

ACCIDENTAL OCCURRENCE OF THE MAN-EATER OR GREAT  
WHITE SHARK *CARCHARODON CARCHARIAS* (LINN.) IN  
NOVA SCOTIAN WATERS.

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ABSTRACT.

Hitherto *Carcharodon carcharias* (Linn.) has not been definitely reported on the coast of Nova Scotia, as Dr. H. B. Bigelow and W. W. Welsh's reference (1925) to a specimen from Banquereau is apparently an error as to locality. That record, which is based on one by F. W. Putnam (1874), is evidently referable to St. Pierre Bank to the south of Newfoundland. The species is not included in J. M. Jones's List of Fishes of Nova Scotia (1879). On 27th June, 1920, a large shark attacked an albacore-fisherman's boat off Hubbard's Cove, St. Margaret Bay, Halifax Co.; and its large size, the ferocity of its onslaught and a description of a tooth left in the wood of the boat, make it evident that it must have belonged to this species. About 2nd July, 1932, another shark of this species wantonly attacked a fisherman's motor-boat in the Bay of Fundy, ten miles northwest of Digby Gut, Ann. Co., and left some of its teeth embedded in the boat. One of these teeth has been examined and identified. It is probable that this fish was the one which was stranded at Harbour DeLoutre, Campobello Island, New Brunswick, shortly before 23rd November, 1932. It appears that, as far as is definitely known, the limit of this shark's casual range northward is about latitude  $44^{\circ}51'$  in the northwest Atlantic Ocean, which is a little north of the latitude of Halifax; but if the St. Pierre record is accepted, the range is extended northward to somewhere between lat.  $45^{\circ}$  and  $46^{\circ}50'$ . The paper concludes with remarks on the other sharks occurring in Nova Scotian waters.

The Man-eater or Great White Shark, *Carcharodon carcharias* (Linn., 1758), or *C. rondeletii* of Müller and Henle, 1838, as it is called in Europe, and the *Carcharias atwoodi* of Storer, 1848, as it was once designated in America, is a large, powerful, voracious and highly dangerous pelagic species which is celebrated for its ferocity and its aptness to attack man without provocation. Breder<sup>1</sup> says, with reference to the east coast of the United States, that the few definite and authentic records of sharks attacking man all refer to this single species. It is therefore probably the most to be dreaded of a terribly ferocious group of fishes; but fortunately for us it is exceedingly rare north of Massachusetts. In southern waters another species, the Cub Shark or Requiem, *Carcharias*

<sup>1</sup>Breder, *Field Book of Marine Fishes of Atlantic Coast from Labrador to Texas*, N. Y., 1929, 22.

*commersonii* (Blainville) (*C. lamia* Risso), is very greatly feared by bathers, although it usually acts as a greedy scavenger about wharves in the tropics. It occurs casually as far north as New York (Jordan, Evermann and Clark) or Massachusetts (Breder).

*Range in North America*.—Jordan, Evermann and Clark, 1930<sup>2</sup>, merely give the geographic range of *C. carcharias* as "temperate and tropical parts of the Atlantic and Pacific, occasionally on our coasts north to New York and Monterey Bay." It is known, however, to occasionally occur north to Massachusetts and even to Maine.

*Occurrence in Nova Scotian waters*.—T. F. Knight in his Descriptive Catalogue of Fishes of Nova Scotia, Halifax, 1866, and J. M. Jones in his List of Fishes of Nova Scotia, 1879<sup>3</sup>, do not mention this species as occurring in the province. A. Halkett in his Check List of Fishes of Canada, Ottawa, 1913, only includes it hypothetically, having come upon no definite record. Dr. H. B. Bigelow and W. W. Welsh, 1925<sup>4</sup>, however, say it "strays northward at rare intervals as far as New England and casually to Banquereau Bank off eastern Nova Scotia," and cite as their authority for the latter occurrence Putnam, Bull. Essex Inst., Salem, vol. 6, 1874, p. 72. Breder<sup>5</sup>, 1929, following Bigelow and Welsh, also includes Nova Scotia in its range. We shall have to pay some attention to this statement before proceeding further.

*The "St. Peter's Bank" occurrence, about 1874*.—At a meeting of the Essex Institute of Salem, Mass., on 20th April 1874, F. W. Putnam<sup>6</sup> exhibited a large tooth of a shark, presented by the Rev. D. P. Noyes of Pigeon Cove, who had obtained it from Andrew Johnson, one of two men who, while in a dory deeply laden with fish near "St. Peter's Bank," had

<sup>2</sup>Jordan, Evermann and Clark, *Check List of Fishes of North and Mid. America*, Rept. U. S. Com. Fisheries for 1928, pt. 2, Wash., 1930.

<sup>3</sup>Jones, *Trans. N. S. Inst. Nat. Sci.*, 5, 95, (1879).

<sup>4</sup>Bigelow and Welsh, *Fishes of Gulf of Maine*, Rept. U. S. Com. Fisheries, Wash., 1925, 40.

<sup>5</sup>Breder, *Field Book of Marine Fishes of Atlantic Coast*, N. Y., 1929, 22.

<sup>6</sup>Putnam, *Bull. Essex Inst.*, Salem, 6, 72, (1874).

been fiercely attacked by a large shark which bit at the dory, leaving marks of one jaw in the bottom of the boat and of the other on the side. The boat was tipped by the shark to such an extent as to spill part of the fish and to take in water, and was kept afloat only by vigorous bailing. Fragments of several teeth were found in the wood. A perfect tooth from the front of the lower jaw was 1.8 inch long from the centre of its root to its point, and 2.1 inches from the extreme end of its root; while the extreme width at the base, across the root, was 1.5 inch. Samuel Garman estimated that the length of the shark was more than thirteen feet, and it was believed that the species was probably *Carcharias* (*Prionodon*) *lamia*<sup>7</sup> or a closely allied one.

This identification is not very precise, but Bigelow and Welsh<sup>8</sup> refer the specimen to *Carcharodon carcharias*, and no doubt correctly, as such information as we possess indicates that fierce species.

Unfortunately the location of the so-called "St. Peter's Bank" is not otherwise indicated by Putnam; but, although there is no fishing bank now so designated, one would naturally infer that the place referred to is the well-known St. Pierre Bank lying between about lat. 45° and 46°50', and long. 55°20' and 57°20', off the south coast of Newfoundland, and which is washed by the southwestward flow of the Labrador Current. Pigeon Cove, from which Rev. D. P. Noyes sent the tooth, is without any doubt the small coastal village of that name in Essex Co., Mass., seventeen miles northeast of Salem and nearly four miles from the fishing port of Gloucester.

Bigelow and Welsh complicate matters by stating that the shark had "attacked a fisherman on Banquereau Bank." That they were writing of the fish mentioned by Putnam in

<sup>7</sup>*Carcharias lamia* of Rafinesque, 1810, is now given as a synonym of *Carcharodon carcharias*; whereas *Carcharias lamia* of Risso, 1826, and later writers, is a different species, the Cub Shark or Requiem, now known as *Carcharias commersonii* of Blainville, 1816, which rarely strays northward in the Gulf Stream as far as New York according to Jordan, Evermann and Clark, or to Massachusetts according to Breder.

<sup>8</sup>Bigelow and Welsh, *Fishes of Gulf of Maine*, Wash., 1925, 40.

1874 is quite clear from their reference to the latter's note in the Bulletin of the Essex Institute before mentioned. One would therefore conclude that they had good cause for saying that Putnam's "St. Peter's Bank" was some part of the extensive and well known Banquereau, the middle of which lies in about lat.  $44^{\circ}30'$ , long.  $58^{\circ}20'$ , to the northeast of Sable Island, Nova Scotia, in which latitude we might expect to find the species on rare occasions, as a wanderer from the warm Gulf Stream.

In order to settle the question as to locality, Dr. Bigelow of the Museum of Comparative Zoology, Cambridge, was communicated with, and he informs me that he thinks he must have found something to make him change the name of the place from that given in the original record of 1874, but that he cannot now come upon any reference to the matter in his notes. Although it was the late Dr. S. Garman who identified the tooth, yet that writer does not mention it in his excellent monograph on the *Plagiostomata*<sup>9</sup>, nor has a reference to it been found in any of his other papers. Dr. Bigelow's letter sums up the matter by saying, "If the locality was St. Pierre, the record becomes Newfoundland, not Nova Scotia, and of course one cannot go back of the original record."

Inquiry regarding the Noyes-Putnam specimen has been made of the Peabody Museum, Salem, Mass., to which the Essex Institute is believed to have turned over all of its scientific material. Mr. A. P. Morse, the Curator of Natural History replies that he cannot find a record of the receipt of a shark's tooth, or any tooth, from either the Rev. D. P. Noyes or the Essex Institute, in that period. So the tooth has probably been lost and no light on the subject can be obtained from that source.

Capt. C. C. Soule, Acting Hydrographer, Hydrographic Office, Washington, informs me that a careful search of the charts and other facilities of the office, fails to disclose any information concerning a fishing-bank named St. Peter's Bank,

<sup>9</sup>Garman, *The Plagiostomata*, Memoirs, Mus. Comp. Zool., Cambridge, Mass., vol. 36, 1913, 32.

other than the one known as St. Pierre Bank. An old edition of the obsolete Hydrographic Chart No. 9, the plate of which was purchased in 1868 from E. and S. W. Blunt of New York and republished by the Hydrographic Office in that year, uses the name "St. Peter's Bank" in place of St. Pierre Bank, and there are several other instances of the use of English instead of French names.

Taking all of these points into consideration, I think that the balance of evidence is very strongly in favour of the opinion that Putnam's "St. Peter's Bank" is St. Pierre Bank, and that in some way Dr. Bigelow must have been mistaken in referring to it as Banquereau. The southeastern end of St. Pierre Bank is, as has been said, lat.  $45^{\circ}$  (which is the same as that of the northern edge of Banquereau) and it extends north-westward to lat.  $46^{\circ}50'$ . From Banquereau it is separated by the St. Lawrence Deep. A casual specimen could easily pass out of the northern margin of the Gulf Stream, in which it had been borne northward, and wander onto the south part of St. Pierre Bank, and yet be very little north of the accidental range of the species as we now know it.

*Probable occurrence off Hubbard Cove, St. Margaret Bay, N. S., 27th June, 1920.*—On 27th June, 1920, a shark, believed to be fifteen feet long, attacked the boat of Jeremiah Harnish and John Chandler of Hubbards while they were harpooning Albacore (*T. thynnus* or *secundodorsalis*) about half a mile south-southeast of the bell-buoy off Slaunwhite's Ledge, just outside and east of the entrance into Hubbard Cove, in the northwest part of St. Margaret Bay, Halifax Co., in lat.  $44^{\circ}36'31''$  and long.  $64^{\circ}02'$ ; and in so doing left a tooth in the boat. The day was a fine, warm one, with a south-southwest wind. While Harnish, Chandler and another man, Walter Winters, were out in their motor-boat, Harnish, standing on the projecting "pulpit" at the bow, harpooned what he supposed was a large Albacore. After the fish was struck, he and Chandler, as was the custom, got into their towed row-boat for the purpose of "drowning" the fish by letting it run with a buoyed line so that it would pull itself out. An Alba-

core dives deeply when harpooned, but this fish kept only a little beneath the surface and did not attempt to run away.

About ten minutes after having been struck, it came to the surface, and when only fifteen feet away suddenly made a savage rush at the after part of the boat where Chandler was standing. The resultant impact was so great that the man was thrown overboard. The thoroughly enraged fish bit at the boat with its large powerful jaws, and left scars and cuts in the wood which were afterwards plainly seen; the spread of the jaws being about twenty-five inches. Where the upper jaw struck, just below the gunwale, was left embedded one tooth which is said to have been "as bright as ivory, as long as a man's little finger, and like the teeth of a saw on both sides." The cut in the upper part of the boat, where the tooth came into contact with the wood, was about six inches long and three-quarters of an inch deep; which is indicative of the great strength of the animal's jaws.

Fortunately the fish did not turn its attention to Chandler, who being a good swimmer soon reached the boat which was fifteen feet away, and was safely pulled in by his astonished companion. They had quite enough of the unexpected adventure and lost no time in cutting the harpoon-line so as to let the dangerous fish go; and it thereupon went off with the embedded harpoon-point and about six fathoms of the attached small rope. Winters, who was operating the motor-boat and had witnessed this affair which might have ended fatally, came alongside, took aboard the two dismayed men, and they hurried back to Hubbards, thankful for their fortunate escape<sup>10</sup>.

When at Hubbards three weeks later, I endeavoured to obtain the tooth for careful examination, but found that in the meantime it had been accidentally dropped over the side of a wharf when being handed from one person to another for inspection. Mr. Harnish's son has sent me a sketch of it, drawn from memory, from which we learn that it was regularly triangular in form, about 1.75 inch high and about 1.50 inch

<sup>10</sup>See contemporary account in a Halifax newspaper, which is now substantiated by Harnish's son, Freeman.

wide at the base, and both edges were distinctly serrated throughout their length.

The fierce attack of the shark, though in this case a provoked one, and the serrated edges of its large triangular tooth, as well as the reported large size of the fish, seem clearly to indicate that it was a dreaded Man-eater (*C. carcharias*).

It may be noted that this attack on a boat in St. Margaret Bay very closely resembles one which occurred off the coast of Massachusetts, as described by Storer in 1848. A thirteen-foot shark of this species ("*C. atwoodi*") seen swimming in Princetown Harbour, Cape Cod, in June, 1848, was chased by a boat's crew and a harpoon thrown into it. Thereupon it instantly turned toward the boat and seized it with great ferocity near the bows, in doing which several of its teeth were broken off. It was eventually killed by being frequently lanced<sup>11</sup>.

*Occurrence in the Bay of Fundy, 10 miles off Digby Gut, Ann. Co., N. S., about 2nd July, 1932.*—This brings us to the latest appearance of this formidable fish along our coast, to which particular attention will now be drawn.

Very early in the morning, just after dawn, of a clear day, on or about 2nd July, 1932, Wilson Munroe, a fisherman of Victoria Beach, and his young son, were in their 25-ft. motor-boat on the fishing-ground, in forty fathoms, about ten miles northwest of Digby Gut, Annapolis Co., N. S., on the eastern side of the Bay of Fundy. The latitude of the location is about 44°48' and the longitude 65°51'. The men had stopped to overhaul their fishing trawls, it being slack water at low tide and the sea quite calm.

Fishermen in another boat which was about a quarter of a mile away saw a large shark which circled around their boat, and which they believed had been disturbed while feeding on the fish which were hooked on the trawls. Then, without the slightest other provocation, the shark suddenly and wantonly rushed at Munroe's boat. The resulting impact caused the boat to be hove up on its forward starboard (right) side;

<sup>11</sup>Quoted by Bean, *Fishes of New York*, Albany, 1903, 41.

which caused it to go downward on the after port side, the Munroes being near the stern tending their trawls. As a result, water slopped in over the port quarter gunwale. With a number of noticeable bumps against the underpart of the boat, the fish worked its way aft, under the starboard bilge; and then finally went clear. Munroe estimated that it was about thirty feet long, but it does not appear that he ever saw it distinctly. When the alarmed men came ashore and examined their boat, they found that the fish had bent the blades of the three-bladed propellor, and in so doing must have cut itself. The boat was otherwise not particularly damaged, but some of the animal's teeth were left embedded in the keel or one of the under strakes, showing that it had endeavoured to bite the boat with its powerful jaws<sup>12</sup>. One of these teeth was sent to the Provincial Museum, and will be later described.

*This shark probably taken at Campobello Island, New Brunswick, in Nov., 1932.*—Shortly before 23rd November of the same year, 1932, an unusually large shark, said to have been "the first of its kind ever taken in local waters," weighing 3,000 lbs., measuring 26 feet in length and about 6 feet in greatest diameter of body, and having a "dorsal" (probably pectoral) fin nearly 5 feet long, was taken within a "sardine" (young herring) weir at Harbour DeLoutre, Campobello Island, lat. 44°55', long. 66°55', in Passamaquoddy Bay, New Brunswick. It had plunged through the brush-walls of the weir and become stranded on the shore. The locality is only a few miles eastward of Eastport (lat. 44°54'), Maine, where a Man-eater Shark had been taken in August, 1872; and about fifty-one miles across the Bay of Fundy, west of the place where Munroe had been attacked in July. When opened, the Campobello specimen is reported to have had an enormous liver, which when removed filled seven fifty-gallon drums, from which exuded a great quantity of oil which was sold to

<sup>12</sup>This description of the shark's attack is mostly based on a verbal account by Capt. Elmer Morgan, fishery inspector, Bear River, Ann. Co., who obtained the particulars when at Victoria Beach a day or two after the incident. His account was communicated to me by Mr. J. W. D. Stearns of the *Spectator*, Annapolis Royal.



an oil factory. This shark was locally believed "to be the same species which attacked a fisherman's boat in the Bay of Fundy near Digby some months before"<sup>13</sup>. Although the teeth of this specimen have not been examined by me, there can be little doubt that it was the individual which had attacked Munroe's boat nearly five months earlier.

*Determination of the species.*—On 2nd November, 1932, the Provincial Museum, Halifax, received from Wilson Munroe one of the teeth (accession number 7508) which had been embedded in his boat. It is rather small, pure white, symmetrically triangular in form, and has 21 or 22 rather conspicuous serrations or fine triangular teeth, up to .02 inch in height, on each edge. The outer surface is only very slightly convex; but the inner surface is decidedly so, the thickened ridge extending from the middle of the base to the apex of the tooth. The point is only very slightly flexed inward—so little as to be hardly noticeable. The tooth measures .71 inch in greatest height; .67 inch in middle height (from centre of the slightly concave base to apex); .50 inch in width at the base, although the original width there had no doubt been about .58 or .60 inch; and the greatest thickness of the tooth from outer to inner surface is .15 inch.

I identified this tooth as belonging to *Carcharodon carcharias* (Linn.); but owing to the great rarity of that species so very far north, and my determination being merely based on a single tooth, I wished to have the identification authoritatively verified, and therefore the tooth was sent to the U. S. Bureau of Fisheries, Washington, which referred it to the U. S. National Museum. On 5th December, Mr. Earl D. Reid, Aid in the Division of Fishes, kindly made the following report which confirms the identification: "Mr. Piers is quite correct in identifying the accompanying tooth as that of the Man-eater Shark (*Carcharodon carcharias* (Linn.)). I have compared the specimen with a jaw of this species in our collections and find that the tooth corresponds exactly with the upper lateral teeth near the posterior angle of the jaws of a specimen not more than fifteen feet in length."

<sup>13</sup>Vide news note dated from Deer Island, N. B., 23rd Nov., 1932.

*Conclusions.*—We may therefore definitely include the dangerous *Carcharodon carcharias* among the fishes occurring off the southern half of our Nova Scotian coast; but its occurrence there is entirely accidental, and liable to take place in the summer or autumn. It appears that the limit of its casual range northward in the northwest Atlantic Ocean, is, so far as is definitely known, about latitude  $44^{\circ}55'$ , which is a little to the north of that of Halifax, N. S. If, however, we accept, as I believe we should, the "St. Peter's Bank" record as referable to St. Pierre Bank off Newfoundland, the range is extended further north to at least  $45^{\circ}$  or possibly even to  $46^{\circ}50'$ .

*Specimens reported north of lat.  $40^{\circ}30'$ .*—The following is a summary, arranged according to latitude, of the specimens of *Carcharodon carcharias* so far reported along the eastern coast of North America north of latitude  $40^{\circ}30'$ . Most of the occurrences, apart from those specially referred to in this paper, will be found noted in Storer, Proc. Bost. Soc. Nat. Hist., vol. 2, 1848, p. 71; Putnam, Bull. Essex Inst., Salem, vol. 6, 1874, p. 72; Goode, Nat. Hist. of Aquatic Animals, (Fisheries and Fishing Industries of U. S., sect. 1, text), Wash., 1884, p. 671; Stevenson, Trans. Vassar Bros. Inst., Poughkeepsie, vol. 2, pt. 1, 1884, p. 83; and Bigelow and Welsh, Fishes of Gulf of Maine, Bull. Bur. of Fisheries, Wash., vol. 40, pt. 1, 1925, p. 40.

North Latitude	Locality	Date	No.	Remarks
$45^{\circ}$ to $46^{\circ}50'$	'St. Peter's Bank' of Putnam (St. Pierre Bank?)	1873 or '74	1	Supposed to be 13 ft. long.
$44^{\circ}55'$	Harbour DeLoutre, Campobello Isld. N. B.	29? Nov. 1932	1	26 ft. long. Probably the one met off Digby Gut in July.
$44^{\circ}54'$	Eastport, Me., U. S. A.	Aug. 1872	1	
$44^{\circ}48'$	10 miles N. W. of Digby Gut, Bay of Fundy, N. S.	2 July, 1932	1	
$44^{\circ}36'$	Off Hubbard Cove, St. Margaret Bay N. S.	27 June 1920	1	About 15 ft. long.
$42^{\circ}25'$	Massachusetts Bay, Mass., U. S. A.	1820 & after	3	6 ft., 9 ft., 7 ft. $2\frac{1}{2}$ in.
$42^{\circ}05'$	Provincetown, Cape Cod, Mass.	June, 1848	1	13 ft. (C. atwoods, Storer).
	Provincetown, Cape Cod, Mass.	Before 1884	4	Caught in mackerel nets.
$41^{\circ}45'$	East Brewster, Cape Cod Bay, Mass.	16 Oct. 1923	1	16 ft. long.
$41^{\circ}32'$	Wood's Hole, Mass.	Before 1884	1	Sev eral
$41^{\circ}25'$	2 miles off Gt. Point Lighthouse, Nantucket Island, Mass.	4 Aug. 1883	1	All small. Taken in fish traps.
$40^{\circ}30'$	South Amboy, New York Bay, New Jersey.	14 July 1916	1	10 ft. long. (Stevenson).

That is, in the sixty years under review, the species has been noted off the south coast of Newfoundland, once, off Nova Scotia twice, New Brunswick once, Maine once, Massachusetts about 15 times, and New Jersey once.

*Little danger to be generally apprehended from other sharks occurring here.*—In closing, it may be noted that I have never heard, either from fishermen, pilots, Indians, or others, of anyone in Nova Scotia ever having received actual bodily injury from a large shark, although I have been told of a hungry school of the small and most annoyingly abundant Spined Dogfish (*Squalus acanthias*, Linn.), which comes in-shore, having once bitten a man's legs while they were dangling in the water. The two other species of Dogfish (*Centroscymnus coelolepis*, Bocage and Capello, and *Centroscyllium fabricii*, (Reinhardt) ) are usually confined to deep water, and are also far too small to do any serious injury.

Of the large species of shark, our commonest kind, the fairly large Porbeagle or Mackerel Shark (*Lamna nasus* (Bon-naterre) )<sup>14</sup>, which belongs to the same family as the vicious Man-eater, is harmless. The Great Blue Shark (*Prionace glauca*, Linn.) which attains a length of twelve feet, appears to be moderately common and occasionally quite plentiful, for instance in 1920, along our Atlantic coast in late summer and autumn, but does not seem to be at all disposed to attack man, although ravenously taking food and also bait on a large hook. Its otherwise phlegmatic and unresentful nature may be realized from the fact that one of the many off Halifax in 1920 was pierced through with an iron harpoon and yet it swam about while so transfixed and even came to eat scraps thrown to it from a pilot-boat<sup>15</sup>. In 1920, the year of its marked abundance, which was also the one when Harnish's boat was

<sup>14</sup>Such specimens of Nova Scotian Mackerel Sharks as I have examined, have a denticle at each side of the base of the teeth, and therefore are referred to *Lamna nasus* (*L. cornubica* Gmelin), which is the common form along the British coast, rather than to the closely related American form, *Isurus punctatus* (Storer) in which Bigelow and Welsh say the denticles are absent.

<sup>15</sup>Statement of Pilot E. Renner, Halifax.

attacked in St. Margaret Bay, it was first noted off the mouth of Halifax Harbour on 15th August, was plentiful about 25th August, and was last seen on 10th October. These sharks were mostly about ten feet long, but among them was one (possibly another species) over twenty feet. The species has also been noted here in other years<sup>16</sup>.

The other species of shark which occur in our waters are apparently either very rare or accidental, and not at all disposed to attack man. The southern forms are liable to come north in the Gulf Stream in summer or early autumn, while the boreal ones are to be expected in winter. They are as follows: the Hammer-head Shark (*Sphyrna zygaena* (Linn.)), of which only a couple of young specimens have been taken as stragglers from the south; the Thresher Shark (*Alopias vulpinus* (Bonnaterre)) which can strike a dangerous blow with its long powerful tail, but is not often met with; the immense but dull and sluggish Basking Shark (*Cetorhinus maximus* (Günner)), an Arctic species with very small conical teeth, which undoubtedly wanders to our coast, although I do not happen to know of an actual Nova Scotian record, but Perley states that one was taken off Musquash Harbour, seventeen miles westward of St. John, on the New Brunswick side of the Bay of Fundy, in August strange to say, 1851; and the large but very sluggish Sleeper Shark, Nurse, or Greenland Shark (*Somniosus microcephalus* (Block and Schneider)), apparently quite harmless to man, of which at least one was taken off Halifax in February, 1863, as described by Jones, and which very likely was more frequent in early years<sup>17</sup>.

<sup>16</sup>See Prov. Museum acc. nos. 3778, Sept., 1909; 4940, 23 Sept. 1920; and 4941, 10 Oct., 1920.

<sup>17</sup>The nomenclature of this paper is that of Jordan, Evermann and Clark, *Check List of Fishes of North and Middle America*, Rept. U. S. Com. of Fisheries for 1928, pt. 2, Wash., Feb., 1930, pp. 1-670.