franca, made up of Eskimo roots and "pigeon English" grammar, which served well enough for every-day intercourse with the natives, enabled us, with the help of expressive gestures, to get the general sense of the story, but rendered it impossible to write down an Eskimo text of the tale which could afterwards be translated. Moreover, the confusion and difficulty was still further increased by the fact that two or three people generally undertook to tell the story at once.

In writing out the following stories I have endeavored to avoid introducing ideas and expressions of my own, and to adhere as closely as possible to the simple sense of the brief disconnected

sentences of the narrators.

I. How people were made. Long ago, Aselu, a dog—"where he came from I did not hear"—was tied to a stick. He bit the stick [i.e., set himself free] and went into the house, where he had intercourse with a woman, who gave birth to men and dogs.

The belief that a dog was one of their remote progenitors is a very common one among savages. According to Egede (Green-

¹Report of the United States International Polar Expedition to Point Barrow, Alaska. By P. H. Ray. Washington, 1885.

land, p. 195) the Greenlanders believed that white men were the offspring of a similar union between a woman and a dog. (The same story is also referred to in Rink's "Tales," &c., p. 471.)

- 2. Another account of the origin of human beings. In the east, a tall tube [like a reed. The narrator to illustrate this pointed to one of our bamboo fishing-rods] stuck up from the ground. A man broke the tube. "Behold, many men and women!"
- 3. The origin of reindeer and fishes. Both reindeer and fishes were made by a mythical person of whom we got only a vague account, though he was often mentioned. He was said to be a little man with long tusks like a walrus, and many of the little Eskimo figurines and masks of ivory, soapstone or wood, which we brought home from Point Barrow, represent such a being, and are, perhaps, meant for images of this person.

When the deer was not, this man made one out of earth. The deer all had large teeth in the upper jaw and were "bad"—they bit people. So he said to them: "Come here!" and when they

came he pulled out these teeth. Now they are "good."

The reindeer, of course, like the sheep and other ruminants, has no incisor teeth in the upper jaw, and this myth is certainly an ingenious way of accounting for this fact, which must have seemed very strange, since all the other animals known to the Eskimos are well supplied with teeth in both jaws.

When the fish were not, this man hewed a piece of wood by the river side with his adze. The chips fell into the water and

were fishes.

There seems to have been a similar myth in Greenland. According to Crantz: "They say fishes were produced by a Greenlander's taking the shavings of a tree, drawing them between his legs and casting them into the sea" (History of Greenland, Vol. 1, p. 204); and Egede tells a similar story (Greenland, p. 196).

4. Thunder and lightning. It rarely thunders at Point Barrow, but the natives know what these phenomena are and account for them as follows: Long ago a grown person and a child went up into the sky, carrying a dried sealskin and torches of tar. With these they make the thunder and lightning, apparently by waving the torches and rattling the sealskin.

Dr. John Simpson, the surgeon of the Plover, the English discovery ship that wintered at Point Barrow thirty years before us,

gives a version slightly different but agreeing in the main with this.

Evidently related to this is the Greenland tradition referred to by Crantz (Vol. I, p. 233) that the thunder is caused by "two women stretching and flapping a dried sealskin." Egede (p. 207) gives the story in greater detail. The thunder and lightning are made by two old women who live in a house in the air. They now and then quarrel about a dried sealskin, and while they are fighting down comes the house and breaks the lamp, so that the fire flies about.

5. The story of the Kokpausina. Long ago there were five very strong brothers, Kokpausina, Kokkaun, Inaluoktuo, Nimna and Pûkanigarua. (The narrators were particular to impress it upon us that these men were not especially tall, but very stout and strong. The strength of Kokpausina especially seems to have become proverbial, for an Eskimo once compared the great, powerful hand of an old whaleman, one of our party, to that of Kokpausina.) Kokpausina lived at Pernye [i. e., "the elbow," the summer campground in the bend of Elson bay, between Point Barrow and the station], Kokkaun east of Point Barrow on the seashore, Inaluoktuo inland in the south, Nimna at Dease inlet, and Pûkanigarua at Cape Smyth. Kokpausina found two little orphans asleep and thrust excrement up their noses [apparently from sheer malevolence, though we never succeeded in making the natives understand that we wanted to know the reason of this action.] So they went home and made a little bow and arrows, short enough to hide under the jacket, but strong enough to shoot through a walrus-hide dried before the fire [and therefore nearly as hard as iron]. Then they went to Pernye and saw Kokpausina, with his back towards them, stooping over. So they shot him in the buttocks and the arrow came out at his collar bone, and he died.

His great shoulder-blade and some of his other bones are still at Pernye. [Natives who came down from the Point Barrow village to the station once or twice told the writer that they had seen Kokpausina's bones at Pernye on their way down. One went so far as to bring us down a rather large human jaw bone from the old cemetery near Pernye, saying that it was Kokpausina's.]

This story, which we heard from several narrators without any

essential variation of names or incidents, and without being able to get more details, is the skeleton of one of the semi-mythical traditions so common in Greenland, which may really refer to some actual occurrences in ancient times, but which have been localized and adapted to suit the region in which the narrator lives.

The death of Kokpausina bears a strong resemblance to the final catastrophe of the Greenland story of Kagsuk (see Rink's "Tales," &c., p. 431), which is said to have taken place in Greenland, in the districts of Holsteinborg and of Sukkertoppen, and according to Dr. Rink is perhaps a variant of an older tale only localized in this way. In this story the wicked Kagsuk, after committing various deeds of violence, at last murders the sons of two old men "clever in magic spells." To revenge themselves they prepare "bows of an arm's length," and while others engage Kagsuk's attention in front they creep up behind, escaping observation by magic, and shoot him dead.

It seems hardly too bold a statement to say that if Kagsuk and Kokpausina were real persons at all they were one and the same man, who lived neither at Sukkertoppen nor at Pernye, but somewhere in the common home of the prehistoric Eskimos, before the Greenlanders started on their weary journey towards the east and the men of Point Barrow on their perhaps longer journey towards the setting sun.

It is interesting to note that the *five* very strong and (apparently) wicked brothers who appear in this story are evidently the same as the "band of five brothers, generally called 'a lot of' brothers or men" who, according to Dr. Rink, figure in so many of the Greenland tales as the personification of haughtiness or brutality.

6. A murder at Cape Smyth. Udlimau was once given as the name of one of Kokpausina's four brothers, but the narrator afterwards corrected himself and said, as did other natives also, that Udlimau was a bad man who long ago lived at Utkliavwing (Cape Smyth) and who murdered Kumnero as he lay asleep beside his wife by cutting him across the bowels. The house where this murder was committed was pointed out to us in the village. This is probably an account of an actual occurrence, as is the following:

7. The people who talked like dogs. Long ago, when there

was no iron, five families had their houses at Isûtkwa (the site of the signal station, where several mounds indicate the position of the former village). They were called Isûtkwamiun ("they who live at Isûtkwa"), and they talked like dogs. They said "imeklunga, wa! wa!" ("I want a drink, bow-wow!").

The following fragment, however, for which Lieut. Ray is my authority, and which was also related to Dr. Simpson thirty years before, which both these gentlemen think indicates that these Eskimos are really acquainted with an unexplored land in the north, is in my opinion more probably referable to the same category as the numerous tales of the eastern Eskimo about the mythical land of Akilinek.

8. Iglu Nuna ("House country"). In the north is a country where the Iglumiun live. When all men wore one labret [the characteristic lip-stud of the western Eskimos, of which a pair is now universally worn in the under lip, one at each corner of the mouth. The expression means a very long time ago, as the single labret has long been out of fashion, and a few only are preserved as heirlooms or amulets], a man with his sledge and dogs lost his way on the ice and traveled many days till he came to a country he had never seen before, where there were people who spoke his language.

We also heard of various fabulous animals, though in many cases the names which in Greenland are applied to animals known only by tradition, and which therefore have grown into fabulous monsters, are still used for the animals to which they properly belong, as in Labrador and elsewhere, for instance, amaro means the wolf, and avwinga the lemming, while in Greenland the amarok and avingak are semi-supernatural creatures that figure in many of the old stories.

The Greenlandic word kilivfak or kiliopak, which there means an animal with six or even ten legs, appears at Point Barrow as at the Mackenzie river in the form kiligwa as the name of the mammoth or fossil elephant (see also Rink, "The Eskimo Dialects," Journal of the Anthropological Institute of Great Britain, November, 1885). We heard none of the fanciful myths about this animal which have been reported by various travelers from the shores of Bering sea, but the word was in common use, especially as the name of the fossil ivory, which is very plenty and much used by the western natives for various purposes.

It is interesting to note in this connection that one of the little ivory images brought home by our party from Point Barrow represents a bear with ten legs, said to have been seen once at Point Barrow, and evidently a blood relation of the many-legged kiliv-fak of the Greenland stories.

Another fabulous beast was the ugruna. "There are none now on the land. It has gone away, only the bones [remain]." This name appears to be applied to an extinct species of ox or buffalo, whose bones they sometimes see in the interior, probably along the banks of the rivers. We procured several teeth of the ugruna which had been worn as amulets. As in Labrador this name is also applied satirically to the smallest mammal known to the Eskimos, a little shrewmouse.

As elsewhere on the American continent, the Red Indian, who in Greenland, like the wolf, has become a fabulous being, dwelling in the mysterious inland country, is called by the contemptuous name, "son of a nit"—Itkûdling, the Ingalik or "Ingaleet" of Norton sound, which is plainly the same word as the erkilek of the Greenland traditions.

Outside of the strict field of legendary history or tradition, the religious ideas and superstitious observances of these people, as far as we had the good fortune to observe them, show a great resemblance to those of the Greenlanders before their conversion to Christianity. So strong is the resemblance in this and in other respects that I feel confident that an intelligent observer who should devote himself to the collection of the traditions of the Eskimos of Point Barrow, as Dr. Rink has so ably done for the Greenlanders, would find here the greater part of the older traditions of the Greenlanders in a recognizable shape.

HISTORY OF CELERY.

BY E. LEWIS STURTEVANT, M.D.

If we consider cultivation as embracing only the removal of a plant to fertile soil and its protection from injury from crowding, the only marked effect of the continuance upon a plant through itself and its offspring seems to be embraced in the one word expansion, i. e., increase of size. If we enlarge the meaning of cultivation so as to embrace selection and the cross-fertilization of the flowers which yield seed for future use, the subject