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THE WASHINGTON ARCHAEOLOGIST

WASHINGTON ARCHAEOLOGICAL SOCIETY, WASHINGTON STATE MUSEUM, SEATTLE 5, WN.

NEXT MEETING: Seattle Chapter - October 11, 1961 - 8:00 P.M.

MEETING PLACE: Washington State Museum
4037 15th Avenue N. E.
Seattle 5, Washington

SPEAKER: MR. ROBERT BALLARD WHITEBROOK

TOPIC: "Archaeological Ruins of Greece and Egypt"

Mr. Whitebrook recently spent several months in Europe during which time he inspected and photographed several of the more important archaeological sites. Minox slides will supplement the descriptive text. Although Mr. Whitebrook is best known locally for his book, Coastal Exploration of Washington, his interest in classical archaeology has been continuing since his undergraduate days at the University of Washington and this sustained scholarship was climaxed by the inspections in the field.

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Coffee and social hour will follow the meeting.
Members are urged to bring friends who are interested.

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OBSERVATIONS ON HALIBUT FISHING AT NEAH BAY

By Jack Thomson and Ted Weld
(Comparative notes compiled by Del Nordquist)

In pursuit of ethnographic data about hooks and their uses, the authors contacted Charles James of Tulalip who furnished them with a wealth of information about the halibut hook as used by the Indians of Western Washington. In the consequence a trip was planned so that firsthand knowledge could be gained about halibut fishing. Although there were known beds in Puget Sound it was decided to go to Neah Bay where the Makah had fished for centuries.

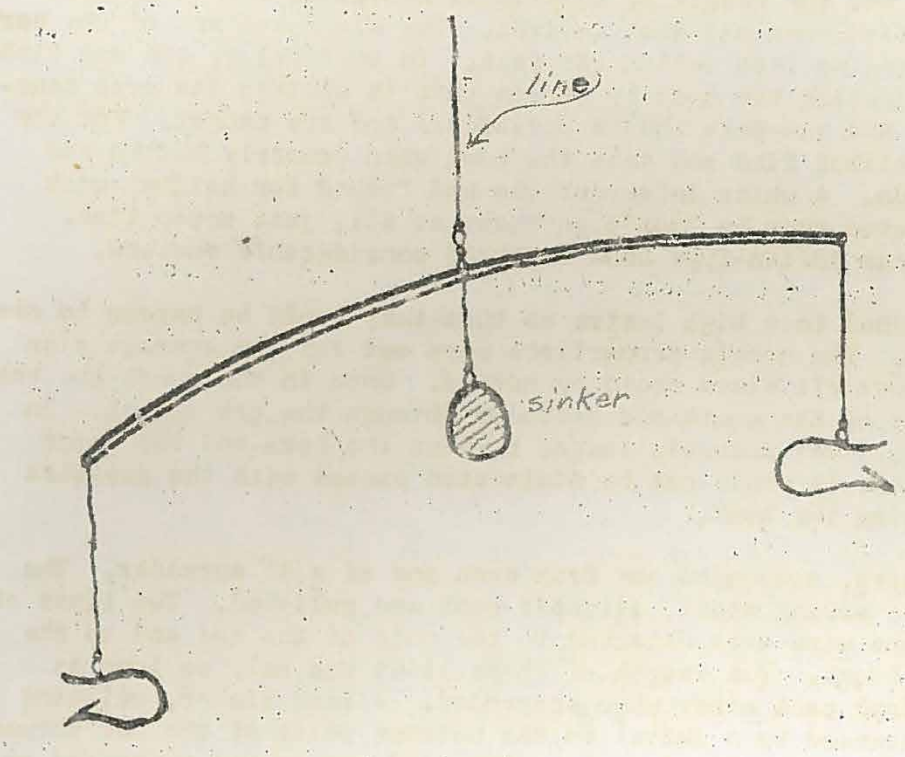
Under James' instruction equipment was made of modern materials; however care was taken to approximate the aboriginal hooks and their assembly. The hooks were shaped of stainless steel or brass and set with a permanent steel barb. The overall U-shape of the native type was retained with special attention to the measurements preferred by the Indians. These were one thumb width between the point and the upper part of the frame, three fingers from the point to the bight or center of the frame, and two fingers from the point to the part of the frame immediately below when the hook is held as suspended in fishing. Indian fishermen, to whom the hooks were shown, casually tested the measurements as they fondled the hooks and turned them in scrutiny of their workmanship.

Drucker describes the halibut hook as found among the Nootka as follows: "For the halibut fishery, the well-known 'U-shaped' hooks were used. These were sections of tough spruce root, steamed in kelp bulbs and bent into a graceful U-shape, narrowest a third of the way back from the arms. The bending was done by hand, not in molds like those of the Kwakiutl. A sharp bone barb was lashed to project backward and upward in the narrow part. At the midpoint of the other arm a leader of nettle-fiber string was tied. The leader was made fast to the end of a line of kelp." p.22

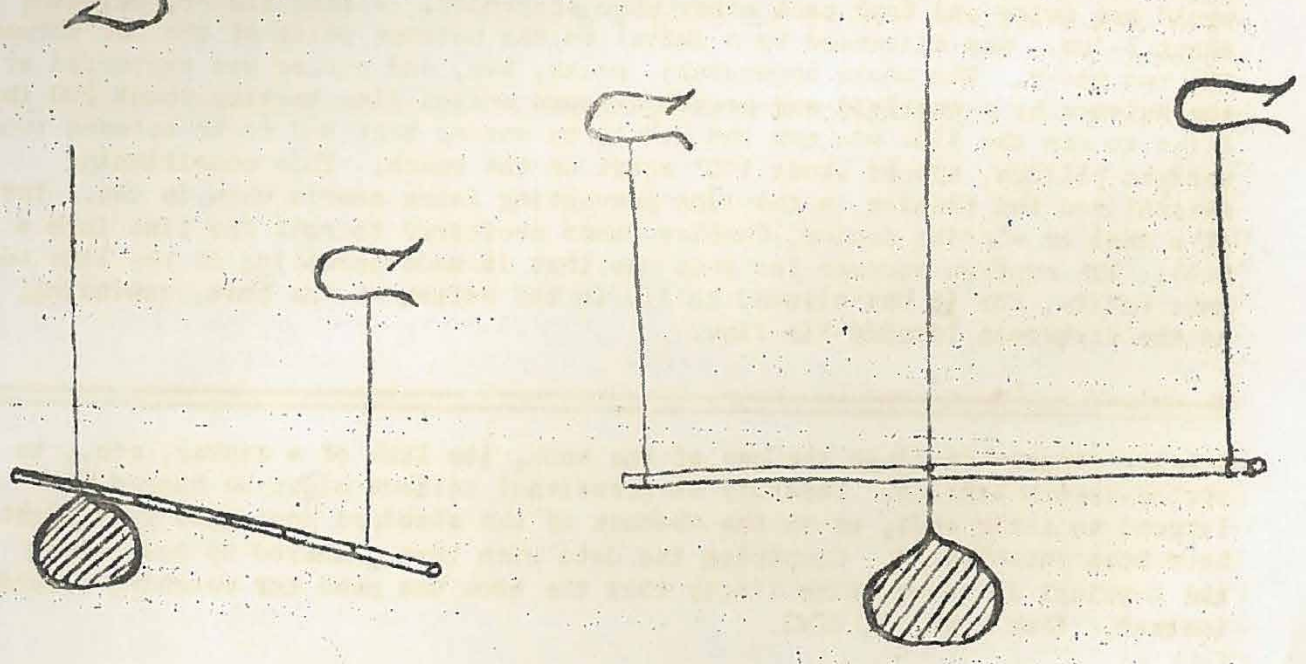
Densmore, in her study of Nootkan music, differentiates between the bone and metal barbed hooks: "Two sorts of halibut hooks are used at Neah Bay, specimens of each being obtained. The smaller hook is of cedar and has a nail as a barb and another of the same type has a barb of bone, each being tied in place with root. ***Young Doctor mentioned hemlock as a material for halibut hooks, saying it was formerly bent by wrapping it in roots of kelp and putting it on a hot stone to steam. It was then taken out and bent quickly over the knee, after which the wood was bent into the desired shape by the hands.

"A different, heavier type of halibut hook is shown in plate 9, c. No sinker is used with this hook. A whale mouth bone ('tooth') is used for the barb and fastened with whale sinew, the other end being tied with sinew and root. The barb is small and made of the lower leg bone of the elk. A large salmon is wrapped around the barb of this hook as bait." (See Plate II, fig. a, hooks attached to withes.)

The latter hook resembles what Drucker describes as a cod or spring-salmon hook. It is possible that some confusion as to use was made in Densmore's data for



Halibut Rig as constructed by Jack Thomson.



Halibut Rigs after Drucker

a. Early Type b. Recent Type

PLATE I

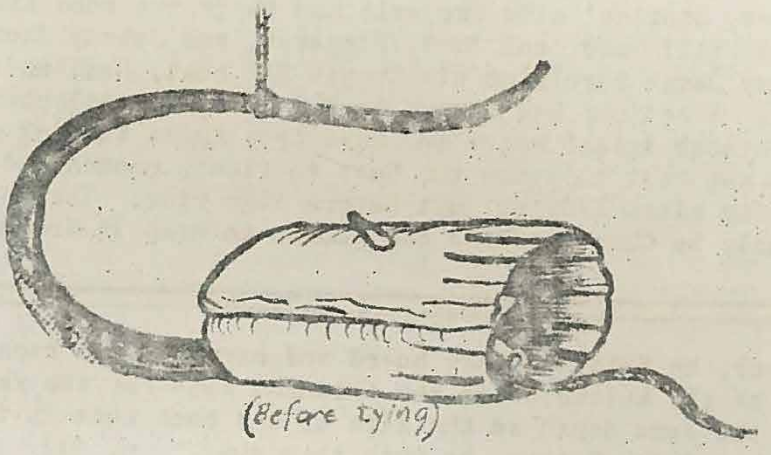
The shape of the hook was the result of functional evolution for it is preferred by many white fishermen and most Indians. The shape and set of the barb prevent many bottom feeding fish taking the bait. In particular, the dog fish is prohibited from molesting the hook by reason that it strikes its nose causing it to turn away. Red snappers and an occasional cod are caught. For the most part, however, halibut find and take the hook when properly baited and lowered into their beds. A white informant who had fished for halibut with regular fish hooks stated that he didn't catchany at all, just scrap fish. Another who had used the Indian-type hook reported considerable success.

Metal hooks were polished to a high lustre so that they would be harder to see and frighten the fish. The hook's proportions were set for the average size desired, although almost all sizes could be hooked. Once in the mouth the barb pierced the upper part of the mouth and extruded through the eye socket. In this way the fish's head was securely lodged between the barb and the inner side of the hook so that it could not be dislocated except with the greatest effort, usually breaking the hook.

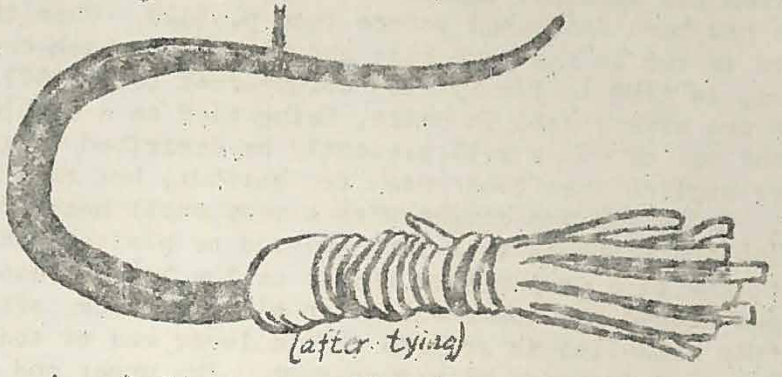
Hooks were used in pairs, suspended one from each end of a 4' spreader. The bar used was made of a spring steel, slightly bent and polished. Two lines of about 18" each of piano wire were attached to the ends of the rod and to the swivels fixed to the hooks. The length of these lines was only so long as would not swing and foul each other when suspended. A lead sinker, weighing about 5 lbs., was suspended by a swivel to the balance point of the bar between the two hooks. The whole apparatus: hooks, bar, and sinker was supported at the balance by a softlaid and preconditioned cotton line testing about 200 lbs. Prior to use the line was new and had to be worked back and forth between two upright pilings, spaced about 100' apart on the beach. This conditioning neutralized the tension in the line preventing later snarls when in use. Instead of a reel or winding device, Charles James preferred to roll the line into a ball. The express purpose for this was that it made unrolling of the line much more easily, for it was allowed to lie in the bottom of the boat, unwinding, as the fisherman lowered his line.

Drucker clearly ascribes the use of the hook, its lack of a sinker, etc., to spring-salmon fishing. Possibly an occasional halibut might be hooked if lowered to their beds, or in the absence of the standard hook this type might have been substituted. Comparing the data with that gathered by Boas among the Kwakiutl it seems quite likely that the hook was used for catching flounder instead. (See Boas, p. 179)

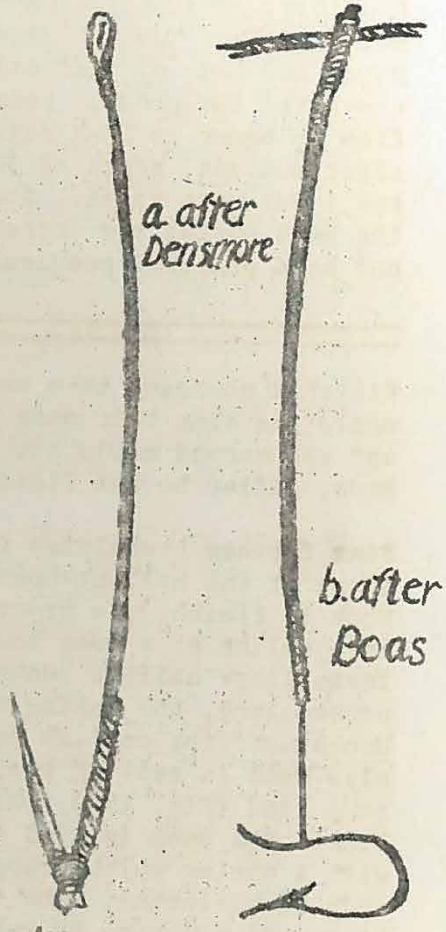
Among the Kwakiutl the halibut hook retained the same basic shape and use as among the Nootka. Boas describes the making of hooks steaming and bending: "When the fisherman gets ready, when he first goes to fish red cod, he takes a branch of driftwood of fir (or knot of this wood) and splits it into four pieces. The length of each is one span of our fingers and four finger-widths. Then he shaves them so that they are thin and round. As soon as he has finished, he takes kelp and puts into it the split branches which are to be the four (branch) hooks for cod. He has also four pieces of kelp. When night comes, he digs a hole in the ashes of his fire and puts into it the four pieces of kelp in which the (branch) hooks for red cod are. Then he covers them over and leaves them the whole length of the night until the morning. As soon as he



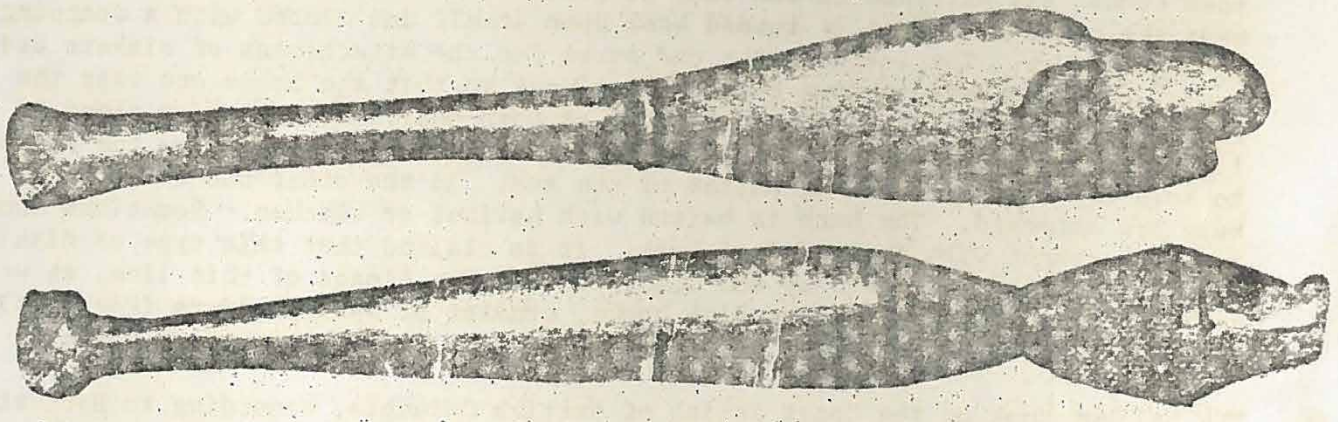
Baiting a halibut hook —



simulating a small octopus



Hooks attached to withes.



Nootkan Fish Clubs, a. after Densmore, b. after Swan.

PLATE II

Once the fishing gear was made and assembled the party prepared to meet at Neah Bay. The participants were Charles, James, his brother Landy James, his father Wilbur "Daddy" James, Charles' wife Marjorie and their two sons Little Butch and Lennie. Ted and Willi Weld, and Jack, Margaret, and Johnny Thomson completed the group. Landy James furnished his Skagit 20' boat, sailing it from LaConner to Neah Bay. A halibut bed, known to Ted Weld, was selected about 300 yds. north of Tatoosh Island where two days were spent fishing when the tides were right. It was best to allow the boat to float, unanchored, above the beds during the incoming slack tide or just before high tide. The bait used had been procured previously by Charles James and frozen to keep it fresh.

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finished covering them over, he takes a short board and carves out a rounded mould the same thickness as the thickness of the (branch) hook for the red cod, and the carved mould has the same depth as the size of the hook that is to be made. After he has finished four of them, he puts them away." p. 332

Boas further translates from his Kwakiutl texts: " *** The bending of the shank of the halibut-hook has been described before (see p. 332). When the hook is finished, a groove is cut in the barb-end; and the barb, which consists of a splint of a long bone, is tied in firmly with spruce-root (Fig. 149). These large halibut hooks are always used in pairs, being tied to a double cross-piece, the making and use of which will presently be described (Fig. 153). Hooks used for codfish are smaller than those used for halibut, but they are also used in sets of two. Kelp-fish are caught with a very small hook of the same kind (Fig. 150) which are attached to a long twisted or plaited cedar line. The hook is tied to the line in the same manner as the halibut hook, with a string which wrapped around the lower end of an elastic stick, often made of whalebone. The thin hook-line is spliced to the lower end of this piece of whalebone by means of a wrapping of spruce-root. The upper end of the piece of whalebone is attached to the long cedar-bark line also by a wrapping of spruce root. The hook here illustrated is one of a set of seventeen hooks, all attached to one line at distances of about 40 cm. Near its ends the cedar-bark line is turned back upon itself and closed with a wrapping of spruce-root. The loops at the end serve for the attachement of sinkers and buoys, the line being thrown overboard and set so that the hooks are near the bottom of the sea. Sinkers are attached at both ends. At one end a piece of light wood is fastened to the end of the line about 50 cm. away from the sinker, to hold the line up from the bottom of the sea. To the other end a line and buoy are attached. The barb is baited with halibut or olachen. Sometimes ducks are also caught with this kind of hook. It is claimed that this type of fishing tackle was originally used by the DEnáx·daᴱxᵘ. The floats of this line, as well as those of the halibut and codfish hooks, consist of seal-bladders (Fig. 151)." (pp. 471-472). (See Plate II, this paper, fig. b, hooks attached to withes.)

The halibut hook of the Coast Salish of British Columbia, according to Barnett, "was of bent hardhack, yew, crabapple, or other hardwood; it was the only hook made for catching halibut. A shaft was not used; the line was attached as shown in Fig. 25. Floats were not used; sinkers fixed permanently to the line kept the hook just free of the sea bottom." (p. 85)

Bait for halibut fishing was fresh devilfish. These are caught near Pysht where their rocky lairs were made accessible at low tide. A stick is used as a probe which was thrust into the recesses where the octopi are throught to be. Usually the sand or gravel around the opening was brushed clean and scattered with small shells which were residue from the octopus's feeding. If the probe struck something soft it was the body of the octopus. Subsequently, a bag (like a Bull Durham tobacco bag) was filled with blue stone (copper sulphate) and introduced into the hole again. This quickly disintegrated and filled the water surrounding the octopus with a solution that irritated it causing it to emerge from its lair. Immediately it was seized by the hunter, one hand grasping a leg near the body, the other the body so that the beak might be warded off. As soon as the devilfish was taken its body was torn apart to kill it and release the ink. The remains were washed, then taken to a sandy part of the beach and rolled to remove the slime. After skinning and dismembering the parts were washed again until the flesh was white.

The tentacles were chosen for bait and prepared by splitting lengthwise, tearing out the central nerve; then cut into lengths of about 3 to 4 inches. Each small section was fringed at one end. These sections were put on ice until time to bait the hooks. Only fresh octopi was used, being frozen if the intended fishing was to be delayed more than a day. Old or rotten octopus was never considered good as bait.

Baiting a hook was accomplished by wrapping the piece of flesh around the lower end and over the barb so that it was concealed. The fringe was allowed to play out from the hook resembling a baby octopus. The bait roll was secured by several rounds of white string tied with half-hitch knots. (See Plate II)

The use of hooks in pairs or (as Boas) in multiples has been seen. The rig to which these hooks are attached is also rather consistent among the authorities. Of the Nootka, Drucker says: "The halibut rig used by northern tribes consists of a cross bar with the sinker at the center and a hook suspended from either end. It was introduced in the latter part of the nineteenth century and is still in use." (p. 23) He earlier referred to a type which he describes as an earlier type, using but one hook, "To keep the hook from fouling on the line when lowered, the end of the kelp line was lashed to, and then wound in a loose spiral around a stick about 3 feet long. The sinker, a stone bound in four withes, was tied to the upper end of the stick, so that its weight held the stick out more or less at right angles." (pp. 22-23). It is worth noting that according to Drucker's illustrations (fig. 5) the hooks are presumed to float and thereby suspend from the bars to which they are attached above; not as usually presumed hang from them. It is not clear if he had ethnographic data supporting such a hypothesis. (See Plate I)

The U-shaped hook has also been attributed to the Haida on Queen Charlotte Island; Tlingit carved hooks are well known, but are V-shaped. See Niblack, Plate XXXI.

Boas describes catching devil -fish from his translations of Kwakiutl texts. "There is no hook at the end of the long pole for fishing devil-fish, for the

During the two days of fishing, generally, three lines were dropped. Charles James sat at the right rear of the boat, Ted Weld at the left rear side and Jack Thomson midship on the right. The lines were payed out by arm lengths until the bottom was reached. Then they were hauled in two pulls, approximating 4', so that they would not drag the bottom. This method of paying out also allowed the fisherman to estimate the depth. At the halibut bed north of Tatoosh the lines were out to about 40 fathoms. Usually, the lines were not secured to the boat; once "Daddy" James tied his as a surer method of maintaining his line.

The first catch was a red snapper. At one time Charles James reacted spontaneously to a tug on his line, giving it a strong yank, which he immediately criticized as too violent and unnecessary. A number of halibut were hooked but, unfortunately, only one was landed. A flaw had appeared in the construction of the metal hooks for they had barbs too light for the vigor and weight of the fish caught. A strike was quite light when compared to the size of the fish. Hooking the bottom was often mistaken for a strike. When a halibut strikes he swallows the bait and swims off. There was no attempt to take in the other lines while playing a catch. Apparently, it is not uncommon to take two fish at a time, hence the paired hooks on a single line. Once hooked, however, the fish set up considerable resistance fighting all the way into the boat. One halibut was brought to the surface and within gaffing distance of the boat had a gaff been provided.

During fishing no special treatment of hook or line, ritualistic or other conditions were made. Once "Daddy" James remarked, following some derogatory remarks by others about the fish, "That will go right down to the fish. He will know what you are saying."

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only end with which they spear the devil-fish is the thin end. When the man who fishes for devil-fish in deep water feels for it in its hole, for that is the name of the stone house of the devil-fish, he feels for its body and he strikes for the hard part. He makes a thrust at it twice. Then he pulls out the pole and puts it into his small fishing canoe. Then it does not take long before the devil-fish comes out of its hole; and he takes his long spear and spears it, lifts it up, and puts it into the small canoe. Immediately he takes out the intenstines. He never strikes it on the rock to kill it, for he wishes (it to be hard)." p. 185.

Drucker gives a more complete description for the Nootka, relating the taking of octopi as bait for halibut fishing. "The first step in halibut fishing was obtaining the bait. The fisherman searched along rock stretches of the shore which were exposed at low tide, looking for cracks and caves in which devilfish might be hiding. He had two long sharpened poles, one with a backward-projecting barb. He poked about under the rocks until he felt a devilfish, then stabbed it with the barbed pole. Then he inserted the other pole, stabbing at the creature, whose movements were indicated by the first rod. Sometimes it was possible to kill the devilfish in its den and drag it out; more often it was worried until it emerged of itself, when it was killed by hiting it on the head. The animal could not be pulled out while it lived. When he had killed it, the

The one catch was hauled into the boat, and in the absence of a gaff hook, grabbed by the gills. Still violently fighting it lay in the bottom until it was stunned by blows of a fish club which Charles James had brought. The club, a round piece of wood about 2½" in diameter and about 20" long, did little more than infuriate the halibut when it was struck about the head. Ted Weld recalled the information given him by a Makah woman, Tessie Christianson, who stated that it was best to strike the fish as if "driving a nail down the length of its spine." This technique seemed to quiet the halibut taking all the fight out of it.

While in the boat the fish was stored in a fish box, which in the James boat was a portable wooden box, lined with galvanized metal, measuring overall about 16" wide, 12" deep, and 40" long. Two rope handles were attached to the end, The capacity of the box was estimated at about 200 lbs. Once ashore, the fish was cleaned and cut up, portions going to the members of the party. "Daddy" James took the head which he considered a delicacy.

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fisherman tied the devilfish on a withe and carried or dragged it home. There he skinned the tentacles and hung it outside the house on the wall. The meat would keep for several days this way. When he was ready to go fishing, he took his tackle box and gear and an anchor, and set out for the halibut banks. The location of the various banks was well known, but many men had favorite spots, which they found by their own set of landmarks, getting simultaneous ranges on certain pair of peaks. On reaching his destination, the fisherman threw out his anchor, a 20- to 30-pound stone with a line of kelp for a 'cable.' When the anchor struck bottom, he slacked off 8 to 10 fathoms, to keep from dragging. The'cable' was tied to a forward thwart and, according to some informants, passed over the prow piece between the earlike projections, keeping the prow into the swells and preventing shipping water. Then the fisherman baited his hooks. (pp. 43-44)

"To bait the hook, a piece of devilfish tentacle was split lengthwise and carefully tied over the back of the shank of the hook from the leader to the end of the barbed arm. Some men preferred to put it over the hook from the inside, covering the tip to the barb with a separate piece. The gear was made up as described (p. 23).

"The fisherman lowered his hook until he felt the sinker touch bottom, then hauled in a couple of fathoms of line to keep clear of projections on the bottom. When the hook finally settled, it was about a fathom from the bed of the sea. At the proper point the line was wrapped around a short springy pole 3 to 4 feet long which was laid over the gunwale and secured to a thwart by a loop of cedar withe. Another line might be rigged and suspended from the same kind of primitive trolling pole over the other side of the canoe. Now the fisherman could lean back comfortably, watching his poles. Halibut do not begin to bite right away; without the poles one would have the wearisome task of holding the lines by hand. A bite was indicated by violent jerks of the pole. The fisherman pulled in his catch. There was little danger of losing it unless the tackle broke. As the halibut shoved its nose in between the arms of the hook to take the bait, the springy material allowed the arms to

COMPARATIVE VOCABULARY: Jack Thomson collected a number of native terms which are here translated into an approximation of their sound. Swan's are as he wrote them.

English	Makah (Swan)	Makah (Thomson)	Snohomish	Skagit
halibut	shoo-voult	chú uth	sxu	chox̌
halibut hook	che-bood	shi-buḱ		
red snapper	klá-hap-pahr	kli-kup'uht		
hook-nose or silver salmon	tsoo-wit			xuh-ba'di
deer	bo-kwitch		mow its'	
sea egg				kwi'tsi

spread slightly until the barb set, when it would not come out. Young men tell me there is quite a knack to taking one out of these 'old time' hooks when the fish is safely aboard; few of them are able to do it. With a ball-ended club the fisherman stunned his catch and hauled it into the canoe. Large halibut--and large ones are not infrequent on Nootkan banks--were loaded by tipping the canoe until the gunwale was just above the water and fish could be rolled on it, then the canoe was tipped back, 'and he slides right in.'" (pp. 44-45)

Swan, one of the earliest Americans to observe the Makah at Neah Bay and make ethnographic studies of them, described halibut fishing:

"The product of the ocean next in importance (to whales) for food is the halibut. These are taken in the waters of the strait in certain localities, but as the depth of water at the mouth of the strait is very great, the Indians prefer to fish on a bank or shoal fifteen or twenty miles west from Tatooche light. The depth on the banks varies from twenty to thirty fathoms. The lines used in the halibut fishing are usually made of the stems of the gigantic kelp (facus gigantea), and the hooks of splints of hemlock. A line attached to one of the arms of the hook holds it in a vertical position, as shown in Fig. 9. The bait used is the cuttlefish or squid (octopus tuberculatus), which is plentiful and is taken by the natives by means of barbed sticks, which they thrust under the rocks at low water, to draw the animal out and kill it by transvixing it with the stick. A portion of the squid is firmly attached to the hook, which is sunk by means of a stone to the bottom, the sinker keeping the hook nearly in a stationary position. To the upper portion of the line it is usual to attach bladders, which serve as buoys, and several are set at one time. When the fish is hooked, it pulls the bladder, but cannot draw it under water. The Indian, seeing the signal, paddles out; hauls up the line, knocks the fish on the head with a club; readjusts his bait; casts it overboard; and proceeds to the next bladder he sees giving token of a fish. When a number of Indians are together in a large canoe, and the fish bite readily, it is usual to fish from the canoe without using the buoy. This hook is called che-büd, and the club, sometimes fancifully carved, is called ti-ne-t'hl.

"When fish are brought home, they are first landed on the beach, where the women wash and wipe them with a wisp of grass or fern. The entrails are taken out and thrown away, and the rest of the fish carried into the houses. The heads are taken off first to be dried separately, and the body of the fish is sliced by means of a knife of peculiar construction, somewhat resembling a common chopping knife, called kó-che-tin (Fig. 10). The skin is first carefully removed, and the flesh then sliced as thin as possible to facilitate the drying; and when perfectly cured, the pieces are wrapped in the skin, carefully packed in baskets, and placed in a dry place. The heads, the back bones, to which some flesh adheres, and the tails, are all dried and packed away separately from the body pieces. When eaten, the skin, to which the principal portion of the fat or oil of the fish adheres, is simply warmed, or toasted over the coals, till it acquires crispness. The heads, tails, and back bones are boiled. The dried strips from the body are eaten without further cooking, being simply broken into small pieces, dipped in whale oil, and so chewed and swallowed. It requires a peculiar twist of the fingers and some practice to dip a piece of dry halibut into a bowl of oil and convey it to the mouth without letting the oil drop off, but the Indians, old and young, are very expert, and scarcely ever drop any between the mouth and the bowl. In former times, dried halibut was to these Indians in lieu of bread; oil in place of butter, and blubber instead of beef or pork." (pp. 22-23)

Swan's reference to the illustration showing the halibut hook in a vertical position is misrepresented, and shown on one side. This may have been the fault of the printer.

Fish clubs are most frequently described as a carved club with a knob on one end. Drucker states that the club was never decorated (p. 23), yet Densmore illustrates one with a decidedly carved representation of some animal's head (plate 9), and, Swan shows a carved one (Plate II). No doubt most were rather plain. Two examples of the Kwakiutl illustrated in Boas study are not carved to represent some animal, but one has an elaborated grooving on the head and handle.

Boas account of halibut fishing among the Kwakiutl is too long to be quoted here, but it is an account that is recommended for further reading on the subject. Taken from the original native texts which he recorded while working with the Kwakiutl, the account carries a flavor and feeling that is much more true to the native than any secondary account based on observation only. See pages 472-480.

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