

bank. Seeing a forlorn chance of getting afloat in the next hour or two, I jumped into the dinghy with the grains and poled over to the first channel through our bank. I did not have long to wait, for along came a big shark. He saw me about the time when I let drive the grains. Striking him fair in the back, he darted off, making the line hum as it went over the bow. I went down in the stern, grasping the line in both hands, having it rove through the ring in the stem. I waited for the strain; it came soon enough and at right angles to fore and aft, slewing the little boat around. We went off with a rush, making a wake like a tow boat. It was all right enough as long as he stuck to open water, but the rascal, he dodged through the channel, turned the corner and stranded me on the bar, he kept right on with the grains. This made the second pair lost.

After warping the Bessie off the bar we continued on our course for the creek, missing it by standing on too far and getting our bearings on Low Key; we about ship and finally found it by running on a mud flat at its mouth, hidden by a small mango key. The artist and I took a run up the creek to make observations and found it alive with fish and game. On passing through the creek with the Bessie we had the tide against us, which gave us plenty of exercise with the poles. We worked through to the south side of Key Largo, and stood N. E. for Captain Albury's plantation, where we received a very hearty welcome indeed. He has a large number of acres under cultivation, raising tomatoes, bananas, coconuts, pineapples, etc. This was the first and only place where I saw pineapples thriving. They can be profitably cultivated as far north as Key Biscayne Bay Keys, for profit but not further north. The land is very broken and stony, and one can step from stone to stone. The soil is remarkably fertile, the produce growing to perfection. We passed a very pleasant afternoon and evening with the family. The next morning they would insist on loading us up with an abundance of the good things from their gardens, one bunch of lady finger bananas being all our cook could carry. We had no pilot now, as we could find the bottom about as readily as he could, so we turned him into a cook without prejudice. The pineapples, ripe and just off the plants, were fine.

We were next bound for Taylor's River on the mainland, west of north from Tavernier Creek. Although the captain told us we drew too much water to reach it, we were bent on trying, so running back through the creek, with fair wind, we ran north for Taylor's River, keeping to the westward of Low and Walker Keys. After sailing along a narrow sand bar for several miles, we ran through a narrow channel about 15ft. wide and entered Barne's Sound. We found Taylor's River at sunset, after a two days' run. We passed very many game birds on the bars or wading in the shoal spots, including a great many flamingoes, curlews and plover, ducks and cranes. Here we saw our first alligators, there were lots of the bulls bellowing all night. The banks of the river are low and composed of hard yellow clay, which had the appearance from a distance of being rock. All sand and stone had disappeared, and there was nothing but the softest kind of mud on every hand. We cruised up the river for a whole day. The water was about 10ft. deep and 200yds. wide, the low banks covered with palmetto and cane brake growth, and occasionally a broad savannah dotted with islands. Probably in the wet season the whole country is under water; I saw high water marks 10ft. above the banks. It is the most forsaken and forlorn place I ever beheld. The color of the water is brown, the current sluggish and all one way, showing it to be one of the many outlets of the great everglades and lakes of southern Florida. So we left without regret, although it had at first interested us very much.

Passing along to the westward, we looked for Alahoochee River, which is a cut off, leading from Barne's Sound into White Water Bay. Following each bar and shoal we were gradually forced to the southward and then eastward, when we became convinced that Capt. Albury was right. Then to get back was the next move, which it took two more days to accomplish. From the gaff I saw two porpoises near at hand; trying a shot at them with the rifle, they headed outward and ran through a small channel that we had passed, and which proved to be the one we had passed through four days previous, so then and there we toasted the two new pilots with a will as they disappeared to the southward showing us the way to deeper water.

Again arriving at the channel through the long bar off Tavernier Creek, after an absence of several days cruising we were more than convinced that a boat drawing more than 14in. of water is not suitable for key cruising.

Our next course was southwest, back to Duck Key and then northwest to Cape Sable, passing between West Horseneck and Middle Shoal and west of Sand Key, reaching Cape Sable at sunset of second day. Part of the time we were out of sight of land with 4 to 6ft. of water; distance run, two days sailing from Indian or Channel Key to Sable forty miles. We found a harbor off a creek at Northwest Cay and had an all night drumfish serenade under the boat's bottom. Our tent in the morning was wet with the dew for the first time.

Ran into Harney's River next day. Shot two pink curlews—a beautiful bird. Saw hundreds of alligators. By shooting from the gaff they can be killed as they swim. This is a difficult thing to do from deck, for they only show their eyes and the tip of the nose above water. The ball from deck is apt to skip, when a plunging shot from aloft will kill every time. The 'gator sinks, turning his yellow belly up, and can be easily seen and picked up on one's return several hours afterward. We saw any amount of deer tracks on shore, and finding a crossing on the river we killed two in the evening of about 100lbs. each, a buck and doe. The mosquitoes after sunset are dreadful; with the hooting of the owl and the bellowing of the 'gators it keeps things pretty lively after nightfall. This is another river full to the brim of everglade water running through a perfectly flat country covered with tall grass and canebrakes, in which lurk bears, deer, wildcats, rattlesnakes and moccasins by the thousand. We see them every day and with the 'gators to keep it lively it cannot be a very nice place for a nervous person to reside in. The artist has a great fondness for bathing, which he gratifies by stripping in the dinghy towing astern, then taking a pail of water and having a shower bath. He went over backward yesterday (the maneuver being caused by a sudden jerk on the painter) into about 10ft. of water, which was alive with sharks. He lost no time in getting on board the dinghy when we cast off the line;

ordinarily he is the most deliberate man I ever saw; some might call it laziness, but he forgot his deliberation for a minute.

Running up the several rivers in passing along the coast we found a great similarity in scenery. We stopped at different favorable points on the beach, sometimes for a sketch by the artist, and again for wood for the stove. I have long since on former cruises thrown overboard the oilstove, with all its nastiness. My attention, while walking along the sandy beach hunting rare shells, was one day attracted by the wild exclamations of the artist, who as usual had lingered behind sketching a cabbage palm. Running back and looking to where he pointed I saw rising above the tough beach grass the heads of two large rattlers. Beside them lay the artist's sketch book, and to this day it has remained a mystery why he was not bitten. Keeping at a safe distance he asked me to hold them while he got the gun out of the sloop. He brought the shotgun and I gave them a barrel apiece, which finished them up in fine shape, and we soon had them stretched out on the sand alongside of tape line. One had twelve rattles and measured 6ft. 5 $\frac{1}{2}$ in., the other nine rattles and measured 6ft.; one measured 14in. in circumference; the odor from them was immense.

At the Ten Thousand Islands we entered one of the many channels, first at low tide fishing up a bag full of oysters. We cruised among the islands for two days, when after the second day it was only by close attention to the compass that we found our way out of the labyrinth of deep channels all full of brown swamp water. Some of the islands at a distance showed the foliage as white as snow, from the droppings of the birds, for here were the roosts of millions of birds of many kinds. Choccoliska and Casimba keys each contain one immense shell mound, perhaps 100ft. in diameter and 50 to 75ft. in height. There are smaller ones further up the coast. On digging into them we found several kinds of shells perhaps carried there by the Indians. These are the first elevated grounds north of Cape Sable. They are occupied by spongers. At several places in the vicinity there has been a feeble attempt at coconut and sugar-cane growing. The soil is rich enough, but the annual overflow causes very uncertain results. It is hard to remember that it is winter, with such perfect weather, enjoying every hour as we cruise along, finding plenty of harbors and a surfeit of game and fish. A full account of all our experience would fill a volume. V. W.

Natural History.

Address all communications to the Forest and Stream Pub. Co.

"OFFICIAL EXTERMINATION."

Editor Forest and Stream:

IN FOREST AND STREAM for Feb. 3 is a communication entitled "Official Extermination," and signed "C. H. H.," which severely criticises Mr. C. H. Townsend for having been instrumental in procuring for the U. S. National Museum the skins and skeletons of sixteen sea elephants. Prof. Baird is also condemned by the author for having instructed Mr. Townsend to obtain these specimens. As Mr. Townsend is by reason of absence unable to speak for himself, I take the liberty of briefly replying for him and furnishing "C. H. H." with the facts in the case.

Mr. Townsend, while in San Francisco, made arrangements with the owners of the schooner Laura to accompany that vessel on a sealing trip, for the purpose of obtaining sea elephants, a liberal offer having been made in order that the skins and skeletons of such as might be killed should be preserved for scientific purposes instead of being made into commercial hides or thrown away. This trip was unsuccessful, and Mr. Townsend returned to Washington, leaving his offer still open. On the next trip of the Laura sixteen sea elephants were killed and preserved, although owing to the unfortunate absence of Mr. Townsend the skeletons were rather roughly prepared, and reached Washington in a decidedly mixed condition.

This act of "official extermination" thus resolves itself into the fact that a price was placed on the skins and skeletons of sea elephants sufficiently large to induce the dealers to save them instead of allowing them to rot upon the beach. But for the foresight of Prof. Baird and the energy of Mr. Townsend there would be to-day hardly a specimen to show that this huge animal ever existed, and Mr. Townsend is to be congratulated on having secured for science even a few immature individuals of this, our largest pinniped. Had the critic's assumptions been correct and the "final tragedy" taken place under the eye of Mr. Townsend, it would still have been far better to have secured all the specimens possible for scientific purposes, although at the risk of exterminating the race, than to have left the survivors to the tender mercies of the seal hunters. "C. H. H." himself bemoans the fate that befell the rhytina, the dodo and great auk, and yet he equally bewails the fact that the sea elephant has been rescued from the same rapidly impending doom. For doomed this huge animal was from the moment of its discovery, both by habit and location, and its final extermination has been merely a question of time, and of very little time at that. There is no case on record where sentimental considerations or even a chance of possible future profit has spared the life of a single creature whose death would cause the immediate gain of a single dollar. "After us the deluge" seems to be the motto of the American race, and the sea elephant does but mark the path of extermination down which so many denizens of our woods and waters are being hurried. We learn from Mr. Townsend's paper how the few animals spared by the Liberty in 1884 were promptly swept out of existence by the crew of the next vessel to appear upon the scene, and it is too easy a matter to imagine how long would have been the lives of any spared by the Laura. Lower California is quite beyond the jurisdiction of the United States, but did the territory lie within our boundaries it is the merest folly to suppose that the law which is powerless to protect the seals on the Farallone Islands could do so any where else.

From the sixteen individuals secured, specimens have already been sent to the British Museum, to the Museum of Comparative Zoology, the American Museum of Natural History and the Philadelphia Academy of Science. It is

just possible that "C. H. H." would prefer that these skins should have been made into leather and their bones left to whiten on the shore, but it is to be hoped that this supposition is not correct. No one deplores the destruction of animals more than does the present writer, and yet he deems the slaughter of the sea elephants not only justifiable but commendable. F. A. L.

WASHINGTON, Feb. 20, 1887.

NAVAJO METHODS OF CURING AGUE.

BY DR. H. C. YARROW.

[Read before the Anthropological Society of Washington.]

FROM the earlier periods of historic time up to the present day, the practice of medicine has partaken largely of an occult and superstitious character, which does not, even with more advanced mental enlightenment, improve as we have reason to expect. To-day we hear among our own people of faith and prayer cures for the relief of disease, of the laying on of hands, and of the miraculous effect of certain waters, charms, relics and conjurations, and this being the present civilized status, we should with all charity be tolerant of the peculiar views held with regard to the cure of physical and mental disorders by the Indian doctor and his patient.

No one will venture to say that the earlier physicians sprang into the performance of healing functions at once; the growth of the art has been gradual, and largely empirical, and this has been the case not only with the more civilized races, but also with the savage ones. It is true, as has been stated by our distinguished president and others, that the Indian has no absolute and definite knowledge of the causation of certain diseases, believing that many of them are produced by evil demons, spirits or gods. But that he is absolutely ignorant of the cause and effect with regard to remedial agents I do not believe. If we deny empirical observation to the Indian, we must then ascribe to instinct alone the faculty he evinces in choosing certain herbs, or other medicinal substances for the care of his ailments. Animals are their own physicians, and it must be instinct or transmitted hereditary experience which leads them to select particular plants and herbs to relieve occasional ill health. The question may well be asked, what part do instinct and experience play in this choice? Any one familiar with the gradual progress of medical science must admit, if not biased by the views of a particular school, that etiology is not of prime necessity in therapeutics, as we find different men of different pathological views, prescribing opposites quite frequently and having equally good success.

Briefly, it may be said then that the Indian's primary view of disease (excluding surgical injuries) is that it is caused by a bad spirit or evil god, his secondary idea of it being derived from actual empirical observation. And, acting upon these two theories, he applies as best he can the means at his disposal. To meet the necessities of the first he hires his shaman or medicine man, for the second he uses such simples as he has been taught by experience will be of benefit. The Indian is a tolerably fair anatomist and a moderately good surgeon, he seems to understand the relation of certain muscles to the bones, and in his treatment of fractures he often puts to shame his white brother. He knows that in delayed parturition, in some cases prolonged epulsive efforts are necessary; and he has certain methods of bringing about this result which, if not quite as elegant as those taught by the schools and approved by Lucina, are equally effective. This is the result of reasoning pure and simple, and I think we should be unjust did we fail to ascribe to him more reasoning powers and reflections in this regard than whites have usually credited him with. That he believes more than his original theory of the demonic origin of disease, cannot be doubted, for when he finds that the prayers and incantations of his medicine man fail to relieve his suffering, how sagely in many instances do we find him applying to his white brother for relief.

It will be noticed that throughout this entire narrative, although the medicine men perform certain rites to dislodge the evil spirits, at the same time from the decoctions given, we must infer that they recognized the existence of fever and sought to reduce this by means of diuretics, diaphoretics and sweating, this certainly indicates something more than a mere belief in exorcism by noise and prayers. Crude as the observations may be I have brought them before the society hoping that in the discussion which may follow we shall be able to obtain an interchange of opinion which will be of value to all of us who are interested in Indian medicine.

I should state that the greater part of the information regarding the Navajo method of curing ague has been furnished me by my friend Mr. A. M. Stephen, of Keam's Cañon, Ariz., well known as a conscientious and careful observer of Indian myths and customs. With this slight introduction I may be permitted to read the notes sent me by Mr. Stephen:

KEAM'S CAÑON, ARIZ., Sept. 16, 1886.

MY DEAR DOCTOR— * * * You may remember having met here a Navajo friend of ours, one of their silversmiths, whom we familiarly call "John the Jeweler." He went over to the Kohonimo Cañon and stayed there four days. The day after leaving the cañon he was taken with ague, and every day for twenty subsequent days he had a chill followed by fever and delirium. The strangeness of the disease had an extraordinary depressing effect on him, and during these twenty days he was in a state of utter collapse. He is a medicine man, a minor priest of considerable repute, and numbers of his friends came to see him. But none of them knew aught about, or had ever seen such a disease. The priests and the patient were inclined to attribute it to "a bad smell" emanating from the Kohonimos; but as there was also a band of wandering Pah-Utes there during the time of the patient's visit, they are still uncertain. Possibly the "bad smell" may have originated with the Pah-Utes. The friends concluded in this emergency to call in the best mediciners of the region. The sequence of the different mediciners in this case may be taken as typical in similar cases, that is, where the patient is suffering from some uncommon or unknown disease, or one considered specially dangerous.

It is to be understood that each of these mediciners is also a priest, in the sense of being a recognized medium of communication between men and the gods, by virtue of the rites and song-prayers pertaining to the priesthood or fraternity. Each priesthood or fraternity has its own exclusive beliefs, rites, fetiches and song-prayers. Each

priest, or commonly two associates of the same fraternity, while they are practicing upon a patient, cannot be assisted in their own particular rites by a priest of a different fraternity. But in the chorus of song-prayers and in the dances, in preparing fetiches and sand-picture altars, and in the erection of singing-house and sweat-houses, it is expected that all male visitors will give willing assistance. These ceremonies are always liable to interruption—numerous classes of accidents arising either from chance or design; or the happening of some bad omen may cause an abrupt abandonment. But the fee of the mediciner is invariably settled upon before the treatment begins, and must be unconditionally paid, no matter at how early a stage an accident may have compelled the priest to desist. Nor is it reckoned whether, after the close of the treatment, the patient may be better or worse. In other words, payment of the mediciner's fee is considered a religious duty, because it is well understood that the gods never listen until a gift is proffered them. The exaction of the fee in these degenerate days is now, I fear, prompted by a more sordid motive. But there are still very evident traces among both Moki and Navajo that in earlier days the "medicine fee" was merely indicated by the gift of an emblem from patient to priest—a feather, a shell, a pinch of pollen, a whiff of smoke. A substantial fee is now usually produced and appraised before any of the ceremonies are entered upon.

The following memoranda must be taken as but a brief summary of the ceremonies. I aim in this to give you but the gist of the *curatio*. I have ignored a multitude of minor rites, etc., which, although interesting as studies, would be tiresome to recapitulate in this instance.

The first priest to officiate was Oj-kai-yos-na (Osh-ki-yos-nah). *Theory*—The rites and song-prayers of this priest are directed immediately to the Yé who dwells at the mouth of the pit through which all people came up to this world, and through which the spirits of the dead return to the lower worlds. This pit, Ne-chro-yose-cha-chee, is in the concave summit of that mountain in the north called Tjoli-i (Cho-lo-he), described by Dr. Matthews in his "Part of the Navajo's Mythology," p. 6. Between the patient and the mouth of that pit, this priest makes a fire with certain woods, and beside this fire the priest sings prayers to the Yé who "sits on this side" the mouth of the pit. He beseeches the Yé not to call the patient to descend the ladder leading to the regions of the dead. He rubs the ashes and pulverized charcoal of his medicine fire all over the body of the patient—first having rubbed him with a mixture obtained by melting the fat of the bison, mountain sheep, elk, deer and a small portion of the fat of the domestic sheep. The patient is rubbed with this fatty mixture so that the coals and ashes of the medicine fire may adhere closely to the skin. The priest sings at the fire, and after having rubbed the patient with coal and ashes sings the same songs beside him. In other words this priest stands between the patient and death. His rites lasted two days and nights and his fee was one horse, say \$50.

The next physician summoned was Kuma bi-ge (bi-geh). *Theory*—Good medicine smell—the inhalation of fumes from burning herbs. In the sick man's hut the mediciner makes a small medicine fire. A little, hollow mound of clay is made, and within the hollow three stones are set. On these are laid splinters of piñon and cedar which are then set afire. When they have burned to embers the priest shakes his rattle and sings to the Yés of his (the priest's) father. (See Kuma further on.) He then lays upon the embers five herbs. The patient is then laid naked upon the sand—close to the fire-place—and a blanket is spread over the fire-place and patient, who thus lies there inhaling the fumes of the herbs, while the mediciner sits beside him—outside the blanket, of course—shaking his rattle and continuing his song. The dry herbs were also bruised fine in the mediciner's hands, and after being mixed with water in a bowl were rubbed over the entire body of the patient. This treatment is performed at sunrise and sunset, and should last four days, with songs and dances and other ceremonies at night. But in this instance at the close of the second day an embarrassing circumstance occurred—the patient's wife was taken ill. This at once put a stop to all further treatment by this priest. Fee, one horse, say \$50.

After the wife got well Et-sid'i bi-kis (be-ges) was summoned. *Theory*—Inherent virtue of the winds. The mediciner signs to the "Leader" of the four winds, viz.: White (east), Blue (south), Black (north), Yellow (west). Before the people emerged from the lower world, these winds were taken up the pit at Tjoli-i (Cho-lo-he) by the "Leader" and their directions were assigned them by him. He caused them to blow upon the muddy surface which was still new and damp until the world became dry enough for habitation. The winds expelled the evil influence of the bad Yés and the new world became beautiful. So it is to this "Leader" that Et-sid'i bi-kis sings, asking him to bring all these winds together and expel the evil influence that threatens the patient. The ceremonies last four days and nights and consist of song-prayers, the exhibition of fetiches, shaking the rattle, blowing the whistle and swinging the Tsin-bo-os-ni. This is the same performance as swinging the Thunder Baho with the Mokis. Fee, a large horse, or say \$60.

The next one called was Hosten bi-kán. *Theory*—Administering the herb roots, both raw and infusions. These are of the same number—five—as those used in the medicine fire, but they are entirely different plants. The raw root of the *Datura meteloides* was given the patient at sunrise, noon and sunset. Each dose was something less than half an ounce of the recently dug root. This was chewed and swallowed. Closely following each of these doses he was given a piece of the stalk of golden alexander, about six inches long and as thick as the thumb. This he chewed, swallowing the saliva, but not the fibre. Between the songs during the day and night, infusions were given the patient to drink in quantities never to exceed a half a pint at once. These were separate infusions from the roots of herbs known to the Navajos as Azé Klo-hí (laughing medicine or medicine hay, *Arenaria aculeata*), Azé bi-ni (bad talk, dreaded medicine), To-jo-zhe-to (Great Chief of all medicines). These three herbs were jealously guarded, thus I have had no opportunity to examine them. This old fellow's ceremonies lasted only a day and a night. His fee was one horse, say \$50.

The last and most potent of the priestly mediciners called to complete the cycle of exorcism, was Kumá. Perhaps you may remember him. He is the chief of the gens to which the patient belongs, and lives about thirty miles southwest from here. *Theory*—Sweathouse decor-

ated upon outside with rainbow in colored sands. Singing-house (built for this special occasion); sand pictures—altars—upon floor of the singing-house. Dances of the four, and of the twelve participants, etc. A series of elaborate ceremonies very similar to those which Dr. Matthews observed at Fort Defiance three years ago and which will be described in an elaborate report to the Bureau of Ethnology by Dr. Matthews and Mr. Stevenson. Kumá's prayers were directed to Hos-djeh-hog-wan (the Killer) and Hos-dje-yelti (the Talker) guardian deities of Tjoli-i (Chi-le-he). But all these prayers are more immediately addressed to the Yés who dwell in the "Half-White-House," asking their mediation, that the "Killer" might withhold his hand, that the "Talker" might withhold the word—of death. I am under the impression that the ceremonies Dr. Matthews observed were addressed to the Yés of the "Half-Red-House," but the motive is very similar.

Apocryph of these Yés. I suppose you know there is a mythic region in the North. It extends from Nadir to Zenith and has no horizon. It is a land of vertical strata of various colored sandstone, each stratum reaching from the below to the above. At the junction of each stratification is the house of a Yé—half in one stratum, half in the other.

Kumá's ceremonies lasted five days and nights. Every morning at sunrise the patient was placed in the sweat-house for about twenty minutes—that is about ten minutes in each. Nothing of special significance was done during the day, but from sunset until dawn the maskers danced before the singing-house, the priests sang their prayers, made the prescribed sand pictures and placed the proper fetiches upon these pictures. For a fee Kumá received a fine horse and colt worth at least \$100.

Aside from all these fees, sheep were killed to provide mutton, and other provisions were purchased to feed the priests and their associates, the dancers; and the numerous gathering of idlers and spectators that flocked around when any of these religious ceremonies are in progress. In these expenses, however, the patient is usually assisted by some of his relatives.

In these ceremonies, with the alternating days, three weeks went by—every day an attack of ague. At the end of that time the patient said he was "looking down the descending ladder." His friends then covered him up on a saddle and brought him here muffled up in a blanket—just like a bag of bones—and we had him dumped in the wool room. This was four days ago. We had no calomel, so we gave him a generous dose of blue mass—about 30 grains. The following morning we administered a liberal dose of castor oil, and then we gave him about 30 grains of quinine in four doses daily. Two days ago his ague left him and he is now almost well.

This morning he and his friends returned home, and just as he was leaving he told me he was feeling so well he thought by to-morrow he could resume the performance of duties, which in an Indian's mind stand for the acme of physical and mental vigor.

OLD-TIME NATURAL HISTORY.

Editor Forest and Stream:

While reading a quaint old volume, which was published nearly half a century since, I found quite a number of interesting items of the early natural history of Long Island. The title is as follows:

HISTORY OF LONG ISLAND;

CONTAINING

An Account

OF THE

DISCOVERY AND SETTLEMENT;

WITH OTHER

IMPORTANT AND INTERESTING MATTERS

TO THE

Present Time.

By BENJAMIN F. THOMPSON,

COUNSELLOR-AT-LAW.

NEW YORK:

1839.

The work contains the usual preface, which is followed by a general description of Long Island, its geology, discovery and Indian tribes, and an account of the Dutch, English and Colonial governments. The bulk of the work, however, is devoted to the history of the counties and towns of Long Island. The early records, Mr. Thompson states, are all made in the Dutch language.

When writing of the discovery he quotes from a "History of New York," by Joseph W. Moulton, as follows: "When Hudson first arrived within the waters of Sandy Hook, he observed them swarming with fish, and sent his men to obtain a supply. It may well be that they landed upon Coney Island, in the town of Gravesend, which was the nearest land. Two hundred and twenty-nine years ago, being the 3d of September, 1609, the chivalric Hudson first saw the shores of this island. On the 4th, it is related, he sent his men on shore in a boat, who, according to the words of his journal, 'caught ten great mullet, a foot and a half long, and a ray as great as four men could haul into the ship. Here, he says, they found the soil of white sand, and a vast number of plum trees loaded with fruit, and many of them covered with grapevines of different kinds. They saw, also, a great quantity of snipe and other birds.' The natives were clothed, he says, 'in the skins of elks, foxes and other animals.'"

"Seawan was the name of Indian money, of which there were two kinds: *wompan* (which signifies white) and *suckahock* (*sucki* signifying black). *Wompan*, or the white money, was made of the stem or stock of the metahook or periwinkle; *suckahock*, or black money, was manufactured from the inside of the shell of the quahang, a round thick shellfish that buried itself but a little way in the sand and was generally found lying on it in deep water, and gathered by rakes or by diving after it. The *seawan* was manufactured most abundantly on Long Island which abounded in shells and was called, for this reason, *Seawan-hacky*, or the Island of Shells. The *poquanhook* or quahang and the periwinkle were extremely plenty."

In speaking of the Indians of Kings county he says: "They depended, in great measure, upon the flesh of the deer and other wild game, and the great abundance of fish, clams and oysters which were found on every shore and in every creek and harbor."

It is also stated "that when the English first commenced the settlement of Long Island the Indians annoyed them much by the multitude of dogs they kept, which ordinarily were young wolves brought up tame, and continuing of a very ravenous nature."

Part of the rental James, Duke of York, promised for himself, his heirs and assigns, was "Yearly, and every year, forty beaver skins."

Among the statutes passed March 1, 1665, by the deputies assembled at Hempstead was the following: "The value of an Indian coat, to be given to any one who shall bring the head of a wolf to any constable on Long Island, provided it be killed upon the island." "On November 2, 1717, an act was passed for destroying foxes and wildcats upon Long Island, they having become both numerous and mischievous. The reward for killing a wildcat was nine shillings, and for a fox five shillings."

The careless use of firearms, it seems, is a hereditament which has descended to us from the earlier times. Mr. Thompson quotes from *Rivington's New York Gazette*, Jan. 16, 1774, as follows: "From Huntington, on Long Island, we are informed that last Christmas-day, Mr. Ebenezer Platt being hunting deer with some other young men near that village, they surrounded a swamp where the game were, and agreed with each other not to enter any part of it. Mr. Platt seeing a buck at some distance, rushed forward, and one of his companions, hearing a noise in the bushes, immediately fired and lodged five swan-shot in Mr. Platt, three of which entered his arm and two his body, which render his life despaired of."

The natives, when selling what is now known as the town of Easthampton, covenanted as follows: "Also we, the said Sachems, have covenanted to have libertie for ourselves to fish in any or all the cricks and ponds, and hunting upp and downe in the woods, without molestation; they giving to the English inhabitants noe just offence, or injurie to their goods and chattels. Alsoe, they are to have flynnes and tayles of all such whales as shall be cast upp, to their proper right, and desire they may be friendly dealt with in the other parte. Alsoe they reserve libertie to fish in convenient places for shells to make wampum. Alsoe Indyns hunting any deare they should chase into the water, and the English should kill them, the English shall have the body and the Sachems the skin. And in testimony of our well performance hereof, we have set our hands, the day and yeare above written.

Signed,

In presence of Richard POYGRATASUCK, X
Woodhull, Thomas Stan- WAYANDANCH, X
ton, Robert Bond, and MOMOMETOU, X
Job Sayre. NOWEDONAH, X

At a general court held in the same town, March 7, 1650, it was "Ordered that any man may set guns to kill wolves, provided they be not set within half a mile of the town, and also to take up the guns by sunrise; and further, that it shall not be lawful to sell any dog or bitch, young or old, to any Indian, upon penalty of thirty shillings."

From Fisher's Island, which is a part of the town of Southhold, "An attempt was made in the year 1712, to transport a pair of moose deer to England, as a present to Queen Anne, which failed by the death of one and the other breaking its leg; and Her Majesty was finally presented with the horns only."

The town of Brookhaven seems to have been an earthly paradise for sportsmen, and also to have possessed a poet to perpetuate some of its charms in verse:

"THE GROVES OF MASTIC.

Far in a sunny, cool retreat,
From folly and from noise remote,
I shun the scorching noonday heat,
Contented in my peaceful cot;
Thro' towns and glades I often stray,
Of turn somewhat monastic,
And spend the solitary day
Amongst the groves at Mastic.

Dame Nature, in a kinder mood,
When things were first created,
Decreed this spot near ocean's flood,
An Eden when completed;
Here all the luxuries of life,
She spreads with hand all plastic,
Beyond the reach of noise and strife,
Among the groves at Mastic.

When spring her annual visit pays,
Sol puts a brighter face on,
And Zephyr fills our creeks and bays,
With brant and geese in season;
Here, on Smith's Point, we take our stand,
When free from toils gymnastic,
Where Death and lead go hand in hand,
Among the fowl at Mastic.

Sometimes the tim'rous trout we wait
Along the streamlet's border,
With well-dissembled fly or bait,
And tackle in good order.
Or catch the huge enormous bass,
Be his course e'er so drastic,
While sitting on the verdant grass,
Close by the groves at Mastic.

The grouse, the pheasant and the quail,
In turn we take by changes,
Or hunt the buck with flippant tail,
As through the wood he ranges;
This strings our nerves! oh, pleasant toil,
We want no epispastic,
Nor doctor, with his castor oil,
Among the groves at Mastic."

The deer hounders of the present day are only following the bad example set them by the early hunters of the town of Islip, of whom it is related, "The extensive forests which border upon this pond (Ronkonkoma) are stocked with herds of deer, who, when hard pressed by the sportsman and his dogs, often, as a last resort, betake themselves to the water in the hope of escape; but this resource avails them not; boats are procured and the poor