NANSEN TELLS HIS STORY.

ENTIRELY NEW DETAILS ABOUT HIS GREAT JOURNEY.

He Describes the Life on Board Ship—The Fram Lifted Out of the Ice Just as Her Frame Began to Crack—Dog Didn't Like to Eat Dog at First—Battles with Walrus and Bear—Life Without Soap—Eating and Sleeping Through the Winter.

Dr. Fridtjof Nansen has written for the London *Chronicle* a detailed story of his wonderful Arctic journey, which appeared in that newspaper in its issues of Nov. 2, 3, and 4. His narrative supplies many interesting details not hitherto made known about the various phases of his journey. Here are extracts:

LIFE ON THE FRAM.

"On the whole, the time passed as pleasantly as possible on board. Every man was on the best of terms with his neighbor, and did his duty with a will. Care was of course taken to provide occupation, but even without this time did not hang heavy on our hands. For those who were not continually occupied in scientific observations and investigations there was abundant entertainment in a capital library, games, music, various kinds of work, &c.; and I think hardly any of us greatly felt the monotony complained of in all Arctic expeditions. For us who had charge of the scientific observations there was more work than we could get through. The Fram, in fact, constituted an observatory of the best kind for scientific investigations of all kinds; and it is therefore scarcely to be wondered at that we should bring home such abundant material as few expeditions before us have done.

"Lieut. Sigurd Scott-Hansen was responsible for the meteorological, magnetic, and astronomical observations, which, I venture to say, are exceptionally complete. Dr. Blessing undertook the greater part of the botanical investigations and observations of the aurora borealis, and also, of course, his physiological and medical observations, which are by no means unimportant. In addition to these, zoölogical researches were made on board, soundings, determination of the temperature, and the salinity of the sea water, observations of the atmospherical electricity, and much besides.

"The speed at which we drifted was continually changing, and our course, in consequence, was not a straight line. Sometimes we drifted forward, but at others we went back again, and, were our course to be marked on a map as it actually was, it would be such a confusion of loops and knots that no one would be able to make anything of it. As we expected, we drifted most in a northwesterly direction in the winter and spring, while northerly winds stopped us in the summer.

PUTTING THE FRAM TO THE TEST.

"On Jan. 4 and 5, 1895, the Fram was subjected to the greatest pressure we experienced. Before we set out on our expedition the great Arctic authority, Sir Leopold McClintock, gave it as his opinion that the Fram would be able to withstand the ice pressure in the summer, but that if she were exposed to it in the winter he believed the probability of her being able to stand the pressure, or raise herself, was very slight. Other Arctic authorities expressed themselves yet more strongly, saying that it was an impossibility for any ship to stand the ice pressure in the winter. Now, however, the Fram was not only to be exposed to winter pressure, but she was then fast frozen in ice of over 30 feet in thickness, a fact of which I had previously ascertained the truth by boring.

"Across this ice immense masses of ice came gliding with irresistible force against our port side. The pressure was tremendous. The ice piled itself up above the gunwales and high up the rigging, threatening if not to crush her, at least to bury her. Scarcely a man on board believed she could live. The necessary provisions, canvas 'kayaks,' cooking utensils, fuel, tents, hand sledges, and 'ski' were all brought in safety onto the ice. All hands were ready to leave the ship, and no one was allowed to sleep unless fully clothed.

"But the Fram proved to be stronger than our faith in her. When the pressure was at its height, and for the first time, her timbers and beams began to creak; she broke loose and was slowly lifted up out of the icy berth in which she had been fast frozen.

"It was a triumph. By putting together the very worst possibilities, I could hardly imagine a more dangerous position for a vessel, and after that experience I consider the Fram to be capable of anything. Notwithstanding the most careful examination, we have not yet been able to discover a single crack, a single splinter displaced in her.

"After this it became comparatively quiet as regards the pressures, and we drifted on rapidly in a northerly and northeasterly direction."

THE SLEDGE EXPEDITION.

Dr. Nansen tells how he happened in February, 1895, to leave his ship and set out by sledge for the highest northing he could make:

"As I now thought I could assume with certainty that the Fram in a short time would reach her highest latitude north of Franz Josef's Land, and as early as the following summer would, as our plan presupposed, be near the sea north of Spitzbergen, I thought the time had come to carry out a new plan which I had for some time entertained, namely, to examine the sea north of the Fram's course. This could only be done by a sledge expedition, which could not reckon upon getting back again to the Fram, as the chance of refinding a vessel drifting in the ice was small. As a journey of this kind might appear to be fraught with some risk, should unforeseen hindrances be met with, I felt that I could not take the responsibility of sending any one else, and therefore decided to go myself, although there was no lack on board of those who were more than desirous of going. I chose as my companion Lieut. Johansen, who gladly accepted the offer of going. The command of the remainder of the expedition on board the Fram I left in Sverdrup's hands.

"I of course felt some hesitation in thus leaving my companions and placing the responsibility for their wellbeing and safety in the hands of another; but with the perfect confidence that I had in Sverdrup's capability as a leader, and power of overcoming difficulties, I had no fear of his not bringing all hands safely home, even should the worst happen and they had to abandon the Fram, an event, however, which I deemed highly improbable.

"All the winter I had been busy making preparations for this expedition. I had had new, strong sledges made on board specially calculated for being drawn by dogs over the uneven ice. Next I had made two kayaks, 12 feet in length, and so roomy that they could each carry a man with provisions for four months, as well as some dogs on the deck. The framework of these was made of bamboo and covered with canvas. When completed they weighed about 40 pounds each. The provisions, which consisted exclusively of the best kinds of dried and greatly condensed articles of food—chiefly dried meat, dried fish, steam-cooked oatmeal, biscuits, butter, &c.—were stowed away in canvas bags of convenient size. We had constantly driven the dogs to keep them in training for the journey, and all kinds of experiments had been tried with the tent, sleeping bag, &c.

A FALSE START.

"It was my intention to leave the Fram as soon as the dawning polar day would allow of our traversing the rough drift-ice. So on Feb. 26, with six sledges, twenty-eight dogs, two kayaks, and provisions for men and dogs for several months, Johannesen and I left the Fram. However, after four days' toiling with all these sledges over the rough ice, we saw that, thus heavily laden, we should not be able to reach our goal in good time. The dogs could not on this ice draw as much as we had expected of them, and we therefore decided to return to the ship in order to reduce the number of our sledges and the quantity of our provisions, and to wait a little longer before setting off.

"On March 3, just as we were approaching the Fram, the sun appeared above the horizon for the first time that spring, after the longest polar night ever experienced by man. Observations taken on the same day showed that we had reached a latitude of 84° 4' N.

"A few days were again spent in preparations. It was now my plan only to take with us dog provisions for one month and provisions for the men for a hundred days, and with this light equipment try to pass quickly on over the ice. We thus need not set off so early, and it was not until March 14 that we again said farewell to our companions, this time in earnest. We had now only three sledges, on two of which lay our two kayaks, and we had the same twenty-eight dogs as before.

THE TOUGHEST OF MARCHING.

"It was my hope as we got further north that we should find smoother ice, the ice there being older, and its unevenness therefore better covered up by the drifting snow. This appeared at first to be the case. We found the ice tolerably easy to get over, and did some good days' marches. On March 22 we had already reached 85° 10' north latitude, and we calculated that we could cover greater and greater distances as the sledge loads grew lighter with the daily consumption of food on the part of both men and dogs. The dogs, too, seemed to hold out fairly well. But by and by the floes began to be more uneven and packed together, and the drift, which until then had seemed to be slight, was now against us.

"On March 25 we had reached 85° 19' north latitude; on the 29th, 85° 30'. The ice was obviously drifting southward at a good rate, while at the same time our progress over the rough ice was slow. It was a never-ending labor, forcing our way through and getting the sledges over the high hummocks and piled-up ridges of ice which were always being formed afresh, and which the snowstorm never had time to smooth over. On such ice the dogs, of course, were of very little assistance. When they came to obstacles such as these they waited patiently until we had carried the sledges safely over, and they could once more draw them on over a short stretch of level ice to a fresh obstacle.

PACKING OF THE ICE.

"The ice was in constant movement and thundering around us on all sides. On April 3 we were in 85° 59' north latitude. We pushed on with all our might, always hoping for better ice. On April 4 we reached 86° 3', but the ice grew worse, until at last on April 7 it was so bad that I thought it unadvisable to continue any further toward the north. If it were like this in the direction of Franz Josef's Land we might have difficulty enough in getting there. We were then in 86° 14' north latitude, and about 95° east longitude. In order to investigate the state of the ice and the possibility of advance I went further north on ski, but could discern no likely way. From the highest hummock I could find I saw only packed and piled-up ice as far as the horizon.

OVERLIGHT CLOTHING.

"The first time we set out from the Fram we had had our good warm wolfskin clothes with us; but as spring was approaching and the temperature had lately been comparatively high, we did not think we should again have very low temperatures, and therefore, to save weight and make the caravan as easy of transport as possible, we reduced the outfit to a minimum and left our warm fur clothing on board when we left the Fram for the second time, a proceeding that we were to repent bitterly.

"For about three weeks the temperature remained at about 40 below zero, rising on April 1 to 7.6 below zero, but soon sinking again to 36.4 below zero. With such a temperature and a wind, we often felt it bitterly cold in our good, but too light, woollen clothing, which, owing to the perspiration of the body, was gradually transformed into an icy coat of mail. It was worst with our outer woollen jackets, which became covered with a thick layer of ice, which it took us fully an hour to thaw every night in our sleeping bag, no little physical heat being spent on the process; and not until we had lain with chattering teeth for about an hour and a half did we begin to feel at all comfortable. A few minutes after we got out of our sleeping bag in the morning, our clothes were again transformed into ice, and I scarcely think that either Johansen or I will ever wish for a repetition of those days. In March, the minimum temperature was 49° below zero, the maximum 4° below zero."

DEATH AMONG THE DOGS.

Dr. Nansen then describes the journey to Franz Josef Land, one of the most interesting features of which relates to his dogs. He says:

"Our progress was greatly hindered by the cracks and channels in the ice. In that low temperature they were as a rule covered with a thin sheet of ice, which made it impossible to use our kayaks in getting across. We were therefore often compelled to go a round of many miles, and it would sometimes take half a day to get past a channel of this kind. The further south we came the more of these there were, and they greatly hindered our advance, while provisions were dwindling and the dogs had to be killed one after another to feed the remainder. Some of the dogs at first evinced great aversion to eating their companions, but as their hunger increased and they got nothing else to eat they gradually became so voracious for this food that it was difficult to keep them from it as soon as a dog was killed.

"Their rations had to be gradually reduced to the smallest possible amount, so as to make the little we had go far enough and keep them alive as long as possible, but by degrees they grew sadly worn out. Many of them drew their load faithfully until they suddenly dropped down with fatigue, unable to stand any longer. We then had no other choice than to kill them on the spot or to lay them on one of the sledges and take them with us to kill them when we pitched our camp in the evening.

"In June the channels became more numerous and more difficult than ever to deal with, and the state of the ice was very bad. Dogs, ski, and sledge-runners broke through the crust on the snow, and sank deep into the soft and wet snow beneath. The number of dogs now, too, was very small, and was continually diminishing. Advance seemed almost hopeless, but we had no choice, and so toiled on as best we could, while the rations for both dogs and men were reduced to a minimum."

When he finally came within sight of land, on Aug. 6, Nansen had only two dogs left. He shot them and left them on the drift ice.

UNDER A BEAR'S PAW.

When nearing Franz Josef Land Nansen and Johansen shot three bears, and came near having a very serious adventure with the fourth they killed. They were about to cross a channel in the ice in their kayaks. "We had just brought my kayak up to the edge of the floe, and while I was busy with it Johansen turned back to draw up his kayak beside it. Suddenly I heard a noise behind me, and turning saw Johansen on his back with a bear over him, and holding the bear by the throat. I caught up my gun, which lay on the foredeck of my kayak, but at the same moment the boat slid into the water, and the gun with it. By exerting all my strength I hauled the heavily-laden kayak up again, but while doing so I heard Johansen quietly remark, 'You must hurry up if you don't want to be too late.' At last I got the gun out of its case, and as I turned round with it cocked the bear was just in front of me. In the hurry of the moment I had cocked the right barrel, which was loaded with shot, but the charge took effect behind the ear and the bear fell down dead between us. The only wound Johansen had received was a slight scratch on the back of one hand, and we went on our way well laden with fresh bear's flesh."

BUILDING A HUT.

They landed at the spot where they made their winter quarters with scarcely anything except their boat kayaks, guns, and ammunition. Nansen continues:

"We immediately set to work to shoot walrus, the blubber of which we intended to use for firing. For two men, however, the manipulation of these huge animals was attended with considerable toil. We had at last to give up dragging them up on land or onto the ice, and our only expedient was to lie on them in the water while removing the hide and blubber, during which process we succeeded in getting our only clothes thoroughly saturated with oil and dirt, thus rendering them peculiarly unfitted for protection against the winter cold and storms. There was no scarcity of bears, and we shot them for our winter store of food. After having laid in a temporary supply, we set to work on our hut, which was built of stone, earth, and moss. How we were to roof it seemed at first a difficult problem to solve. Fortunately, however, we found a piece of drift timber cast up on the shore. This we used as the ridge piece of the house, and stretched walrus hides over it, weighted at the edges on both sides with large stones. On the top of this we laid snow. To build a chimney was not easy, as we had not the stones necessary. Our only expedient was, therefore, to build it of ice and snow, which had to be renewed, however, two or three times in the course of the winter.

A DREAM OF MARBLE HALLS.

"For cooking, lighting, and heating we used walrus blubber and bear's fat. Bear's flesh and fat was our only food. In the evening we fried it in a large aluminum frying pan; in the morning we boiled it. We made our bed and sleeping bag of bearskin. To keep warmer we both slept in one bag, and, taken altogether, we were quite comfortable in our low hut, of which a great part lay below the level of the ground, and was therefore fairly well protected from the violent winter storms which continually raged above it. By the help of our lamps we succeeded in keeping the temperature inside at about freezing point, while on the walls it was, of course, considerably lower. These were covered with a thick coating of rime and ice, which in the lamplight imparted a beautiful marmoreal appearance to the walls of the hut, so that in our happier moments we could dream that we dwelt in marble halls. The hut was about ten feet long, six feet broad, and high enough in some places to allow of our standing almost erect. Our couch was formed of rough stones; we never quite succeeded in getting it even tolerably even, and our most important business throughout the winter was therefore to bend the body into the most varied positions in order to discover the one in which the pressure of the stones was least felt.

HOW TIME PASSED.

"We had no work which could help to take the time pass; we did little else than sleep, eat, and then sleep again. If any one still holds the old belief that scurvy arises from want of exercise this is a striking proof that such is not the case. Strange to say, our appetites continued unimpaired the whole time, and we always consumed our bear's flesh and our fat with the same voracity. When the weather permitted we would take an hour's walk every day in the dark outside the hut, but often it was so stormy that it was not expedient to put one's nose beyond the passage which led to our palace. Several days would often pass in which we lay quite still, until at last a scarcity of ice to melt for drinking water, or of food, compelled us to go out to fetch ice or to drag in the carcass or leg of a bear. After November we were not visited again by bears until March, and our only company in the winter were a number of foxes which constantly sat upon the roof of our hut, whence we could hear their perpetual gnawing at our frozen hams. It made us often dream that we were sitting comfortably at home listening to the rats in the loft above; and we by no means grudged them a little of all our abundance. These foxes were both of the white variety and of the valuable dark-furred kind, and had we been so inclined we could easily have laid by a good store of valuable furs. Our supply of ammunition, however, was not so large as to allow, in my opinion, of our spending it upon them, for it seemed to me that bears were the smallest game that could give us any return for our cartridges.

"Upon the whole the winter passed in a manner beyond our expectation. Our health was excellent, and if we had only had a few books, a little flour, and a little sugar we were both agreed that we could have lived like lords.

SPRING AT LAST.

"At last came spring with sunshine and birds. How well I remember that first evening, a few days before the sun had appeared above the horizon, when we suddenly saw a flock of little auks (rotges) sail past us along the mountains to the north. It was like the first greeting from life and spring. Many followed in their train, and soon the mountains around us swarmed with these little summer visitors of the north, which enlivened everything with their cheerful twittering. A dark sky, which we had had the whole winter, but especially now in the spring, in the south and southwest seemed to imply that there must be water in that direction, of which it was a reflection. We had, therefore, every hope of making a quick and easy voyage in our kayaks across to Spitzbergen, partly over open water, partly over drift ice; and as daylight had now returned we busied ourselves in preparations for this journey.

LIFE WITHOUT SOAP.

"There was much, however, to be done before we could set off. Our clothes were so worn out and so saturated with fat and dirt that they were anything but suitable for a journey of this kind. We therefore made ourselves two entire new suits out of two blankets we had brought with us. Our underclothing we tried to wash as best we could, but never before did I know what it was to exist without soap. It was difficult enough to get one's person clean, but this we managed to a certain extent by rubbing in bear's blood and fat, and then rubbing this off with moss. But this process was not applicable to clothes. After trying every possible way, we found, in our despair, no other expedient than to boil them as we best could and then scrape them with a knife. In this way we got so much off them that they did to travel with, though the thought of putting on clean clothes when we once more got back to Norway was always in our minds as the greatest enjoyment that life could bestow. We had to make a new sleeping bag of bearskins, which we dried and prepared by stretching them out under the roof of our hut. Our good, precious silk tent, which we had had during the whole of the preceding year's journey, had at last, during the autumn storms, become so worn out that I did not think it could be used any more. We were now, therefore, obliged to employ our sledge sails as a tent. Our provisions for the journey were chiefly bear's flesh and fat, and our fuel was train oil and blubber, and we were sure of finding sufficient game on the way when the provisions we took with us gave out."

ATTACKED BY A WALRUS.

On the way south to Jackson's camp they were attacked by a walrus.

"These monsters had tried several times to put an end to us by suddenly coming up from below and attacking the kayak with a violent blow, which might easily have upset us, but this they had hitherto not succeeded in doing. This time, however, the attack was more violent. The walrus suddenly pushed up beside my kayak, and, laying one flipper on its edge, tried to upset it, at the same time driving its long tusks into the bottom, fortunately, however, without touching me. I managed to give the walrus such a blow on the head with the paddle that it rose high up out of the water, threatening to fall upon me, but disappeared the next moment as quickly as it had come. The water was rushing into the kayak through the long rent made in the bottom by the walrus, and I was sinking rapidly, and only at the last moment managed to run my kayak onto a floe that was projecting under the water, and escaped in safety from the boat onto the ice. The next day was employed in repairing the kayak and in drying clothes, outfit, photographic apparatus, &c., which were all soaked with sea water, though fortunately no real harm was done."

The meeting with Jackson's party a few days later has already been described in THE SUN.

THE HOME OF THE CARIBOU.

A Social Animal with a Range from Northern Maine to Lands of Perpetual Snow.

"If you've never hunted caribou," said a travelled New York sportsman, "you have lived pretty much in vain. I used to go after them in Maine, but I found that the sport there was a little tame after I had made a trip or two into New Brunswick and neighboring British provinces. There is a surprising and deplorable ignorance among sportsmen about caribou, even among those who talk pretty loud and fast about where they've been and what they've bagged. I know men who have lived all their lives in the woods, you might say, who have a dim recollection of hearing something about elk and buffalo, but who look a little incredulous when you mention caribou. I met an old hunter in Michigan once who had a record of over 1,500 deer, but who gave me a suspicious grin when I asked him whether he had ever hunted caribou.

"'Caribou?' said he, with his grin. 'You mean bugaboo, I guess!'

"I'd just like to see that old mossback once with a wounded bull caribou reaching out for him. He'd think it was the fastest and wildest-eyed bugaboo he ever had any idea of!

"There isn't a great deal of difference between our caribou and the reindeer of Lapland or Greenland. The northern ranges of Maine are as far south as this capricious animal can stand the climate, but I believe it would like it first rate up around the North Pole. For all anybody knows, its range extends to that undiscovered country. No weather has yet been found in the very uttermost parts of Labrador that is too cold for the caribou, and it can't be a great deal colder up in the far polar seas than it is in those boreal regions. There are a good many caribou in northern Maine, and on the wild, cold barrens of New Brunswick and Nova Scotia they are still abundant. In the very northern parts of New Brunswick and Newfoundland, and in Labrador, they still roam almost undisturbed by the hunter. The settlers themselves hunt them rarely, because their hide is of little value, and, besides that, few of the settlers know how to hunt them. It would be well with the great, hulking moose if it were more like the caribou. These huge animals cannot travel in deep snow, and during the winter they fall easy victims to the hunter on his snowshoes.

"But the caribou, because of its lesser weight and the peculiar formation of its hoofs, which it can spread to great width or close at will, making regular snow shoes of them, moves readily over the top of the snow, and can rarely be run down. It requires a good stalker and favorable conditions of wind and snow, to approach within range of a caribou. Unlike moose, these animals are sociable though wanderers, and travel in herds. Their favorite resorts are spruce and juniper woods and barren grounds. They feed on mosses which hang in profusion, like tufts of hair, from the stems and branches of the black spruce and juniper trees. The lichens that grow abundantly on the barren grounds are also favorite food for the caribou. These latter they dig for with their fore feet down through the deep snow.

"The caribou has three gaits—a walk, a trot, and a gallop. With whatever gait caribous are traveling they always move in single file, keeping to a marvellous degree in each other's tracks, so that no one can judge by the trail how big a herd is leading him on. The trot of the caribou is not unlike the trot of the domestic cow, but it is much more rapid. It would take the fastest walking horse to keep up with the caribou in a walking match. But it is the gallop of this animal that is a wonder among the gaits of wild beasts. The caribou never gallops unless it is frightened, and then its leaps are thirty and even thirty-five feet in the clear.

"Although a shy and wary animal, the caribou is sometimes a very stupid one, and seems so puzzled at the report of a gun that it will as likely as not run directly toward the sound instead of away from it. If a concealed hunter shoots one caribou out of a herd so that it drops dead in its tracks, he will stand a good chance of getting the whole herd, if he should be so greedy, for the remainder instantly lose their heads, become rattled, and run aimlessly here and there, always within range. The sight of a dead companion seems to entirely craze all the rest of the herd. But if the caribou winds a hunter, he might as well give up all hope of getting a shot at it that day.

"The finding of fresh caribou tracks by native hunters is a very important event. The Indian hunters follow these with magical skill, and the circumstances must be more than ordinarily unfavorable if they return without a caribou. The following of a fresh caribou track is a matter that requires great tact. A herd of caribou when feeding is continually on the move and makes a vast amount of tracks, backward and forward, round and round. The animals are obliged to do so from the nature of their food, which they obtain in small quantities here and there.

"The most enjoyable hunting of the caribou, to the lover of the sport for the sport itself, is when the game is found on the barrens—great plains, dotted with spruce trees and junipers. The huge deer may be seen far away, like boats on a broad expanse of water, and, as they can see a good way themselves and smell a great deal further, the stalking of them under these circumstances is not only precarious but extremely exciting. Success depends almost entirely on the state of the snow. A thaw, succeeded by a sharp frost, forms a crust through which the snowshoes break, making so much noise as to make stalking impossible. The only thing to do is to take off the snow shoes and walk in the caribou tracks. No sight can be more inspiring or grand to a true sportsman than a herd of caribou on the barrens, he having the wind in his favor and a well-hidden stalking course. If he is clever he can easily get within sufficiently close range to send his rifle ball where he wants to put it, or where he ought to put it, if he knows how to shoot."

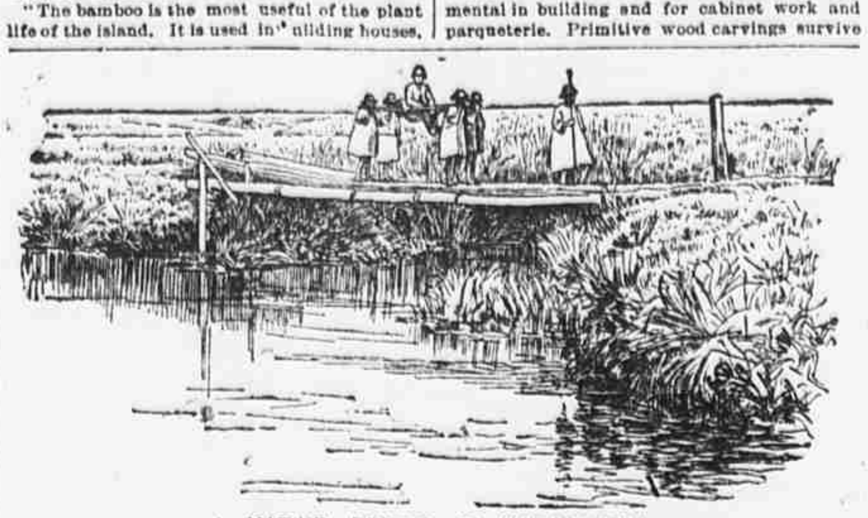
BAMBOOS IN MADAGASCAR.

THE MOST USEFUL PLANT THAT GROWS ON THE ISLAND.

Various Purposes for Which the Natives Employ It—A Tree from Which Travellers Obtain a Refreshing Drink—The Tangena Tree, Whose Kernels Are Poisonous

One of these pictures shows a bamboo forest in Madagascar. Mr. Frederick Taylor, from whose photographs these pictures were made, writes to THE SUN:

"The bamboo is the most useful of the plant life of the island. It is used in building houses,



A NATIVE BRIDGE IN MADAGASCAR.

constructing palanquins, making stepladders and snuff boxes, and many other articles. It is employed as a substitute for pitchers for fetching water from wells, for making rafts, and so on. The bamboo forms the principal musical instrument of the island. The bamboo pole, when put to this use, is about four feet and a half in length. At about six or eight inches from one end the point of a knife is inserted to

IN A BAMBOO FOREST.

the depth of a sixteenth of an inch and slit down, following the grain to within six or eight inches of the other end, and close to this another similar slit is made. This forms a string which by degrees is lifted upon a small piece of wood like a fiddle bridge inserted at either end. A series of strings of different notes is thus made all around the bamboo,

A MADAGASCAR VILLAGE.

raised to different heights, and stretched to different degrees of tension, thus forming a musical instrument played with the fingers, producing a low, sweet, harplike tone."

Mr. Taylor says that a large number of the trees, shrubs, and herbs on the island are not found elsewhere. Among the most notable of them is the travellers' tree, which is something like a large banana in appearance, and from between its leaves a very welcome supply of watery liquid is derived at will. A beautiful species of pitcher plant, whose flowers hold water, grows on the borders of the marshes all along the eastern coast. The wonderful perforations of its leaves give its name to the lace-leaf plant. One of the orchids has a spur fifteen inches long of what appears to be snow-white moulded wax. A gigantic arum lily grows along the river sides, often reaching the height of ten or fifteen feet, with a large yellowish white flower eighteen inches long.

The coast forests furnish an abundance of hardwood trees, such as mahogany, satinwood, teak, and ebony. There are many beautifully veined woods which would be useful and ornamental in building and for cabinet work and parqueterie. Primitive wood carvings survive almost everywhere in the island. The South Sakalavas and the Antinosy of the Manansua district carve to this day full-size figures of men, women, cattle, crocodiles, and birds. The natives generally show considerable artistic ability in ornamenting spoons, bamboo sticks, earthen pots, snuff boxes, and cooking utensils.

The tangéna, a small tree resembling our cherry tree, with leaves like the horsechestnut, grows in the forests along the east coast. Many years ago the natives used the nut, which is poisonous, in an ordeal for the detection of witchcraft and treason when ordinary evidence could not be obtained. It was administered to the suspected person by giving a portion of two nuts rubbed down in water or in the juice of a banana, the prisoner having previously partaken of a little rice and square-shaped bits of fowls' skin. He was then made to swallow lukewarm water, causing nausea, and if he failed to throw up these pieces uninjured he was pronounced guilty.

Another picture shows a typical Madagascar village in the depths of the great forest that covers a large part of the eastern portion of the island. The village is on the route from the east coast to the capital. The white man's party has halted here, and their baggage is seen in front of the huts, together with the filanzana or seat fastened to poles in which the white man is borne by his carriers.

Another picture shows a native bridge and the manner in which the white man is carried in the filanzana.

THE BRIER PIPE.

Where the Brier Comes from and How the Pipe is Made—Styles and Prices.

The brier used in the making of brier pipes comes chiefly from France, and largely from the region of the Pyrenees; it is said that the very best brier comes from Sicily. Only the root, or that part of the wood that grows underground, is used. It is sawed into oblong blocks which have no semblance to the form of a pipe, but each of sufficient dimensions to permit the fashioning of a pipe from it. The sawed blocks are soaked in salt water, dried, and seasoned. They are imported into this country in large bags.

In the pipe factory here the brier blocks are sorted out in sizes, for larger and smaller pipes, and then if necessary they are trimmed down before going to the machines that are actually to shape the pipe; little slabs or bits may be sawed off the block to bring it down close to the size of the pipe that is to be cut from it; but not much needs to be cut off, for the blocks are sawed originally so that there will be as little waste as possible. Then the brier block goes to the borer, the first of the machines employed in the actual fashioning of the pipe.

The boring machine has three knives, set in the same plane; the middle knife bores out the bowl of the pipe, the two outer knives cut away the wood on the outside and form the shape of the pipe. These knives, set in a lathe, make more than 4,000 revolutions a minute. The middle knife, which bores out the bowl, is longer than the two outside knives, which shape the bowl. The borer cuts the pipe out to its full depth; the cutters, in the case of an egg-shaped pipe, dig down to the point of the pipe's greatest circumference. In making a wood pipe of the bulldog shape, an additional side tool is used to shape the bowl for a little space below its greatest circumference. In making an egg-shaped pipe the knives are made to turn; in making a pipe of bulldog shape the block is revolved.

As the brier block comes from the borer it is still a brier block, with the pipe bowl bored down into one end of it, and the outside of the pipe bowl shaped down for half its depth. The block with the pipe thus partly cut in it goes then to a lathe similar to the lathes used in cutting gun stocks and other irregular forms. The cutting tool used with this lathe is circular, like a circular saw. It has peculiar, knife-like teeth. It is revolved, like a circular saw, at high velocity. The brier block, with the bowl partly shaped out, is secured upon the lathe, to which has already been attached a metal pattern of the shape that it is desired to cut the block. This metal pattern is made to turn against a smooth-edged wheel attached to the lathe. The brier block turns with the pattern, and is brought into contact with the cutting wheel in precisely the same manner that the pattern is brought into contact with the smooth wheel. As the pattern is turned the centre line of the block is brought near to or it recedes from the teeth of the cutting tool, and the teeth cut into the wood deeply or lightly accordingly. Whether the stem of the pipe is round, oval, or square makes no difference; the cutting wheel cuts away the wood so that the wood that is left is shaped in accordance with the pattern.

The work of the irregular lathe is done very quickly, and the pipe comes from it with bowl and stem completely shaped out. The tobacco bowl has been bored out, but there is as yet no hole through the stem. The stem here spoken of is the brier stem continuous from the bowl, and not a bit, or mouthpiece.

The pipe is then rough finished and fine finished on wheels covered, one with coarse and the other with fine sandpaper, and subsequently is further fine finished by polishing it on a wheel with ground pumice stone.

After the first fine finishing the pipes are assorted into firsts and seconds. Firsts are pipes without a blemish; seconds are pipes that have any outside defect.

The hole through the stem is bored with a steel wire having a cutting tip, and turning rapidly in a lathe. Fine pipes are centred, so that the hole through the stem may be bored exactly in the centre; ordinary pipes are held against the wire borer by hand, but pipes thus bored are almost without exception bored squarely in the centre.

Then the pipe goes into another machine which cuts the thread in the end of the stem to hold the bit, or mouthpiece. Then the band, if it is to have one, around the wood stem where it is joined by the bit or mouthpiece, is put on, and the bit is attached to the pipe.

Most brier in its natural state is of rather a light color. If the pipe is to be finished in natural color, it is treated with linseed oil, which brings out the grain and the beauty of the wood. The oil also makes the pipe slightly darker in color, and it grows darker in smoking. Some buyers prefer a dark colored pipe, and so some pipes are finished artificially of a darker color. Some pipes, having what is called a hard varnish finish, are finished very dark, and are highly polished on leather buffers.

In a large pipe factory the accumulated patterns number hundreds, and pipes are made in many different styles and in large numbers. One New York factory in which pipes of other kinds are made as well has a capacity of a hundred gross or more of brier pipes daily.

A brier pipe with the least outside defect is classed as a second. At wholesale seconds are sold at 25 to 40 per cent. less than firsts. Any hole or other opening in the outside of a pipe is filled up with a paste or cement made for the purpose, and colored to match the wood. It may hide the defect or it may not, but it makes the pipe practically as nearly perfect as possible. A second that is defective on the outside only may last as long as a perfect pipe, and it is just as good to smoke.

A genuine brier pipe can be bought at retail as cheaply as 25 cents or even less than that, though it is likely to be a second. A very good brier pipe can be bought for 50 cents, and a fine pipe for a dollar or less. From that the prices run up to $5, which might be the cost of a pipe of particularly fine quality and handsome grain, and with specially fine mountings. Brier pipes are sold as high as $20, but that would be something very unusual.

SAD TIMES IN INDIA.

The Country Famine-Stricken, Cholera-Scourged, and Plague-Visited.

From the Chicago Record.

India is famine-stricken, cholera-scourged, and plague-visited. Famine was bad enough, famine and cholera seemed a heavy scourge, but the appearance of the bubonic plague, or black death, in Bombay has filled the cup of calamity to its trembling brim. India is indeed stricken this year.

What the famine is may be gathered from the fact that less than half the usual rainfall has been received, and the greater part of what has fallen came unseasonably. Rice, wheat and the cheaper grains, upon which millions live, have slowly shrivelled under the burning sun. Pastures have become crisp and yellow. Every breeze carries its two-fold burden of heat and dust. Cattle are mere skeletons, and starving humanity abounds. In many parts of the famine-stricken districts the population numbers as high as 700 to every square mile. Imagination can fill in the details of the suffering which crop failure means to these close-huddled millions of our fellow-beings. Even the guarded wording of Government reports shows how desperate a conservative government considers the situation. I quote from the *Weekly Allahabad Pioneer* of Oct. 8:

"The continued drought is proving disastrous to the standing crops, except where irrigation is practicable, and rain is very urgently required throughout the provinces. Agricultural operations for the spring sowings are retarded for want of sufficient moisture. Prospects continue to be unfavorable. Flights of locusts passed over several districts and caused slight damage to the crops in Meerut, Budaun, Ghazipur, Lucknow, and Unao. The numbers employed on relief works and in receipt of gratuitous relief on Saturday, Sept. 26, were: Banda, 2,111; Hamirpur, 1,935; Jhansi, 823; Jalaun, 576; Hardoi, 6,073. Total, 11,518. Of these 696 were dependents gratuitously relieved on the works, and 6,634 persons were gratuitously relieved under other provisions of the famine code. Supplies are reported deficient in Cawnpore, Fatehpur, Benares, Hardoi, Bahraich, and Bara Banki. Fodder is becoming scarce and is dear in many places. Prices are very high and generally rising."

A private letter received yesterday from an old friend in Lucknow says:

"We are just entering on a famine here. The very cheapest rice is 2 annas a seer (equivalent to 2 cents a pound—three times its regular price), and already some are dying. We are beginning to give out help, and as a test to keep out the professional beggars we have started a surki yard. The way a professional beggar won't break surki is a caution. But when they stick to it we give food or wages, as we think best. Poor people, who only earn 5 to 6 rupees ($1.50 to $1.80), are suffering. That amount will hardly keep the head of the family in food. We shall try to buy rice cheaply in Calcutta, ship it in, and sell it to our own people (native Christians) at cost. The rascally grain dealers (all Brahmans) have cornered all the grain, and when the Government tries to force down the price they simply shut up shop. Cholera is very bad, and now that the black plague has broken out at Bombay we feel that we are drinking the dregs of calamity."

The heartless grain dealers make huge profits out of this hunger of India's millions. Selfishness in its most cruel and fiendish phase never eclipsed that of the calculating grain dealer of India in famine times. The conquerors of the empire are the personification of mercy and justice compared to these, of one flesh and blood, believers in the same gods, with the multitudes who slowly starve to death before their shops for lack of money to buy the grain which the dealer bought cheap and sells dear.

The Government authorities provide relief for the hunger-bitten people in three ways: First, by shipping in rice from other districts and selling it to all who can buy, usually below cost; in the second place, "relief works" are opened in the afflicted districts. Irrigation canals, roads, railroads, &c., are built by the labor of famine-stricken men, who are paid in money or grain, as they choose. These relief works confer a double benefit on the country. They give help to the needy and provide better roads, better irrigation channels, and generally further the interests of commerce and agriculture. In this improvement all share when times of plenty return. The Government also supplies, gratuitously, help or food, medicine and medical services to those too far gone with want or its attendant diseases to work.

Practically speaking, all the ordinary functions of government are in abeyance at such a time, while the energies of public officers are directed to the work of feeding the starving and caring for the sick. All this help is English. Natives have little pity for one another.

Now the black death has added a new horror to the situation. Its appearance in Bombay puzzles the city health officer, the sanitary board and the citizens. So far as can be ascertained, it has not come from Hong Kong, where it has raged so fatally since 1892. Suspicion rests upon Mecca. Pilgrims to and from that holiest and filthiest spot on the planet make Bombay their port of arrival and departure, and it may be that this awful scourge comes from Arabia instead of from China. In any case, it has come, and parts of the great city of Bombay are full of the cries of mourners.

The sanitary authorities are bending all their energies to rid the city of filth. All who voice public opinion unite in advocating drastic sanitary reforms, regardless of the expense involved. A centrifugal pump has been placed on one of the main docks along the front of the bay, and every night pumping is carried on, and sea water mixed with carbolic acid as it is discharged from the pump is poured through the drains. The drains of houses where the plague is raging or threatening are being whitewashed. The flushing of all pipe sewers is being undertaken by means of large flushing tanks, holding 600 gallons each of phenyl solution.

Dr. Weir, the Bombay health officer, points out that the drainage is wholly insufficient.

"There has been an enormous increase of the water supply since 1892," he says, "from 16,500,000 gallons to 29,000,000 gallons or more daily, and very little increase in the number of drains. The island is flooded or irrigated with water, and unless drains are constructed to take away all the water that comes into the city the life of a healthy population will not be possible; what has been seen in countries of marsh and wet, the poisoning of life from malarial fevers, will be seen here. It is not possible to look to the future except with anxiety."

In spite of all precautions the plague broke out in five new places in the city, and the percentage of fatal cases was daily rising when the mail left. Thousands of inhabitants fled, panic-stricken, to their native villages or down the seacoast. Thousands of devout Hindoos make daily pilgrimages to shrines and to the seashore, at which latter place they solemnly cast in their cocoanut offerings to the gods of the great deep.

With the famine and cholera to cut a swath before it, the grim reaper of which we first hear from Procopius, and, with the dread ravages of which England and the continent, as well as Africa and Asia, have learned to their undoing, may pile up a ghastly score of victims.

In the year 1348 100,000 died of the same disease in Venice, leaving hardly enough inhabitants to carry on any of the many lines of Venetian industry. The same year 60,000 died of the plague in Florence, a third of the population of England perished, and the country did not make up for the victims of this unconquerable plague until the latter part of the reign of Elizabeth. In 1720 a ship from the Levant brought the plague to Marseilles, and 60,000 of the inhabitants fell before it. Ten years later the same disease almost depopulated Moscow, while toward the end of the eighteenth century Egypt and Morocco lost more than 1,000,000 inhabitants.

It was this same plague that was mentioned in Boccaccio's "Decameron." To the readers of English fiction it will be recognized as the disease which filled the loathsome charnel houses of Florence, as described in Lytton's "Rienzi."

Sanitary officials at all our seaports should leave open no door of opportunity through which this terrible scourge may enter our American cities.

PROPHECY OF THE PLAYING CARD.

An Experience of a Man Who Looked Like Hamlet the Day Before Election.

At a table in a Raines hotel on Third avenue, on the day after election, sat four men eating imaginary sandwiches and drinking real beer. One of the drinkers was an old man with a thoughtful and Hamlet-like cast of countenance and a far-away look that seemed to scorn his present surroundings (with the single exception of the beer) and to peek and peer into the future and endeavor to look into the seeds of time and tell which grain would grow and which would not.

The man who sat next to the philosopher was distinguished by nothing but a very large wart on a still larger nose. Drinker No. Three wore a shirt which really ought to have been in the laundry; this fact was proclaimed by the shirt itself, in black on white. The fourth man had drunk too much beer and could bear no more.

"Can any gentleman here define the word superstition?" said the Hamlet man.

No one replied, except the man with the objectionable shirt, who said that superstition was nonsense.

"Dam'f it is," said the drunken man; "I b'lieve'n shuperstition—shupsthishus m'self."

"I'm hanged if I am," said the proprietor of the wart.

"Well, anyhow, I'll tell you a strange story," said Hamlet. "On the day before the election I was walking along Fifty-first street, near Third avenue, when I saw, lying on the sidewalk, a playing card, turned face downward. It seemed to me to be as plain as the wart on Snowden's nose."

"You let my wart alone," said Snowden.

"As plain as the wart on Snowden's nose," continued Hamlet, "that here was a chance for me to peep through the blanket of the dark. I said to myself, 'I will pick up this card. If it be a jack of diamonds it will show that McKinley will win; if a jack of hearts, then Bryan will be the man.' I picked up the card, turned it over, looked at it, and, gentlemen, you may believe me or not believe me, but, as Heaven is my witness, that card was the four of spades."

"You-rah liar," said the drunken man.

JAPAN WANTS THE EARTH.

HAWAII, BRAZIL, SIAM, THE PHILIPPINES, WITHIN HER SPHERE.

Ambitious Designs of the Japanese Jingoes—"To Dominate Everywhere the White Inhabitants and to Supplant the Blacks."

From the London Times.

As Count Okuma, the new Minister for Foreign Affairs in Japan, is energetically supported by the strong foreign-policy party, and is to some extent under their influence it is important to know what the views and aims of this party are. These are set forth very clearly by the *Yumuri Shinbun* in two recent articles, of which the following is a summary:

The policy of the outgoing ministry in their conduct of foreign affairs has been a temporizing one. Whenever rudely awakened from their inanition to face an emergency they have been seized with panic and, true to their motto of "Anything for peace and quiet," have sought an issue from the difficulty in concession and compromise. In place of this negative, unenterprising policy the Japanese people require of the incoming Cabinet an active, independent, go-ahead policy, which shall give Japan a position of vantage among the nations. To those who say that the perfection of our military organization must precede the adoption of such an attitude we reply that diplomacy cannot be said to exist if its only weapon is war, and that a large field is open for the exercise of diplomatic skill before an appeal need be made to arms.

The failure of the retiring Government was due to just this want of diplomatic manœuvre, to their lack of initiative and of expedient in covering a retreat. For instance, the retrocession of the Leao-tong Peninsula was assented to at once, to the great relief no less than to the great surprise of the three powers, who had feared a forcible resistance. A strong Japanese Cabinet would have procrastinated, made a show of iron resolution, attacked the weak points in their opponents' position, and, in eventually yielding, would have managed to secure an advantage of some kind to themselves. Such a refusal to acknowledge defeat is the secret of diplomacy; it was well exemplified by the Greek Government in their affairs with Turkey ten years ago, when they saved their prestige by a refusal to disarm, persevered in to the last extremity in the face of the warnings and the naval demonstrations of the great powers of Europe.

To take another instance—the affair of Feb. 11 in Seoul, when the King took refuge in the Russian Legation, nullified our benevolent intentions to foster the independence and reform the administration of Korea. We did not, as we should have done, on that occasion, by recalling our representative, breaking up the legation, and withdrawing our troops, relinquish our rights for the moment in order to await a later favorable opportunity for their recovery, as did Russia in Bulgaria; but, adopting a *laisser aller* policy, we allowed ourselves to drift with the current of circumstance from our position of influence. Our idea of entering into an understanding with Russia was merely a temporizing expedient, and in the event we lost prestige at home and abroad.

It is such cases as these which prompt us to call for a Cabinet which, by adopting an active, independent, and energetic policy in foreign affairs, may extend our national influence.

It is time to awake from our dream of stay-at-home seclusion and give reins to the bold Japanese spirit of adventure. The expansive power of the Japanese race must make itself felt eastward through North and South America and the Indies, westward through India, and southward throughout Polynesia, dominating everywhere the white inhabitants and supplanting the black races.

The making of a Greater Japan should not be limited to the piecemeal extension of our dominions. The spirit of colonization must be encouraged and emigration facilitated by the authorities at home, while abroad legations and consulates must be established at once for the protection and assistance of our colonists.

Japanese settlers have already opened trade in the groups of islands, English, Dutch, French, and German, lying between Formosa and Australia, and of late years the tide of Japanese emigration has set southward with almost irresistible force. The islands immediately adjacent to Formosa, viz., the Philippine and Caroline groups, belong to Spain, and there is danger of our spheres of influence clashing. To guard against this, an agreement delimiting our respective territories was drawn up after the war, but the south-going tide of Japanese emigration is not to be stayed by the power of man, and contact and complications between Japanese and Spaniards are inevitable. The murder of a Japanese by a native in an island of the Caroline group last February is a case in point. The murderer was let off, and redress was thereupon claimed through our Minister in Paris, from the Spanish Government, but, there being no Envoy specially charged with Japanese interests in Madrid, the matter could not be cleared up and satisfactorily settled. Not only are such complications bound to occur, but, further, the Spanish authorities, mistaking our natural expansion for simple aggression, are devoting attention to military defence in the Philippines. It appears also that at the close of the war Spain was for joining the Triple Alliance, with a view to robbing us of the fruits of our victory in the south. To prevent the recurrence of such misunderstandings and to transact the diplomatic business arising from the proximity of our possessions it is most necessary that a Minister Plenipotentiary should be appointed to Madrid.

Hawaii is the country of the highest importance and brightest prospects for our emigrants, who already number more than 20,000 of the total population of 70,000. Every year some 2,000 Japanese emigrants settle in Hawaii, and of those who go, the majority stay after the expiration of their contracts. The growth of our influence has naturally made us an object of jealousy to foreign countries such as America, Portugal, and England, and there are persons in the present Hawaiian Government who favor the idea of a union with the United States. In view of these facts and of our great and growing interests in the country, Japan can no longer be content to be represented merely by a Consul-General, and the appointment of a Minister resident is desirable.

Brazil is a country of great natural fertility and much potential wealth, and a scheme has been set on foot to promote the emigration thither of 20,000 laborers. To this end the Government recently concluded a commercial treaty with Brazil, and the ratifications will shortly be exchanged. The future is full of hope, and it is incumbent upon the new Cabinet to see that a Minister Resident, at least (instead of merely a consular agent), is appointed, following the example set by Italy in attaching importance to the country and transferring thither a diplomat of M. de Martino's calibre.

Emigration to Siam is on the increase. When Viscount Aoki was Foreign Minister in 1889 proposals for a treaty of commerce were made, and since then there has been a great development of immigration. The so-called Japan-Siam Society has been started in Bangkok, and a company of the same name has been formed in Tokio to promote emigration to, and trade with, Siam. In the last session of the Diet a resolution was carried urging the establishment of a Japanese consulate at Bangkok. The outgoing Ministry made overtures to the Siamese Government for the conclusion of a treaty, and a Siamese Plenipotentiary is shortly expected to visit Japan to open negotiations. There is at the present time severe competition between England and France in Siam, and the Russian adventurer Skobeleff has obtained much influence at Court. We hope that the new Cabinet will hasten the arrival of the Envoy and, having without delay concluded a treaty, establish a legation and consulate at Bangkok, on the one hand to transact the business of the post, and on the other to watch the relative influence of England and France in that kingdom.

A BOBCAT'S BOARDING HOUSE.

Maine Farmers Sorry Now for the Things They Said About Some Fishermen.

NORTH SEARSPORT, Me., Nov. 12.—During the heavy rain of Sunday afternoon more than one thousand tons of granite ledge in the pasture of Clarke M. Marden, comprising a good part of a high bluff which overhung Swan Lake, was loosened and fell with a great splash into the lake, making great waves that swept up among the woods of the opposite shore and carried away several cords of wood cut and piled up near the bank. The spur broke off in an old seam that was rusty and worn with water channels. Down some ten feet from the top the seam extended into a wide pocket walled with rusty quartz crystals and filled with hay and fine grasses that had evidently been carried there by some wild animal. Attached to the crystals in exposed places were tufts and wads of hair from some large animal, which the old residents said was a bobcat.

Feathers of geese and hens as well as wool from sheep, were found scattered about. A small heap of bones containing the shank bones and hoofs of sheep was discovered in the pocket, indicating that the animal had been boarding at the expense of the farmers. Then the residents remembered they had lost sheep and poultry at sundry times. They also had a recollection of casting suspicions upon a party of fishermen who camped here last summer, and they were sorry they had talked so much. As an atonement for what they had said they organized a hunting party to follow the bobcat to his death. Late Sunday evening Harry Black shot a big bobcat near Bog Hill, and after that the people felt better.