

Shark Attacks in New Guinea Waters

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Introduction.

INFORMATION concerning the prevalence of sharks in New Guinea waters was obtained in inshore netting tests close to Port Moresby in Bootless Inlet in the dry season (May to November) of 1954. These experiments showed that shoals of small sharks up to 3 ft. 6 in. total length entered these waters which have a salinity up to 4.1 parts salt per 1,000. The estuaries become stable environments in the south-east season without any influence from fresh water, and ocean fish species enter the inshore waters sometimes in large numbers. The sharks come to prey on these fish.

Small sharks do considerable damage to mesh nets so that it is not practicable to leave nets untended, and even nets watched continuously are often damaged by the small sharks which are not caught in the standard type of mesh net used (about 3-in. mesh), but are able to bite their way through, causing considerable damage to the net. These shoals of small sharks seriously disrupt the normal inshore shoaling of small fish with the result that few big catches of the normal inshore species are made.

In inshore water near Port Moresby lines on the surface, buoyed so that each hook was only two feet below the surface, were tested in fishing for larger species—Trevally, etc.—which at times appeared in great shoals. The only species caught were sharks up to eight feet long. In similar tests inside the barrier, again sharks were captured, although considerable numbers of surface fish were in the vicinity at the time the tests were made. In further tests outside the reef, eight miles offshore, long lines set about 25-30 fathoms below the surface again produced sharks, although quite small baits set for other species of fish were used. It is perhaps significant that two mud crabs (*Scylla*) were captured and it is possible that crabs had formed the baits for the nine and ten foot sharks (*Carcharinus* sp.) which were captured.

Sharks are most abundant in the open sea which is their normal habitat: they feed on ocean species and they appear to follow the tuna shoals and other migrating species.

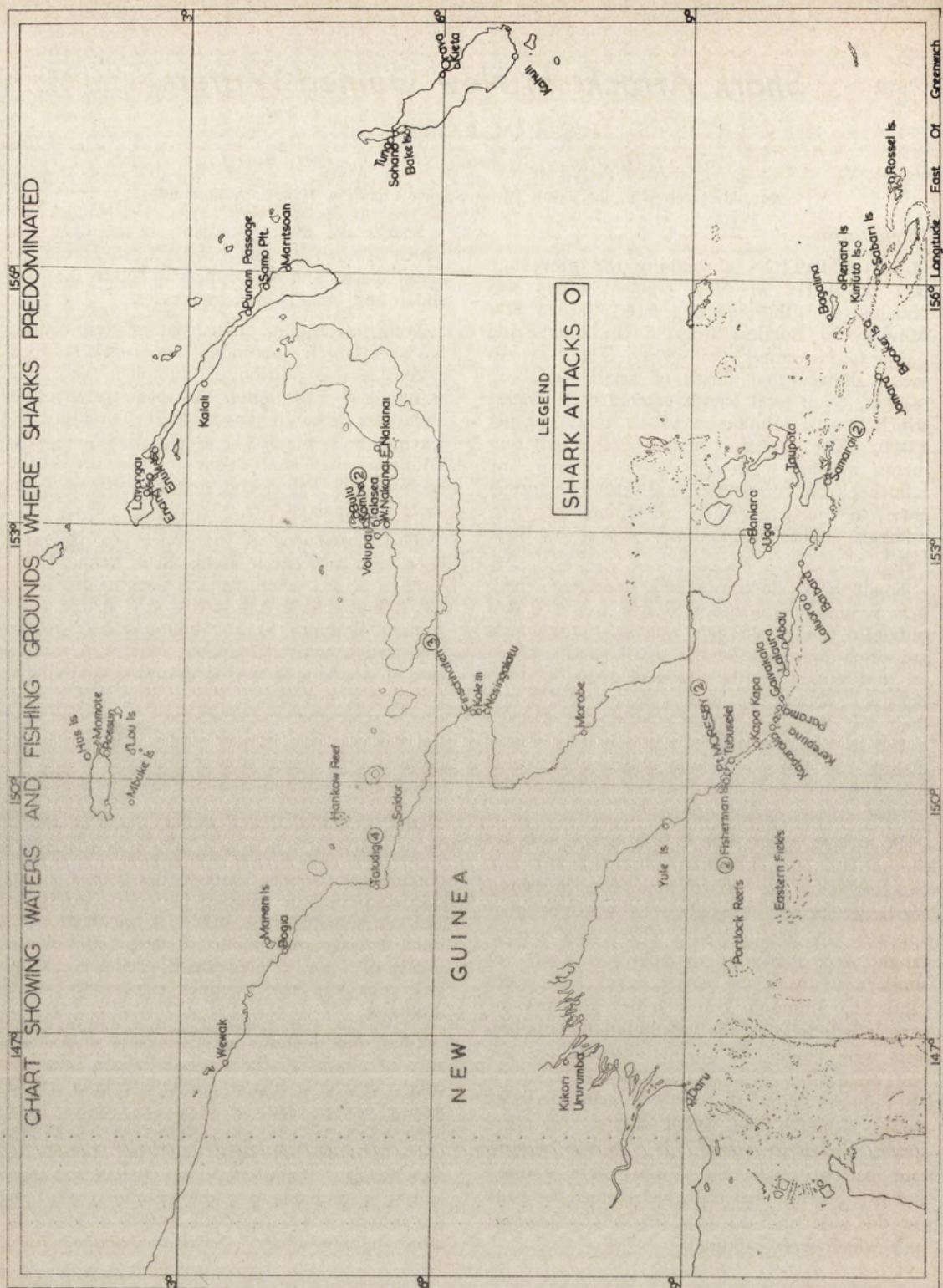
Long line fishing carried out in New Guinea has been largely uneconomic because sharks took a considerable portion of the catch, and tuna weighing 80-120 pounds have been consumed in about six bites of about 15-20 pounds each, leaving the head, backbone and the fibrous fins. Localities where sharks were dominant are off the south-east of Papua and to the North of Louisiade Archipelago.

This dominance of the open sea has also been seen at Eastern Fields Reef south of the Gulf of Papua where vertical lines in depths of 60 fathoms have produced only sharks. At Jomard Entrance in 100 fathoms only sharks were caught, and at Hankow Reef to the north-east of Madang sharks on many occasions have completely dominated the fishing which has been largely uneconomic because of their attacks. *Carcharinus*, *Hypoprion* and *Galeocerdo* are probably the most important. *Galeocerdo* is believed to be responsible for most fatal attacks.

Localities where shark attacks have occurred.

Although sharks are the greatest menace as potential attackers in shallow, discoloured water, they also occur at times in perfectly clear water and can sometimes be seen in large shoals. In Buka Passage and south of Woodlark Island, shoals of long snouted sharks following skipjack tuna and reef snapper respectively, were observed.

Chart No. 1 shows a considerable preponderance of attacks in the Central Papuan southern coast. In this region there has been much fishing activity and at least six attacks have been associated with skin diving for fish in the years 1954-56, the shark attacking initially to take the fish. Only one of the attacks was fatal and it is probable that the swimming skill of the fishermen was partly the means of avoiding more serious injury. Several fishermen have



stated that they know the dangerous ocean sharks which they avoid, but it is apparent that ocean sharks may attack from unseen positions and that small reef sharks sometimes attack.

Attacks have occurred over a wide area, some as at Baibara in 1955 in inshore shallow water, others on offshore reefs.

Places where shark attacks have not been reported.

No attacks have been reported from the following places:—Lae, Tufi, Karkar, and Ela Beach swimming area, Port Moresby. These areas are of interest as they are centres of considerable populations and there is a greater amount of swimming than in many other places where attacks have occurred. The Ela Beach area, Port Moresby, is relatively shallow and at high tide seldom more than $1\frac{1}{2}$ fathoms deep. The shoal reef area extends seawards about 100 yards beyond the normal bathing area and is protected at the outside margin by a broad zone, mainly of staghorn coral. The area is not productive of fish and inshore shoals of small fish are rare. At Tufi, although there are no reported attacks by sharks, two deaths have occurred through crocodile attacks.

Attacks on humans and animals.

Unfortunately, the first shark attack in any area is not easily explained and an examination of the data in Appendix II indicates that in many cases the victim was taken completely unawares.

Although brushing attacks as described by Coppleson do not appear to occur in Territory records, some of the attacks are possibly related to this type of testing where sharks have taken hold of a victim and then actually released him on his retaliating by blows or vigorous struggling. One of the most interesting attacks of this type occurred at Baibara where an eight-year old boy fought with bare hands a shark which he succeeded in driving off. It is this type of retaliatory attack which appears to put human beings, in their attacks by sharks, generally into a different category from other animals, as most fish species attacked appear to become paralysed and more readily submit to their fate.

These brushing or testing attacks are evidently not uncommon and G. P. Whitely in his book "Sharks" gives a photograph of a victim of such an attack in which the shark tried to take the victim's head.

By far the greatest number of attacks are on limbs and it is probable that these offer the parts most easily obtained by sharks, although such method of feeding is contrary to that found where sharks feed on other fishes, when they leave any hard parts or even fibrous fins until last. Sharks in this respect may quickly form habits and increased efforts to catch sharks, both with the aim of preventing attacks and using the meat for food, are recommended.

It is not possible to predict where shark attacks will occur, but in discoloured waters, even a few feet deep, care should be taken. After one attack, there is good reason to believe a second will follow within a short period. Shark attacks may develop as a habit unless entirely prevented. The taking of a dog three months before a young boy was taken at Kaparoka in 1959 is an example of this.

A suggested method by which this habit is developed is remembrance of the mammal smell and after attack the remembrance of the smell of mammal blood. There is some doubt if rogue sharks as described do exist but it is worth recording here that a similar type of characteristic is developed in crocodiles which are even more cunning than sharks, and in New Guinea waters also attack canoes, seeming to know when there are no weapons aboard.

At Taludig near Madang on the north coast of New Guinea, three shark attacks occurred (believed to be a rogue shark). Only after the third attack was any publicity given and the Division was made aware of the situation. The attacks took place in shallow water only two or three feet deep, close to steeply shelving bottom descending rapidly to some fathoms. Sharks which were plentiful lay in wait in deep water. It was believed that these attacks were related to the brushing attacks described by Coppleson. However, the victims were always bitten and although the first three attacks were not severe, after the capture of one large shark and the withdrawal of the fishing team to another area, a subsequent fatal attack occurred. Intensified fishing by the local people caught more than thirty big sharks, suggesting that the "rogue" shark may in fact be a number of sharks.

Three other fatalities in Papua should be mentioned. A young boy died swimming under his house at Kaparoka near Hula, and two school boys, one returned from Australia, lost their lives in one week in December, 1956, swimming

close to the Kwato Mission near Samarai. It is probable that large sharks were responsible although subsequent newspaper reports stated that a shark about seven feet long captured after the second attack contained clothing belonging to one of the youths. Later evidence has shown that this is not likely to have been the shark responsible for the deaths. The details given above are recorded to show the difficulty in analysing the results of these surveys. After these deaths, the Division of Fisheries took more active interest in shark fishing.

It is appropriate to state here that at the Chatham Islands to the east of New Zealand, fishermen do not normally venture out in vessels less than 35-40 feet in length. Even vessels of this size are attacked by sharks which apparently consider the vessel is an invader of the shark's own private territory. Only at the Chatham Islands have I heard of a prepared plan to attack sharks by spearing behind the pectoral fin. From the way sharks attack, this method of defence is not likely to be possible on many occasions. Needless to say, behind and below the pectoral fin the shark skin is relatively soft and a good lance could penetrate the skin with a moderately strong thrust.

At Abau in 1955 a shark took a string of fish from a fisherman and then attacked the canoe, while in 1961 at Rossun, Manus, a shark which had been speared overbalanced a canoe, threw one of the occupants into the sea, bit him and, after the victim had regained the boat, bit the canoe. These are the only records of sharks attacking boats although there are numerous reports of sharks swimming in shoals near small canoes to the considerable anxiety of the canoeists.

Analysis of data on attacks.

Appendices I and II give details of attacks. The provoked attacks are not discussed as they in part are caused by carelessness or lack of fishing experience. The records of unprovoked attacks do not include deaths of two Europeans and several New Guineans whose bodies have never been recovered. One New Guinean and one European were almost certainly victims of shark attacks. The second European is suspected of being taken by a crocodile and the fate of a second native is not known as it may have been a shark or a crocodile that attacked.

Prior to 1950 only nine attacks are recorded of which six were fatal. There were no attacks in 1950 and only one attack in 1951. Fifty-four attacks occurred from 1951 to June, 1961, and of these twenty were fatal. There were four fatal attacks in 1956, four in 1958 and three in 1960. In 1955 there were no fatal attacks.

Table I gives an analysis of the attacks into fatal and non-fatal categories. Head, body and multiple injuries comprise the greater part of the fatalities and if the records for which no details are available are added (probably body injuries) the total is about 85 per cent. In the non-fatal attacks, head, body and multiple injuries comprise only about 20 per cent.

Of the fatal attacks about 40 per cent. were fishermen and of the non-fatal attacks 60 per cent.—50 per cent. of all attacks were on fishermen.

In a number of cases in which sharks attacked the body from the back, including shoulders and buttocks, the shark released its grip and the victim escaped. This was not the case when the shark attacked from underneath. Many of the attacks on the upper thighs were also fatal but some remarkable escapes are recorded.

How to avoid shark attacks.

Although most shark attacks appear to have been avoidable, in many instances the methods by which sharks attack show that certain standard precautions should always be followed. Example may be quoted of the fisherman who dived into the sea at Wewak in 1954 (Appendix II) during fish cleaning operations and received a fatal injury. The example emphasises the type of act which should never be attempted.

The following suggestions are made on the basis that many of the attacks would have been avoided with a few simple precautions. To-day young children crossing the road look to right and left, and the evidence of shark attacks indicates that, for fishermen at least, the possibility of a serious attack in New Guinea waters is not negligible and is of the same order as the risk of becoming involved in a serious motor accident. The following precautions should be taken :—

A. Fishermen.

- (1) Fish in groups, keeping a watch for sharks. Even small sharks, apparently not able to do much harm, can inflict serious and even fatal wounds.

SHARK ATTACKS.—1948-1960. (1)

Table 1.

FATAL.										NON-FATAL.				
Year.	Head and Body.	Multiple Injuries.	Legs or Thighs.	Hands Arms or Shoulders.	No Details (2).	Total Fatal Attacks.	Head and Body.	Multiple Injuries.	Legs or Thighs.	Hands Arms or Shoulders.	No details.	Total Non-Fatal Attacks.	GRAND TOTAL.	
1948	...	...	...	...	...	...	...	...	...	1(F)	...	1(1F)	1(1F)	
1949	2(1F)	1	...	...	1	4(1F)	...	...	1	2	...	3	7(1F)	
1950	...	...	...	...	...	...	...	...	...	...	...	...	...	
1951	...	...	...	...	...	...	...	...	...	...	1	1	1	
1952	1(F)	1(F) ⁽⁴⁾	...	...	...	2(2F)	...	...	1(F)	...	...	1(F)	3(3F)	
1953	1	...	...	...	...	1	...	1 ⁽⁵⁾	...	...	...	1	2	
1954	2(F)(1) ⁽⁶⁾	...	...	...	...	2(2F)	...	2	...	...	...	2	4(2F)	
1955	...	...	...	...	...	...	1	...	2(1F)	3(F)	...	6(4F)	6(4F)	
1956	...	1	1(F)	...	2	4(1F)	...	...	4(3F)	1(F)	1	6(4F)	10(5F)	
1957	...	2(F)	...	...	...	2(F)	...	...	1(F)	...	...	1(F)	3(3F)	
1958	2(F)	...	...	1	1	4(2F)	1	...	2	4(F)	...	7(4F)	11(6F)	
1959	...	1	...	...	1	2	...	...	2	...	2(F)	4(2F)	6(2F)	
1960	1	...	1	...	1	3	2(1F)	...	2(1F)	...	...	4(2F)	7(2F)	
1961	...	...	...	...	...	...	...	...	...	2(F)	...	2(2F)	2(2F)	
TOTALS	9(6F)	6(3F)	2(1F)	1	6	24(10F)	4(1F)	3	15(7F)	13(11F)	4(2F)	39(21F)	63(31F)	

(1) Only records prior to 1948—2 fatal attacks, 1939 and 1940. (2) No details sometimes includes no remains found. (F) Fisherman.

(4) Attached by several sharks—no remains. (5) Arm and leg bitten off. (6) Head.

- (2) Do not hold fish in the water and particularly keep fish away from the body as far as possible.
- (3) Return to the canoe trailing fish with a cord attached to the spear in preference to holding the fish or spear in the hand. Allow someone in the boat to take the fish aboard, away from your body.
- (4) Do not dive deeply into deep water; go down feet first preferably in small groups looking all around.
- (5) When fish are being gutted at sea, do not enter the blooded water.
- (6) Even sharks out of water, apparently dead, can inflict serious injury. Treat them with caution.
- (7) The shark when attacked by a fisherman will often turn on the fisherman and attack him. Be sure fishing gear and vessel are suitable to stand an attack when fishing for sharks.
- (8) Other methods of fishing may be more efficient than spear-fishing—handlining, netting, trapping are all efficient methods—and with a small capital expenditure may produce a greater income for a smaller effort than is required in spear-fishing.
- (9) If animals are taken, keep a closer watch and set lines for some months after the attack. The setting of lines with good baits will attract sharks so that added precautions should be taken when the lines are set and for some time after, even if no sharks are caught.
- (10) As large sharks usually do not feed for some days after attacking, set lines after a few days. Often there are a number of sharks in a shoal, so do not stop shark fishing after one shark has been caught.

B. *Bathers.*

- (1) Bathe in groups, keeping a close watch especially to seaward or to deep water. Do not bathe near deeply shelving bottom. Sharks and other large predaceous fish are often close inshore in these places.
- (2) Avoid muddy water or discoloured water as far as possible, particularly blooded water.

Actions which have been successful in fighting attacks.

An analysis of the successful fights with sharks shows that, except in cases where large sharks deal fatal first attacks, the chance of

escape is high. So much has been written by spear-fishermen and shark fishermen on encounters with sharks that it is difficult to give advice concerning the preliminary nosing attacks which some large sharks make, but it appears that sudden panicking, splashing movements would only increase the likelihood of the shark attacking immediately. Keep the shark in front and, if any weapon is at hand, use it to point and thrust at the shark. Try to protect the body as much as possible with hands or legs. The number of attacks which have been repelled with bare hands show that no effort should be spared in attacking the shark in some way, all the time endeavouring to get to a canoe or to the beach. It should be remembered that a shark, only four feet long, can inflict a fatal wound in one bite.

The following methods have been successfully used in escaping after an attack by a shark:—

- (1) When an attack occurs in shallow waters, wade or swim quickly to the victim's assistance. Sharks are at a disadvantage in shallow water and are often scared off. The victim may also need assistance to get ashore. In five per cent. of cases sharks have attacked the rescuer. (Leonard P. Schulz, Smithsonian Institution, Washington, D.C. U.S.A.—Personal communication.)
- (2) If in deep water, go quickly in a boat or canoe to help the victim. If he fights the shark off he may also need urgent assistance.
- (3) Remember mouth-to-mouth artificial respiration in case victim of attack needs this type of help also.

Shark fishing as a means of preventing attacks.

It is unlikely that shark fishing in itself will prevent attacks. However, this method of combating sharks will essentially reduce the risk if carried out systematically. Shark meat is good food and fishing is often profitable. A market exists for shark skins prepared as for crocodile skins.

Certain principles should be followed if fishing is to be carried out on a large scale:—

- (1) Fish with good gear so that if a shark is hooked it has little chance of escape. Shark-meat smoked or made into dried meal will keep for months.

- (2) Fishing should be done some distance from villages or habitations where people normally bathe or of necessity travel in small boats.
- (3) Red meat is good bait but blood or chum material should not be used where current may take the scent near inhabited places.
- (4) Vessels used for shark fishing must be of suitable size to permit large sharks to be easily handled.
- (5) Crews must be well trained.

The large number of sharks caught at Daru and saw sharks in Lake Murray suggests that with the correct fishing gear shark fishing would at certain seasons be economic close inshore, and further survey work might extend the range of shark fishing and also locate stocks of better fish.

Conclusions.

The large number of accidents, 22 fatal (two unconfirmed) and 34 non-fatal, caused by sharks which have occurred in the last ten years in New Guinea indicate that considerable effort could profitably be undertaken to give training in shark attack prevention, as suggested. Particular reference to shark fishing should be made, primarily as a source of food, but also as a means of preventing attacks.

Sharks are the dominant group of fish in tropical waters and feed by taking their prey unawares. Even very active predators are caught in this way. For this reason few sick or injured fish are ever found.

ACKNOWLEDGEMENTS.

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DETAILS OF SHARK ATTACKS IN NEW GUINEA WATERS—1948-1961.

Appendix I.—PROVOKED ATTACKS.

Year.	Month.	Locality.	Remarks.
1948	March	Punam Passage	Fisherman. Grey shark speared in shallow water. Bites and lacerations to leg.
1948		Tung Island	Fisherman. Taking shark off spear, was bitten on face.
1959	February	Ururumba, mouth of Kikori River	Fisherman. Savaged on arm by 12-ft. shark which he thought was dead.
1959	November	Rapindik Beach, Rabaul	Fisherman. Companion speared shark. Helping to land it, both hands bitten.
1959		Morobe	Fisherman. Bitten on penis when trying to kill shark he had speared and dragged to beach.
1960	November	Toro Passage (Western District)	Fisheries trainee. 4-ft. 6-in. black tip taken from net alive and put in bottom of dinghy. Pushed aside by trainee—shark snapped at his left wrist and jaws had to be prised open to release it.
1961	June	Rosun, Manus	Fisherman. 9-ft. shark speared, attacked canoe and man overbalanced into water. Bitten severely on thigh. Regained canoe, then shark attacked canoe, breaking teeth on side.
1961	August	Vanimo	Fisherman. On Musu side of Wutong anchorage—two large sharks passed. Speared one and it savaged him on left thigh, causing deep jagged laceration.

DETAILS OF SHARK ATTACKS IN NEW GUINEA WATERS—1939-1961.

Appendix II.—UNPROVOKED ATTACKS.

Year.	Month.	Locality.	Remarks.
*1939	....	Gaivakala, Aroma	Fatal. Man swimming to anchored boat. Injuries to lower abdomen.
*1940	....	Bagalina, North coast Misima Island	Fatal. Small girl. No other details.
*1948	....	Finschhafen	Fisherman. Right hand holding fish bitten.
*1949	....	Kerpuna, Abau	Fatal. Two men swimming near the village close to the bank when they were attacked. One victim's stomach torn out, second received severe multiple injuries.
1949	....	Sohano, Buka Passage	Man swimming close to wharf. Right hand torn off.
*1949	....	Orava, near Kieta, Bougainville	Fatal. Spearfisherman—youth 18 years old. Practically bitten in two through loin. Attacking shark not seen.
1949	....	Enang, Kavieng	Hand and shoulder bitten. Recovered. (Kavieng Hospital.)
1949	....	Kulengei, (South-east of Kilili) Kavieng	Leg amputated. (Kavieng Hospital.)
*1949	....	Sabara Island, Calvados Chain	Fatal. No details. (Misima Hospital.)
1951	....	Manam Island	No details. (Bogia Hospital.)
*1952	....	Samo Plantation, East coast New Ireland	Fatal. Spearfisherman. One bite, lower abdomen bitten out. Shark not seen.
*1952	....	Momote, Manus Island	Fatal. Fisherman. Underwater fishing, a number of sharks attacked. No remains.
1952	October	Lalaura, Abau	Fisherman. Near reef, bitten on right thigh but managed to fight off shark.
*1953	....	Kahuli, Buka Island	Fatal. Man washing, shark took piece out of side.
1953	March	Rossel Island	Fisherman. Arm and leg bitten off. Tiger shark then smashed at body with tail.
1954	....	Volupai, Talasea	12 years old boy swimming. Lacerations to leg and abdomen.
1954	January	Saidor	Bitten on back and thighs (a circle of teeth marks). Released when victim struggled.
*1954	May	Wewak	Fatal. Fisherman cleaning fish, dived into water to retrieve a lost fish. Head bitten off.
*1954	December	Port Moresby, Kila Beach	Fatal. Fisherman swimming near canoe in shallow channel of water 200 yards offshore. Shark bit pieces from stomach and thigh. Four others with him did not see shark.
1955	March	Kabiman, West coast New Ireland	Fisherman. Youth putting speared fish into canoe, bitten on leg by small brown shark.
1955	....	Lavongai, Kavieng	Back bitten. (Kavieng Hospital.)
1955	April	Port Moresby	Fisherman. Bitten on shoulder. Shark released grip when struck by victim.
1955	April	Abau	Fisherman. Took string of fish from him, then attacked canoe.
1955	November	Low Island, Manus	Fisherman. Right arm almost torn off, while spear fishing.
1955	November	Baibara	Eight year old boy fought off shark with hands in shallow water. Badly bitten on thigh.

DETAILS OF SHARK ATTACKS IN NEW GUINEA WATERS.—1939-1961—*continued.*Appendix II.—Unprovoked Attacks—*continued.*

Year.	Month.	Locality.	Remarks.
1956	June	Port Moresby (Fisherman Island)	Fisherman from Hula. Badly mauled during underwater fight with 7-ft. shark. Had speared two fish when attacked. Deep gashes 6 in. long in foot and leg.
1956	August	Yule Island	Fisherman from Tsira attacked when fishing on reef. Leg torn off.
1956	August	Port Moresby (Paga Point)	Fisherman. Badly lacerated down leg.
*1956	August	Port Moresby (Fisherman Island)	Fatal. Fisherman from Hula. 14-ft. shark seized him by upper thigh. Other fishermen had not seen shark until attack.
1956	October	Kapakapa	Fisherman from Rigo. Badly mauled on left arm which held a 5-ft. fish just speared (12-ft. shark).
*1956	December	Samarai	Fatal. Youth on leave from school in Australia, swimming. No remains.
*1956	December	Samarai	Fatal. Boy from Wedau, swimming. No remains. About two days after previous attack.
1956		Kimuta, Renard Island	No details—not fatal. (Misima Hospital.)
1956		Hus Island, Manus	Man bitten on right calf. Friends held victim and fought off shark.
*1956		Enuk Island, Kavieng	Fatal. Bitten on leg and neck. (Kavieng Hospital.)
*1957		Duke of York Island	Fisherman severely mauled while dynamiting fish and died in water.
*1957		Laluoro, Abau	Fatal. Fisherman fishing near reef. Severe multiple injuries.
1957		Kieta, Bougainville	Fisherman. School boy attacked while fishing. Leg bitten off. Shark disappeared.
*1958		Brooker Island, Calvados Chain	Fatal. No details. (Misima Hospital.)
(3) 1958		Korem, Finschhafen	Fisherman. Three attacks similar to previous attacks in which hand of victim bitten while holding fish.
*1958	July	Maritzoan, Namatanai (South of East Cape, New Ireland)	Fatal. Arm bitten off, while swimming. Shark escaped.
*1958		Bulu, Talasea	Fatal. Spearfisherman, injuries to back and buttocks.
*1958		Kombe, Talasea	Fatal. Spearfisherman, several sharks attacked. Severe abdominal injuries.
1958	April	Nasigilatu (near Malasanga), Finschhafen	Fisherman. Left hand bitten holding fish. Fore-arm amputated.
1958	October	East Nakanai, Talasea	Man collecting shells. Injuries to leg and foot.
1958	November	M'Buke Island, Manus	Spearfishing, boy lost leg.
1958	December	Taludig, Madang	Hip bitten in shallow water bordering deep water.
1959	January	Uga, Baniara, Milne Bay	Shark 4½ ft. long in 2 ft. 6 in. water, made two bites—first took lower left calf, second the muscle right thigh (front inside). Shark chased away by man's brother. Recovered.

DETAILS OF SHARK ATTACKS IN NEW GUINEA WATERS.—1939-1961—*continued.*Appendix II.—Unprovoked Attacks—*continued.*

Year.	Month.	Locality.	Remarks.
1959	October	Taludig, Madang	Thigh bitten in shallow water bordering deep water.
*1959	December	Kaparoka, Hula	Fatal. 13-year old boy swimming under house in village. Dog taken three months previously.
*1959		Enuk Island, Kavieng	Fatal. Abdomen and leg bitten.
1959		Poi, Kombe, Talasea	Spearfisherman. Minor injuries.
1959		Kalapiai, Kombe, Talasea	Fisherman. Minor injuries.
1960	January	Taludig, Madang	Lower left leg bitten, later amputated. 11-ft. 6-in. shark captured. Third in series of attacks.
*1960	February	Tupuselei, Port Moresby	Fatal. Lower part of body bitten. 11-ft. tiger shark captured.
*1960	May	Taludig, Madang	Fatal. Fourth in series of attacks. 39 sharks subsequently captured in effort to rid the area of sharks.
1960	July	Bimat, Bogia	Fisherman. Aid post orderly fishing in sea, right buttock deeply slashed.
1960	August	Taupota, Milne Bay	Serious injuries to back and chest.
*1960	November	Paramana, Abau	Fatal. Fisherman attacked on reef, severe mutilation of genitals and upper legs.
1960		West Nakanai, Talasea	Fisherman. Slight lacerations to leg.
1961	May	Kokopo	Man collecting dynamited fish when thumb and two fingers bitten off.
1961	June	Rabaul	Spearfisherman. Shark struck causing minor lacerations to arm.

* Shows fatal attacks.