

are common to one or both of the other tribes. This is caused by persons leaving their own tribe to live with another one, but instead of uniting with some gens of the adopted tribe, they have preserved the name of their ancestral gens for themselves and their descendants. It is probable that the names of the gentes are very ancient. The Blood gentes "Many horses" and "Many children" are neither of them thirty years old. The Piegans gens "Stiff-tops" is also a comparatively new name. Each gens is governed by a chief chosen by the ceremony of the "Medicine Lodge" which will be described in another place. However, I can hardly be said that chiefs govern the gentes. Matters of importance are attended to by the chiefs, medicine men and married warriors of the tribe. A council is called "they-all-talk," a tribal and a gentle council house "in-the-middle-talk-to-each-other-house."

The Blackfeet have very few laws for the social and military government of the people. The law regarding murder is, that the murderer must be killed by some of the male relatives of the murdered; if the murderer escapes, some one of his male relatives may be killed in his place. If a married man, who has no near relatives, dies, the widows may demand some warrior of his gens to avenge him. Thus, in the story of "Red Old Man," which is as follows: "And some widows, whose husband had been killed by the Crows, painted their faces black and came to the lodge of Red Old Man, saying, 'Our husband is dead, we have no one to avenge him, and the women cried. Now Red Old Man's heart was good. He could not bear to hear the women crying, and he took his weapons and rushed out singing, 'Go, no! I will avenge his death.' A woman guilty of adultery was punished for the first offense by cutting off the end of her nose; for the second offense she was killed. For lesser crimes there is no punishment save the contempt and jeers of the camp, which are dreaded as much as the penalty of death. A coward, one who will not go on war expeditions, is made to wear the dress of a woman, and is not allowed to braid his hair. His weapons are smashed, and he leads a miserable life, begging from lodge to lodge and singing with the dogs.

As the members of a gens are all relatives, however remote, men are prohibited from marrying within it, they must seek wives from some other gens. Polygamy is practiced. All the younger sisters of a man's wife are his potential wives. If he does not choose to marry them, he must be consulted regarding their disposal to other men. There is no marriage ceremony. A man having found a woman he thinks will suit him, sends one of his friends to her parents' lodge, when, in a roundabout way, he is praised for his valor, good heart, etc.

After an interval of a few days the friend is again sent to make a formal demand for the woman. The parents of the woman then call a family council to discuss the advisability of letting the young man have her. Often a price is set—a number of horses, valuable furs, etc. If within his means, the young man pays it, whereupon the bride is escorted by some female friend to his lodge, where she immediately enters upon her duties as if she had already been accustomed to them.

If a man die his widows may become the wives of his eldest brother. However, if he does not choose to marry them, they are at liberty to marry any one else. If a man wish to divorce his wife, he accomplishes it by taking back the price he paid for her. The woman is then at liberty to marry again. The widows of a man, who dies, are called "sits-beside-his-wife," she is invested with authority over all the other wives, and does little but direct the work of the other wives and attend to her husband's wants. Her place in the lodge is on the right side of her husband's seat. She enjoys the great privilege of being allowed—to a certain extent—to participate in the conversation of the men, and often, at informal gatherings, take a whiff out of the pipe as it is being smoked.

Female children are generally named by their mothers or some female relative. Male children by their fathers or some male relative or friend. Female can always be distinguished from male names by the terminations, *tsi*: Antelope-woman, Sitting-up-in-the-air-woman, Little elk-antelope-woman, etc. As soon as a young man has taken part in some brave deed he is allowed to choose a new name for himself by which he may be known for the rest of his life. However, names of personal property, such as horses, robes, as are his bows and arrows or his shield, and are often bought and sold, large prices sometimes being paid for them. Favorite men's names are White Shield, Bear Chief, Wonderful Sun, Running Wolf, Yellow Wolf, Wolf-coming-up-the-hill, Young Bull, Water Bull, etc. A very singular custom exists among the Blackfeet, that a man must not, under any circumstances, meet or speak to his mother-in-law, and if this rule be broken, the mother-in-law may exact a heavy payment from the offender. The writer has been unable to learn any special reason for this. Some say that the sun made the law, others that it is improper for a man to meet his mother-in-law for fear she might hear him say something impolite.

[TO BE CONTINUED.]

A BIRD OF NO FEATHER.

A FREQUENT contributor to the FOREST AND STREAM relates a good story about his endeavors to be agreeable to a distinguished nobleman, who, some four years ago, visited that portion of America where our friend lives, and is there known as the Commodore.

The nobleman in question, who, by the by, is very learned and a litterateur of high order, became interested in the fish and fishing in the neighborhood of an ancient city. Our friend having described in such glowing terms the beautiful lakes and the fine speckled trout inhabiting them, the nobleman expressed a desire to pay them a visit. Our friend volunteered his services, boat, rods, flies and general outfit, and made arrangements to receive him with his son, the Marquis, and two daughters, Ladies M. and E.

On the appointed day, a beautiful June afternoon, the party drove out to a renowned lake about twelve miles from the city, and were soon comfortably placed in the fishing boat whithering the lake, which was as calm and smooth as a mirror, but not a trout would rise to corroborate our friend's description of their beauty. Mortification and disappointment were depicted on his broad countenance at their want

of success, and the host then took the forward part of the boat and put into play all the art years of practice had perfected him in, but not a rise could be got. Turning around to see how his guests were amusing themselves, he found them dissecting a wild flower picked up on the road, and comparing it with other specimens of the scientific name in Europe; the nobleman mentioned the scientific name, and asked if other members of the same family were to be found in America. This question was too much for our friend, who, keenly feeling his want of knowledge of botany, had to declare his ignorance of the subject. A dead silence followed for some time till the nobleman, casting his eye upon the adjacent rocks, then asked if he could tell him of what formation the rocks of another several of ignorance on the subject of geology had to be offered by our friend, who felt that he was entirely the wrong man to entertain such scientific strangers, but being bent on establishing a claim to knowledge of some sort, turning to the Duke he told him that in America few men devoted much time to scientific studies.

"Why is that?" said the nobleman.

"Because," answered our friend, "I don't pay, in this country one's earnings at his leisure are of no consequence for money-making, and the scientific man has a poor chance in the race for wealth. Yet," he added, "Your Grace must not form an estimate of our people's knowledge of many refined studies by my ignorance of botany and geology. We all try to cultivate a taste for some of the arts and sciences. Some of us are musical; others sketch, paint, or do something which can be made useful as well as agreeable. As far as I am personally concerned, being fond of shooting and fishing, I have acquired a familiarity with our birds and fishes, and my knowledge of ornithology, or pisciculture, I shall be happy to place at your Grace's disposal."

"Thanks," answered the nobleman, "I am well acquainted with your American birds, and can tell the name of many of them by their song. For instance, the bird we now hear is the robin"—and so it was—which for the moment fully established the Duke's knowledge of that bird at least. A little further on another songster attracted his Grace's attention. He said to our friend:

"Of course you know that bird?"

"Oh, yes," he answered, "very well indeed. They are very plentiful here about, and in fact everywhere."

"I also know him," said his Grace. "That is the—the—well, I have got his name on the end of my tongue; how do I call it?"

"No, though," replied our friend, "I do not know, but in satisfaction, the Duke is beautifully cornered by himself, and with a most respectful bow, he answered: "That bird, your Grace, is called an Irish nightingale, but it is really a bird of another feather, or rather no feather at all, it is a frog." Here our friend looked at his distinguished guests to see the effect of his wit. He met a stolid stare of the most incredulous kind, and the nobleman said he was mistaken. That the bird was well known by him, but its name for the moment forgotten.

Our friend was too modest to dispute with a live Duke, and merely answered that the object in question was near at hand, and ordered the man to paddle on. The party soon came to a dead tree lying partly submerged; a small frog was seen sitting on the end of it, which gave one chirp and made one dive in the lake. His Grace looked a little red in the face and said, "It does appear to be a frog after all." With another bow, but not so low as the first, our friend smilingly remarked that he was happy that his Grace would not leave America with the poor impression he might have formed of some of its people's scientific knowledge by his own display of ignorance of botany and geology; and he now relates this story in evidence of his success on a very trying occasion, to show that he knew something of natural history, that mistakes could occur even in the best families and with most learned people.

Natural History.

LIFE AT THE BOTTOM OF THE SEA.

IN connection with his inquiries into the food fisheries and fishes of the coast of America the United States Fish Commission has carried on important scientific investigations. While trawls are being set, for the purpose of inquiring into the abundance of fishes in certain localities, and for finding new fishing grounds, with but little additional expense to the Commission, extensive dredging operations are carried out, bringing up immense numbers and kinds of animals never seen before by the human eye. Not only are these animals of important value in the study of the character of the food of bottom fishes, but they are also of immense scientific value, since many of them present curious types of structure not found in animals inhabiting the shallow waters, and often unknown, except from fossil types supposed to be long since extinct. It is a curious fact that many groups of animals, a few years ago thought to be represented only by fossil types, have recently been found inhabiting the deep seas in places in great numbers, and it is reasonable to suppose that such groups as the Trilobites may sometimes be found upon the ocean bottom. The Crinoids, so widely distributed and so numerous throughout the fossiliferous rocks, but, a short time ago, placed upon the extinct list, have been found very abundantly and in considerable variety in certain regions. Whereas, a few years ago it was asserted that there was not a single living true Crinoid, we have to-day no less than fifteen species embracing several genera, from the North Atlantic coast. When the whole ocean bottom is explored as thoroughly as certain regions of the North Atlantic, who can tell what curious forms may not be found?

About twenty-five years ago it was believed that no life existed or could exist below a few hundred fathoms; yet now, from off the coast of New England alone, we have over a thousand species, and every year at least fifty new species are added. No life is known that shows how ocean bottom is explored as thoroughly as certain regions of the North Atlantic, who can tell what curious forms may not be found? About twenty-five years ago it was believed that no life existed or could exist below a few hundred fathoms; yet now, from off the coast of New England alone, we have over a thousand species, and every year at least fifty new species are added. No life is known that shows how ocean bottom is explored as thoroughly as certain regions of the North Atlantic, who can tell what curious forms may not be found? About twenty-five years ago it was believed that no life existed or could exist below a few hundred fathoms; yet now, from off the coast of New England alone, we have over a thousand species, and every year at least fifty new species are added. No life is known that shows how ocean bottom is explored as thoroughly as certain regions of the North Atlantic, who can tell what curious forms may not be found?

animals with eyes must depend upon phosphorescence for light, and, furthermore, that phosphorescence must be very common and very brilliant. Certain corals, and a few other animals, retain their phosphorescence even after being brought to the surface. Although animals are very abundant in these great depths, not a vestige of vegetable life has ever been found in any deep sea dredgings. The reason for this is of course that sunlight is essential for the nourishment and growth of plants, which is not at all the case with animals.

The *Bathypus* of Huxley, which was supposed to be the lowest form of life, in fact the primary starting point of all life, hardly an animal, yet not a vegetable, merely capable of motion and taking food, has been proved to be nothing but a mass of organic and inorganic matter, covering the bottom of the ocean throughout the world. *Foraminifera*, the lowest forms of life found upon the ocean bottom, allied to the *Amoeba*, so common in fresh water ponds and on damp leaves and pieces of bark, and, at the same time, to the animals composing the chalk deposit of England, form a layer upon the bottom, that depth of which has never been ascertained. This foraminiferous deposit, commonly called "blue-green ooze," is composed of many species of animals, belonging to the classes of Protozoa, and *Foraminifera* (*Proboscis*), some of which may live upon the surface of the water and drop to the bottom after death, but the most, probably, living and dying upon the bottom. These animals, composed of only one cell, secrete shells of carbonate of lime, microscopic in size, but when looked at through the microscope, presenting beautiful colors and fantastic shapes. Some are as smooth and glossy as the best glazed china ware, showing beautiful concentric rings of different hues, while others are rough and lobed in form, and in some which defies description. Still others have the most beautiful shade of pink, and some present in color a most delicate chocolate brown. We find them tubular, coiled, cross-shaped, spherical, oval, and in masses which look as though the animal started with a spherical form, and, wishing more room, pushed out a portion of the side into a hemispherical or cylindrical form, and continued to enlarge, when more room was needed, until a mass of lobes upon lobes is the result. Perhaps the most curious form is one which has the general shape of a Nautilus, and upon making a horizontal section it is found to be composed of chambers, too. Although these animals are usually not larger than the head of a pin, that symmetry exists which is always found in the living and the natural, but seldom in the accidental. *Foraminifera* are everywhere and continued to be everywhere even in these cold waters, the lowest form of animal life. In no case do we find one of them having the irregular outline which is to be seen in grains of sand, chipped off from larger rocks and worn into accidental shapes. Some pre-established law causes these regular forms; in fact, causes them to produce like regular forms, differing in no respect from their parents.

In these *Foraminifera* communication with the outer world is obtained by means of holes in the shell, out of which the pseudopods are projected. By means of these little feet-like projections motion is obtained and food procured. But little is known of the life-history and habits of these animals, coming, as they do, from such depths, and not being adapted to life upon the surface. The chalk cliffs of England were formed by similar animals, living in the cretaceous period, but probably inhabiting shallower waters than the modern *Foraminifera*. In many places the mud and shells is mixed with fine blue mud. By placing the mud in a tub of water and stirring the contents, then allowing the heavier portion to sink and pouring the top water off, and repeating this a few times, an almost perfectly pure deposit of *Foraminifera* is formed in the bottom of the tub.

Covering this mixture of mud and shells, usually in great abundance, often with extreme variety of forms, sometimes having both variety and abundance, but never entirely barren of life, we find many forms, representing nearly all the groups of the animal kingdom, except the higher vertebrates and insects proper. Although the stony, many-poled coral is not at all represented upon the bottom, still we find many forms of the *Corporalia* or soft corals, as well as the single polyp stony coral. The soft corals are represented in extreme variety and by remarkable and curious forms. *Plysinia*, *Antipathes*, the bush coral, *Cladophora*, and *Cladophora* coral, both first found on this side of the Atlantic, and presented to the Fish Commission by the Gloucester fisherman and this summer obtained by the Commission itself, are remarkable for their great size and beautiful color, the former being a very delicate pink, the latter, a pink bordering upon the red. Specimens of the tree coral four feet in length, have recently been found more branches, while we have had one specimen of the latter, which has been found in a natural condition, would have undoubtedly been ten or fifteen feet high, and nearly that number of feet in width. The animals forming this colony produce in unison a rather tough but spongy mass, branching and gradually growing in bulk. The polyps can contract and withdraw into the mass of the stem, but are fixed permanently in one place. In the case of the bush coral a hard silicious central axis is secreted in each branch, and the polyps live in the small cavities attached by their tentacles to the axis which they secrete. When the polyps are rubbed off a hard stony is left, which could easily be mistaken for a petrified branch of a tree. In both cases the whole colony is attached to a rock. Upon the stem large bangles often two inches in diameter, resembling rock barucles, excepting size, frequently make their homes.

In a few places rocks are found upon the floor of the ocean. These are usually found in places where they might have been carried by ice in comparatively recent times, but in a few places we have taken large conglomerations of clay, containing fossils of animals at present inhabiting these localities, thus proving that they must have been formed in comparatively recent times. In places where rocks are found, such animals as must of necessity have some solid base to build upon, as sponges and the like, exist in abundance. But the sponges and other forms are so much frequently met with, sponges are almost entirely unknown.

Here are noticed the devices which nature is continually adopting, to adapt herself to circumstances. A free swimming polyp just budded from a mother colony, being accidentally transported from stony grounds to a softer bottom, by force of instinct, at a certain period searches around for some hard substance upon which to fix itself and start a new colony; but failing to find a substantial base, it is obliged to use the soft mud for a base, and in this way a group of *Gorgonias* is grown, but in doing so will become top-heavy and tip over unless something is done. Buds from this have the same experience, and gradually, after many years, a membrane grows down at the same time that the colony grows

up. In the particular case in mind, a circular membrane, hollow within, and open at the lower end, is produced downward as the colony grows. After becoming an inch or more long, the open end closes, thus enveloping a mass of mud and having the shape of a bulb. The bulb is attached to the facter by a short stem of fixation in these soft regions. The *Pennatulæ*, or sea pens, beautiful clusters of bright red and purple polyps, upon a straight stem, the base of which is slightly bulb-shaped, but tapering gradually to the end, receive their name from the fact that the polyps are all on one side; and on account of this, together with the pointed end, the resemblance to a quill pen is nearly perfect. The most peculiar and interesting of this group of Radiates is that which bears the form of Barnacles, the *Caprellidæ*, so named on their resemblance to the umbelliferous flower. In the present case there is a stem, often two feet in length, fastened in the mud by means of an elongated bulb, but bearing upon the other end a peculiar cluster of animals, which as they gracefully bend over, have an almost perfect resemblance to certain umbelliferous flowers. The allied animals, the so-called sea anemones, are represented by many forms, often large and always beautiful in color.

Hydræ are a form which possess a silicious sand-like substance in the body walls, after the free swimming stage, attach itself to a shell inhabited by a hermit crab. In growing and dividing, quite a colony is formed, which gradually envelops the whole shell excepting the entrance. The shell is finally dissolved and the hermit transports the anemone through the water from place to place. But the crab in return is furnished with a comfortable transportable house, which grows at about the same rate that the hermit grows, and thus an accommodating house.

Starfishes are represented in all varieties, from the five-armed species to those with fifteen arms, and from the nearly pentagonal forms to those with a mere disk, with five narrow arms branching from it. Among the sea urchins, perhaps the oddest are those forms which have no hard shells, but are soft. Besides these are some with very thin and delicate shells and others with many long and sharp spines. One of the most curious of the starfishes stands around the sieve, in the full glare of the electric light, were anxiously waiting for the bag of the dredge to be untied, and the contents dropped into the sieve. At last the mass of mud and animal life came tumbling out, and conspicuous among the objects were peculiar white forms one foot long, one-half foot wide and two inches thick. Every one was puzzled. One suggested that they might be Planarian worms, others, that they were Holothurians, and still others, that they were some of the species of the group of animals intermediate between two of the above classes, and of which these were the first specimens. After a few moments of such suggestions it was determined to make a dissection of one. Immediately upon revealing the internal organs the question was settled, for there, before the anxious crowd lay the peculiar organs which belong to Echinoderms. Upon arriving home and consulting books we found that several similar species of Holothurians had been described from the Challenger Expedition. This, however, proved to be a somewhat different species and received the scientific name *Bombardites japonica*. But it was not destined to escape so easily, for the sailors applied various names, such as lump of pork, loaf of bread, and animated boxing gloves. The creature was pure white, and although of the great size mentioned above, still the color of the animal was not white, standing around the center, the rest being quite superfluous. Later in the cruise another peculiar Holothurian was dredged and was christened by sailors old boat. It bore quite a resemblance to an unbleached luo sho. The scientific name *Euphoroides coronata*, was given on account of the horn-like protuberances of flesh on the upper surface.

In places shells are extremely abundant and are often found in enormous numbers. One of the most peculiar fact that the deep-sea shells are usually nearly related to shallow water and shore forms, while in other groups of animals the case is quite the reverse. It is to be borne in mind, that the shells proper or *Mollusca* bear no resemblance to the shelly *Terebrantifera*, the former being quite high in the animal scale, while the latter are the lowest group known. Our most beautiful deep-water shell *Calliostoma hutchinsoni*, is a form which is confined to a narrow portion near the center, the rest being quite superfluous. Later in the cruise another peculiar Holothurian was dredged and was christened by sailors old boat. It bore quite a resemblance to an unbleached luo sho. The scientific name *Euphoroides coronata*, was given on account of the horn-like protuberances of flesh on the upper surface.

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Squid and Octopi are quite frequently taken, and are represented by many curious forms. Amelids, the group of worms proper, are not represented by any remarkable forms, being for the most part rather small, and often represented by similar forms in shallow water, and further north. It is a well known and curious fact that many animals, which are found in from 100 to 500 fathoms south of New England, are often common species in the shallower waters, and even on the shores, on the northern coast of Eastern North America. And, furthermore, the fauna on the bottom of the Mediterranean Sea, and off the coast of Europe, is in many respects identical with the fauna on the bottom off our coast. Besides this, the fossil rocks of Italy contain many species which are at present living upon the ocean bottom. But to return to the Amelids. The only really curious one is the species called *Hydrobia arctica*, which secretes a circular tube, open at both ends, which, in structure, resembles the quill of a bird's feather. In fact, it was actually made to serve the purpose of a pen. One of the party went so far as to clean out one and fit it into his pipe, to be used as a stem. When last night he was sitting at his pipe through a worm's tube taken from the bottom in 500 fathoms.

In places shrimp are so abundant upon the bottom that bushes are brought up at each haul. In such cases advantage is taken of the quantity, and the mess is treated to shrimp cooked in various ways. One species of shrimp was taken in 2,300 fathoms, which measures a foot in length, and a species similar to the sand flea, nearly three inches long, was found quite abundantly. By far the most interesting animals which have yet been taken are the Echinogonids, or sea spiders. It is not yet determined just where in the animal kingdom to place them, for they have affinities to the crustaceans, spiders, and also to the group which includes the grasshopper long-legs. One specimen taken this summer measured, when stretched out upon a table, over two feet from the end of one leg to the end of the other on the opposite side. It is not without some astonishment that we find that the legs are not as long as the body, but are only about one inch long. In fact, its body is so small that a branch of the stomach has to be extended into each of the eight legs, in order to make it large enough to digest the food required for the support of the legs, for these are about all that there are

to the animal. Food is sucked in through a rather long, simple proboscis.

Deep-sea fish were represented by many new species, and some extraordinary forms. One, *Photichthys argentea*, will probably form the basis of a new order. It has a remarkable long mouth, occupying a great deal more than half the body. The skull is very primitive, and the whole animal is a curious case of extraordinary development. One fish was taken, in which all traces of eyes were apparently wanting.

At the surface, two or three hundred miles from land, animal life is extremely abundant. Cuttlefish swim around and are chased by swordfish, sharks and dolphins. Another Curlew's chicken about fifty in great numbers, attracted by the refuse thrown aboard, which they hover over and, apparently, greedily devour. Notwithstanding the amount of food thrown away, still the stomachs of these birds are usually entirely empty. In the warm waters of the Gulf Stream, by dragging a very fine net along the surface, millions of minute animals can be obtained in a very short time. Attached to pieces of timber and floating seaweed, the stalked, or goose, lamellidives in great number. Good sized crabs and shrimp also seek refuge among the seaweed. All these new and wonderful things have been discovered and studied by the Fish Commission, under the excellent management of Prof. Baird, in addition to, and without interfering with the regular works of exploring the fishing grounds and studying the movements of the food fishes of Eastern North America.

R. S. TARR.

DISCOVERIES IN ALASKA.

CAPT. M. S. HEALY, of the United States Revenue Marine steamship Corwin, recently submitted to the Treasury Department an interesting report of discoveries made in Alaska during the past summer. He says:

Being desirous of ascertaining the exact locality and extent of a large river reported by the natives to debouch in Hotham Inlet, I availed myself of Ensign G. M. Stoney's (United States Navy) better knowledge of surveying and his desire to make such examination, with a view to ulterior explorations should the result of the preliminary expedition warrant the same.

I placed the dingy, with two men armed and equipped with ten days' rations, under his command, and landed him at Hotham Inlet July 23, with instructions to report on board at the expiration of ten days.

The result of his expedition, considering the limited means and time, is highly gratifying and well worth the attention of the Government. He reports that, leaving the native village on Hotham Inlet under the guidance of a native from the interior and well acquainted on the river, he made for the river marked on the chart. Arriving there, he found it to be small and very shallow—not worth exploring. Thence he proceeded some twenty-three miles along the northeastern shore of Hotham Inlet. Here he struck the mouth of another river of considerable size, which the native said was one of the outlets of a larger river. Ascending this branch in a southeasterly direction for two days, he struck the main stream, which proves to be a river fully three-quarters of a mile in width, flowing nowhere less than two and a half fathoms of water, deepening at times to seven fathoms. He ascended the river a distance of fifty miles from its mouth.

The banks generally were steep and thickly timbered with birch, alder and spruce, some of the trees attaining a height of forty feet, with twelve inches diameter at the base. Back from the river banks the undergrowth formed an impassable jungle, particularly where the banks were low. The current was strong, at the landing reaching the rate of two knots per hour. The natives reported that the river held its depth of not less than two fathoms and its width of half a mile for not less than three hundred miles beyond where Mr. Stoney turned back. It was further stated by the natives that by making a small portage near the head of this river they could reach another stream flowing northward into the Polar Sea. Mr. Stoney, having gone as far as time permitted, retraced his steps to the mouth of the main stream, and thence to other branches, forming the delta on the north side of Hotham Inlet.

Everywhere the natives were kind, harmless and hospitable, many of them evidently having never seen a white man before. The heat was intense, vegetation rank and the natives scantily clad.

Captain Healy also says:

This far on our cruise nothing has been seen to show that either liquor or breach-loading arms have been landed on the American side by traders or others, while quite the reverse is the case on the Siberian shores.

Captain Healy also submits a report by Lieutenant W. E. Reynolds, who hastily explored the large lagoon that lies back from the beach south of Cape Seppings. The lagoon has an average width of about two miles, though the flats on the eastern side are exposed in many places at low tide. Striking right across from the mouth of the lagoon, the explorers found an entrance to, a small river up which they proceeded about five miles, when the current became so strong that they could not stem it without using the oars. Owing to their limited time they were unable to follow the stream but two miles further. Tracks of foxes and deer were found to be numerous.

Lieutenant Reynolds concludes his report by saying that were it not for the ice which bars the entrance, the lagoon would furnish an excellent harbor for small ships such as visit the Arctic, and recommends that the lagoon be named after the steamer Corwin.

THE ADIRONACK FORESTS.—The Constitution Club of this city met last week. A committee appointed at a previous meeting presented a report. By the act of incorporation of the Adirondack Railroad, in 1863, the company was authorized to hold 1,000,000 acres of wilderness lands in addition to lands necessary for railroad purposes, and to dispose of the products of the forests and iron and other ores. The company has already come into possession of 500,000 acres, and the forests are being gradually destroyed. The report called attention to the importance of forests to the water supply of the State and to the navigation of its rivers and canals, and its crops and climate. The discussion which followed the report took the form mainly of suggestions to the committee, which was continued with power to petition the Legislature to pass a general forestry law or such other measures as the wisdom may be necessary to preserve the woodlands of the State. The club is unanimous in the conviction that the State should exercise its power to prevent the destruction of the Adirondack forests by railroad companies or by individuals.

A HOE-NOSSED SNAKE.—Westfield, N. J., Nov. 3.—I send herewith a small specimen of a snake known to New York as the New York flat-head adder, but I know under the name of "flat-head adder," and believe to be as poisonous as either the rattlesnake or moccasin, though I have never seen the snake mentioned anywhere in FOREST AND STREAM as being venomous. Some time since I caught one and placed a live toad in an ash can with it and teased the snake until he bit the toad. I watched for some time, but saw no indications of the bite taking effect. Some hours after I concluded to kill the snake, and found the toad still sitting in the same position in which I left him, and therefore concluded that the snake was not poisonous. The toad, however, proved to be stone dead, and had never moved or even kicked after being bitten. I am told that snakes of this species when tormented will flatten their bodies as well as heads, and finally bite themselves and die. What is the proper name and classification of specimen sent you? I know them to move an inch to get out of the way of man or dog. They hiss as loud as a goose when disturbed.—JOHN J. WILLIS. [The snake is the common hoe-nosed snake (*Heterodon platyrhinos*), also called flat-headed adder and puffing adder. It is a very common species, and from its appearance and actions is rather alarming to one not acquainted with it. It is not venomous, however, though generally believed to be. See Dr. Yarrow's "Notes on Reptiles," recently published in these columns.]

FLYING AGAINST BUILDINGS.—Cosumne, Cal., Nov. 8.—A note in a recent issue reminds me of an incident which happened to me some years ago, while living in Orange county, N. Y., near the New Jersey line, I was out after grouse with a friend. Above his house, at three or four hundred feet elevation, ran a high ridge, well covered with rhododendrons, among which many a house had in the course of time fallen before our guns. On this occasion a brace whirred up and one dropped to my shot. The other got away unharmed, slanting down the hill at a tremendous rate, with wings almost stationary as is their custom when under full headway down hill, only an occasional movement keeping them in the air. We could find nothing more of him and returned to the house, where we were astounded to find a black hung up a neck hung up a neck. We were told that the family had been startled by a tremendous blow on the house, and going out had found this bird lying on the steps with neck broken. At the same place on another occasion, I saw a flock of quails pursued by a hawk, three of whom flew against the barn and were killed, while I had the pleasure of killing their enemy. Shooting here is fine, quail being plenty and geese coming in by thousands. Have just come back from a hunting trip to the Sierra Nevada, during which the party brought thirty-five deer to camp.—W. L. W.

ENORMOUS FOSSIL SHARK TEETH.—MONROE, Louisiana, Nov. 9, 1883.—There was recently found in a gravel pit, on the line of the V. S. & P. Ry., two stones, one about twice the size of the other, and each having the typical shape of a shark's, or "grounded" tooth. The larger one measures thirty-four inches from extreme projection of base to point, besides several inches broken off from the point. It is nineteen inches across the base and seven inches thick at the thickest part. There were no other stones found in the pit except small gravel. These have been pronounced genuine fossil teeth by a scientific authority. The animal that owned and operated these teeth must have been the one that swallowed Jonah, or a near relation, that one of the specimens is now in the R.R. office. I enclose a rough outline sketch of the larger one.—OUACHITA. [We have no knowledge of any fossil shark's teeth having been found that are at all comparable in size with those here reported.]

"HOW TO COOK A 'POSSUM."

IN a barber shop one day last week, while several gentlemen were waiting to be shaved, the conversation turned on good things to eat. After discussing various dishes, Joe Roney, who is considered a connoisseur, and who had taken an active part in the discussion, said: "Well, boys, you can all talk about the good things to eat, but the best thing to eat, I have tasted was 'possum, hedged in with brown gravy and sweet potatoes, with sugar on them." It struck us that Joe knew what he was talking about, and we determined to investigate the good of the 'possum. We had an opportunity to do so when Mr. Walt Furrow extended an invitation soon after to go out to his plantation and assist in a genuine old-fashioned 'possum hunt, with an hour or two for squirrels thrown in. We suppose there is hardly a man in Southwestern Georgia who has not had some experience in the preparation of 'possum, and we benefit, therefore that we write these lines. Possibly the ladies may not feel particularly interested in them, but we must beg the excuse that some one will for we are full to overflow with the good of the 'possum, and we must share. On every plantation there is one or more dorkies who do the 'possum and 'coon-hunting; who can tell you to a hair's breadth where to find them. Mr. Furrow's plantation is no exception. There is a negro there named Jim that knows all about it, and what he don't know his dogs do. His dogs are his life and soul; he would rather you would steal his wife than his dogs, for he reasons that another wife he could get, but another dog as good as Rock, Jack or Pup, never. Rock is his "boss dog," and he says that the best way is heard of 'possum is to get the dog and wager it that 'possum will be treed. The first night's experience was a tame one; we got into a dry piece of woods and struck but one 'possum track, but we got that 'possum, and the next night we got every thing in a fine shape, and between 8 and 9 o'clock we started out. Down the side of the woods we went, stopping long enough to get several handfuls of good lighter, and then into the forest we went. Scarcely fifteen minutes had passed before a bark was heard, succeeded a few moments later by another and then another. A trail had been struck. The voices of the dogs grew more frequent, until at length a long continuous bay from the leader announced that the 'possum was treed. A few moments' walk brought us to the spot, but the scene was not what we had described. With bark after bark the dogs circled around, now sniffing, and trying in vain to climb the sapling. A few blows from the ax brought the tree down, and the next moment the 'possum was in the jaws of the dogs, forty feet away. He had started to run as soon as the tree fell, but the dogs ran to quickly. As soon as they had a taste of him they were satisfied. It is remarkable, but a 'possum dog will never eat a 'possum or the bones of one. The same scene was repeated twice more, varied by long tramps through swamps, fields and corn fields. The small hours of the morning had arrived when we went to bed, but we consoled ourselves with the thought of the feast we could have the next day, and such a feast it was! On a big dish in the center of the table, brown and fat, the 'possum lay, and it was the best I ever ate. The dog that looked. It was a meal fit for kings, but which anybody could have for the trouble of the hunt. It was the first 'possum we had ever ate, but if our legs hold out it will not be the last. There is nothing, there is nothing that will beat the 'possum.—AMERICA (Ga.) Herald.