TIDAL NETS OF THE SOLWAY

Werner Kissling*

The bed of the Solway, north and eastwards of a line drawn from Southerness Point on the Scottish shore to Silloth on the English shore, far up into the recesses of the Firth, consists largely of low banks of sand which are dry at low water in ordinary tides. With twenty-seven tides a fortnight, the wet surface of this level stretch of sand and mud is exposed twice a day, leaving numberless shallow pools and channels, until once again the whole is flooded and levelled by the next high tide. Thousands of worms, sandeels and small shellfish live on these sandbanks, depending on the cyclic rise and fall of the water, while fish of all kinds, mainly salmon and flounders, come and go with the tides; salmon on their way to the mouths of the various rivers which empty into the Solway linger about these banks until they are tempted to move up the rivers; flounders coming with the flow to feed return with the ebb into the deeper water. Their movements, coinciding with the states of the tide, have for generations past attracted man to the perilous mud flats of the Solway.

The devices in use to-day for capturing fish in the tidal waters of the Solway have been used from time immemorial. Some consist of fixed stake nets and traps of various types in which the fish collect with the ebb and flow of the tide, others of portable means of intercepting them. These require great strength and skill and, above all, local knowledge as to the depth of the channel, irregularities of the ground, the reach of the tides, irregular currents and so on.[1] As the tide is moving up river, inundating the flats, and again when it is ebbing from the banks, the fishers take up their positions in the channel with their "haaf" nets (Pl. II fig. 2) to intercept the salmon. This mode of fishing (p. 169) which seems suited to the Solway, survives both on the Scottish and the English side, where it is

* Dr. iur. (Königsberg); part-time field-worker, School of Scottish Studies.

still widely used. Netting by "fixed engines" on the other hand, an ancient right and usage within the waters of the Solway, is carried on legally only with certain types of nets and on the Scottish side alone; for the rights to fish with stake nets on the English side were lost in 1865. In modern times, however, a clear distinction between a salmon net proper and a white-fish net has brought at least some measure of protection for the salmon.

STAKE SALMON NET

The stake salmon net, which can be used irrespectively of whether the tide is ebbing or flowing, is stretched on stakes and has at least one enclosed "chamber" into which the fish are guided from different directions by arms, known as the ebb-arm, the flood-arm and the cross-arm. The cross-arm or "leader" is extended across the direction of the tide. When a salmon strikes the cross-arm, it is swept along the net until it reaches the chamber and finally the inner pocket from which it cannot find its way out (Pl. III fig. 1).

The position of the stake salmon net is as close as possible to the natural tidal bed of a river where it winds seawards across the flats, thus leaving the channel clear for the fish to run to the upper reaches of the river. The stakes are sunk in the ground and the "head" is placed near low-water mark. In the case of deep-water fishing, the "stake nets" may be attached to buoys and float at anchor.

Stake salmon nets vary greatly in length and height. They may be a hundred yards or more long and from eight to twelve feet high. The method of using them, however, is the same in all cases.

In the Solway, with its rapid tides and long stretches of shallow water, stake-net fishing is the most convenient and efficient method for catching both salmon and flounders in large quantities. From the commercial point of view, therefore, the "paidle" net, which may be described as a miniature stake net but which must be set *bona fide* for the purpose of catching white fish, remains an important net. It is by means of fixed tidal nets that a large supply of fish for the market is ensured.

"PAIDLE" NET

This small stake net has one pocket into which fish are led by various arms, the plan of the net being to all intents and purposes the same as that of the stake salmon net (Pl. III fig. 2).

The pocket of the net, however, is different, its mouth opening at the bottom into a small barrel-shaped trap known as a "paidle," devised for catching flounders (Pl. III fig. 3). The advantage of the paidle into which the fish are finally drawn, is that it keeps the fish together and facilitates their removal from the net. The paidle is about three feet long and two and a half feet high.

For generations fishermen have set nets of this type on flounder feeding grounds in the Solway to catch white fish; some formerly chose their sites to capture fish of all kinds, including salmon. This, however, was made illegal (1886) and for a time the use of the net was almost completely abandoned. The paidle net, to-day, is lightly built and kept throughout appreciably lower than the salmon nets. The average height of the net is about five feet; the pocket is about eight feet long by four and a half feet broad. The netting, formerly made of Russian hemp, a strong material sufficient to stop a running fish, is now lighter, generally of cotton twine. The pocket may be covered or not. A cover may be more important in some places than in others, but is bound to add to the efficiency of the net. If covered, the pocket will be a more deadly trap for fish of all kinds, not excluding the occasional salmon which is liable to enter it. For a flounder net maximum efficiency is essential if the fisherman is to pay his way.

The position of this flounder net, in which fish may be caught on the flood as well as on the ebb tide, is on a channel bank with the "head" reaching over the top of the bank at a point where the fish coming over it drop into deeper water. As they run against one of the leading arms, they are swept into the pocket and finally into the paidle.

The paidle net survives on the Scottish side of the Solway alone.[2]

"POKE" NET

The simplest type of tide net, and no doubt an early one,[3] is used in the neighbourhood of Annan for trapping salmon. Sir Walter Scott's novel *Redgauntlet* contains numerous allusions to "nets of flex and stakes of wood" among the "Lakes of Solway,"[4] which are described as "improved modes of erecting snares, opening at the advance of the tide and shutting at the reflux." The type of net is easily recognised. In the past perhaps best known in the form of a "raise" or "rise" net, its lower part rose with the mouth of the net wide open to the top when

the tide flowed, but was flattened by the pressure of the ebb to form a bag or "poke" in which the fish were trapped.[5] A poke net, to-day, works on the same principle.

The net is made of sturdy hanks of cotton, suspended between a pair of iron stakes or "stours," five and a half to six feet high, forming a four-foot pocket (Pl. IV fig. 1). The pairs of stours are set in groups of five which constitute a "clout," each fisher being allotted fifteen clouts or seventy-five pockets.

Licences are issued annually by the District Fishery Board and usually given to retired fishermen or fishermen's widows, and the position of the licensee's nets is determined at the end of January, prior to the opening of the season, by the ancient method of "casting the mell," which is still practised in some districts in a more or less modified form. Each fisher, of whom there may be a dozen or more, builds a small heap of sand upon the shore. One, who is selected to be the neutral man, turns his back while the others stand at random beside the sandheaps carefully noting each other's position. The fishermen then stand aside. The neutral man, who does not know his own position nor that of any of the others, kicks down one of the sandheaps. This gives the man whose heap it was the first choice of place at the fishing ground, the positions of the others depending on the order in which the sandheaps are kicked over.

THE "HAAF" NET

A large type of "pock" or "poke" net, which must be held and worked by the fisher standing up to his breast in the channel, is known as the "haaf" net. Available sources of information on the use of this net in the past throw no light on its origin. *Haf* is Norse for "the open sea" and survives in the dialect of Barra, where "fishermen still call the Atlantic the Haf" (Maclean 1956: 21), and elsewhere in the Hebrides and in Shetland. It is at least a plausible guess that the net came over to this country with the Norsemen, but there is no evidence. Another explanation of the name links it with Icelandic *hafr*, a poke-net for herring fishing, Norwegian *haav*, connected with the verb *hevja* meaning "to lift or raise."

My attention has been drawn by Mr E. C. Truckell to two entries in the Dumfries Kirk Session Book (1649 and 1653), the first referring to "fishers and halffers," the second to "halff netts." In 1692 Symson describes the "halfe net" as having almost the "forme of a semicircle" (Symson 1907:

79-80), which seems to indicate a slightly different meaning of the name by which the net was then known. An eighteenth century description, however, speaks of "haaving" or "hauling" with a "pock" net "fixed to a kind of frame, consisting of a beam twelve or fourteen feet long, having three small sticks or rungs fixed to it" (*Stat. Acc. Scot.* 1791: 15). Both of these sources refer to localities on the Solway, and observations on the use of the net are identical.[6]

The net, to-day, differs in no important respect from that used in the past. It is fixed to a beam or a cross-bar and to three "rungs" at right angles. There is one of these at each end and one, the midrung, not quite in the centre and projecting through the cross-bar (formerly known as the "haaf-bawk"[7]) by which the frame is held.

Standing in the running tide as deep in the water as his breast-high waders will allow[8] (Pl. IV fig. 2) the "haafer" sets his net against the stream and holds it firmly with his left hand on the centre of the beam, pressing it down and out and keeping it at arm's length, while reaching out with his right arm to grip the handle (Pl. V figs. 1, 3). The correct position for the fisher is to stand with one foot forward, so that he is able to lean against the fishing frame and yet, if necessary, quickly withdraw his weight and regain his balance.

He then pulls up six meshes on his thumb so that a small bag or "poke" forms at each end of the net (Pl. V fig. 3). When a fish strikes against one of the pokes, the haafer, feeling a pull at his thumb, instantly takes one step backwards, and presses down on the midrung. His haaf then floats to the top. ". . . from each corner of the net they have a warning string coming, which they hold in their hand, which gives them warning when the least fish comes in the net, and presently they pull the stakes (for so they term the frame of timber) from the ground, which are instantly wafted to the top of the water, and so catch the fish . . ." (*Stat. Acc. Scot.* 1791: 15). If a salmon is caught in the right poke, he flings it with his right hand over into the double yarn, then turns with his back to the tide, knocks it over the head with his "mell" (a mallet) (Pl. V fig. 2 and Pl. VI fig. 2) and throws it out of the double yarn. Then he lets the current swell the poke out, draws it in again to reach the fish, puts his finger into the gill, balances the fish over his shoulder, still holding onto the gill, and slips it head first into a bag slung over his shoulders (Pl. VI figs. 1, 2; Pl. VII figs. 1, 2).

When more than three are fishing in the same place, the haafers stand in a row (Pl. IV fig. 2). They "pile" for positions before restarting in any place or fishing ground. The method is apparently derived from the ancient practice of "casting the mell" which is retained among the fishermen of Annan (p. 169). As the tide rises and becomes too strong, the haafers move in from the deep end, one by one, to "set down" on the "shal end," or go behind the "backs," and as the tide ebbs they move farther and farther down and continue till low water. After bagging the fish, the haafer resumes his position in the row without delay.

Haafing is laborious and requires much endurance, but the reward attracts a growing number of part-time fishers from the neighbourhood to haaf side by side with the regular fishermen.[9] The latter generally manage to practise haafing and to attend to one or other of the stake nets as well. Some take up their positions standing on a "brow" (slope of a flat bank) at the foot of a channel (leading into the Solway) when the tide is starting to "bound" and salmon are coming up the river with the rising flood. This needs courage and great circumspection. A man may stand just too long to escape the pressing flood and be washed away before he can manage to get up the brow. An experienced fisherman who was trying to extricate his mate from such a perilous position by holding out the end of the haaf "back" to pull him up the slope once found himself unable to do so without fetching help, so heavy was the man with his waders filled with sand and water. Bad visibility is dreaded. The story is told how having to wade through a "gut" (old channel) on their way back from their positions in the channel on a foggy night, one group of fishermen decided they would leave the fishing as soon as they saw the tide come within reach of a nearby stake net. That night a lot of fish were running and the catch was promising. "Coming out from the deep, over to the 'shal' end, my father[10] suddenly thought of the stake net, and as he went to have a look at it, found it in four feet of water. Immediately he gave the alarm. With their waders on to save time (normally they take them off) and holding on to one another's haaf back, the men advanced forming a human chain, the tallest first, the smallest last. This worked; four of them, washed off their feet, but clinging to their haaf backs, were pulled to safety by the other five men. But their troubles were not over. Keeping close together in thick fog, they started for the road but after half an hour they came

FIG. 1.—20-foot tidal bore, River Nith at Glencaple.

FIG. 2.—"Haafers" taking up position, Glencaple.

FIG. 1

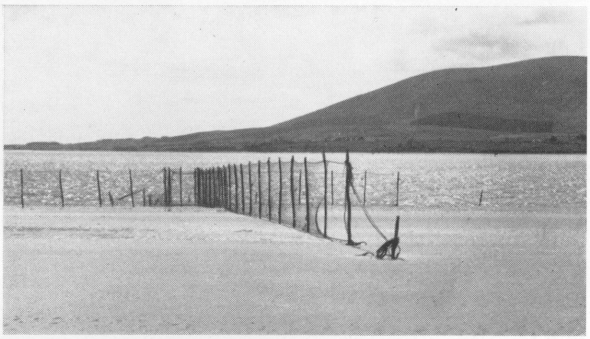

FIG. 2

FIG. 3

FIG. 1.—Stake salmon net (two chambers), estuary of River Cree.
FIG. 2.—"Paidle" net (one chamber), estuary of River Nith.
FIG. 3.—Removing the catch from the "paidle".

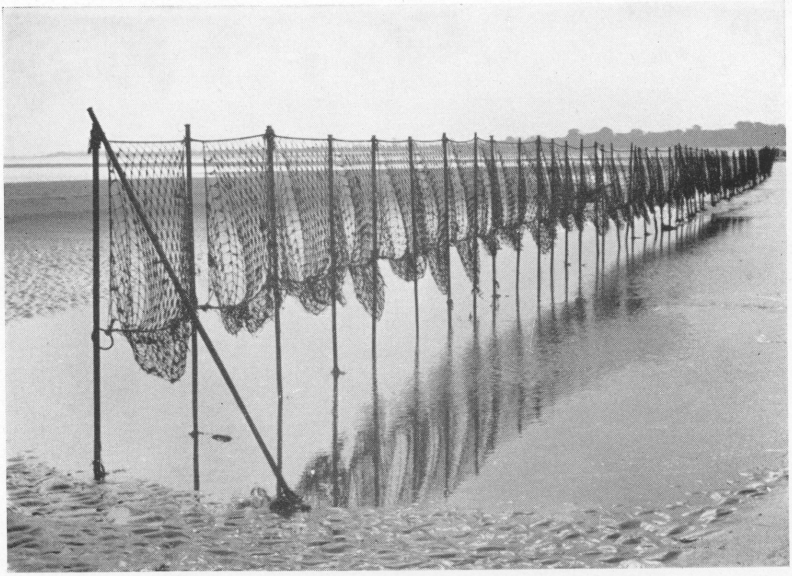

FIG. 1.—"Poke" nets, estuary of River Annan.

FIG. 2.—"Haafers" in the running tide, River Nith.

FIG. 1.—Waiting for a fish.

FIG. 2.—The kill.

FIG. 3.—The correct position for the "haafer".

FIG. 1.—Fighting a salmon in the ebb-tide.

FIG. 2.—Preparing to kill with the "mell".

FIG. 1.—Passing the finger into the gill.

FIG. 2.—Bagging the fish head first.

FIG. 1.—Salmon "yair", net up, River Dee, Kirkcudbright.

FIG. 2.—Salmon "yair", net down, River Dee, Kirkcudbright.

back to the water's edge. Again they tried and then decided, as the tide was almost spent, to wait until the fog had lifted. An hour or so later they discovered that they had walked round in circles."

Fishing, in shallow water, on the "shal", or "fording," is practised either by a group of fishers or individually—the solitary fisher having the best of it—with a full haaf back or with a miniature haaf—or "lifting" net. With the haaf back on his shoulder, always on the move, the fisher looks for the "break" of a salmon and prepares to run to get in front of it before it escapes into the deeper water.[11]

THE SALMON "YAIR"

A more convenient mode of fishing salmon with a type of stake net which is dying out, the salmon "yair", is still in operation during the summer in the estuary of the Dee at Kirkcudbright. The net consists of two leaders, wattled with twigs, forming a V-shaped enclosure into which the fish enter with the flow of the tide. It must therefore be placed as close as possible to the tide-way. The fisher operates the net from what are called the "yairs," a sort of scaffold with projecting platform, erected at a point where the two leading stakes come close together, pulling up each salmon onto the platform as he feels it entering his net (Pl. VIII figs. 1 and 2). This net is believed to be the only example of its type left in the country.[12]

The yair is supposed to have been introduced by the monks of Tongland Abbey.

It is not, of course, intended to make a complete list of all the types of net in use in the Solway to-day or of those which have been used in the past, the writer's aim being rather to place on record the various modes of fishing which are of interest before they disappear through replacement by more modern and standardised methods. "Greedy devices" they may have been in the eyes of those who used "only the boat-net and the spear, or fishing rod," to quote once more from *Redgauntlet*, but who can doubt that further "improvement" of the methods used in the name of efficiency and dictated by commercial interests on a larger and larger scale will far surpass in "greed" even the most offensive of those used in the past, and this without the compensation of their predecessors' claim to the picturesque? Our sympathy must always be with the "haafer" whose efforts compare favourably with those of the more "manly" angler.

[1] At Glencaple, close to the mouth of the River Nith, on the north shore of the Solway, where the tidal range is considerable and the tidal current strong, the flood tide (from 16 feet upwards) under certain conditions comes in as a bore (Pl. II fig. 1) which may move at a rate of five knots or even more. The following passage in the *Irish Life of Adamnan*, quoted by Maxwell (1896:2), refers to the Solway:

> "The strand is long, and the flood rapid—so rapid, that if the best steed in Saxonland, ridden by the best horseman were to start from the edge of the tide when it begins to flow, he could only bring his rider ashore by swimming, so extensive is the strand and so impetuous is the tide."

[2] In Morecambe Bay, on the flat shores of Lancashire, white fish are caught in stake nets which have no elaborate traps, pockets or mazes (baulk nets, stream nets and tail nets). The nets are from a hundred to three hundred yards long and up to three feet high. From this it may be inferred that fish are intercepted only when the tide is ebbing. Evidently varieties of an altogether different type of net and different methods are employed under similar physical conditions to those in the Solway.

[3] No evidence is at hand as to the time when the earlier wicker or stone fish-traps, remains of which are occasionally washed out of the sand at many points round the Scottish side of the Solway, gave way to stake nets. The early charters as far back as the 1120's make references to Solway fisheries and these presumably employed the more ancient fish-traps.

[4] The pools left by the tide in the hollows on the sands at the head of the Firth.

[5] Scott's acquaintance with this net is suggested by the attention he paid to its position in the lakes, not in the river channels—a point of difference in the way nets of this type were used. See also *Stat. Acc. Scot.* 1791: 16-17.

[6] In Morecambe Bay, to-day, a variation of the type is called a "heave" net (so termed in the Lancashire River Board Licences Order).

[7] "The pole whereby the net is raised out of the water." (The *English Dialect Dictionary* Vol. III.)

[8] In the old days, still within memory of the older men, the haaf-net fisher used to wrap a folded blanket round his waist, reaching down to his knees, in the manner of a kilt. One end of the blanket might be fastened to a stake, so that a man could roll himself into the length of it and keep it tight as he worked his way towards the stake ("whapping" post). It may therefore have been possible for the people to go into the water till it came "up to their breast and sometimes to their shoulders . . ." (Symson 1841: 64).

[9] Speaking about the toilsome and dangerous life of the Irish shores, E. E. Evans stresses that "these various activities are carried on not as a rule by specialized fishermen but by farmers and peasants to whom the sea offers an accessory source of life and interest . . ." (Evans 1949: 152).

[10] I am indebted for this story to the son of Robert Wilson, fisherman, Glencaple, Dumfries.

[11] A singular mode of fishing, called "shauling" is recorded in the parish of Dornock, at the end of the eighteenth century: it was done with "leisters"—a kind of four pronged fork, with the prongs turned a little to one side, having a shaft 20 or 24 feet long. These were thrown by the fishers, sometimes upon horseback, killing at great distances, when the waters turned shallow (*Stat. Acc. Scot.* 1791: 15).

An earlier record from a survey carried out by Timothy Pont at the beginning of the seventeenth century, mentions the same method, practised on the shores of Ruthwell, Annandale, when the tide was starting to flow: "Also, which is both profitable and pleasant, the inhabitants . . . watch for salmon entering the channels of the Solway, and when they see them ascending the flood, they enter the river on horseback and easily transfix and land them with spears of three prongs." (quoted in Maxwell 1896: 253-4).

The method survives to-day in the custom of "tramping" flounders, which is still practised on the sandbanks, mainly in the estuary of the Nith. Bare-foot and bare-legged the people wade into the shallow water, feeling the fish slide between their toes and stabbing them one by one through the head with hay forks (leisters being illegal).

[12] In the past, more salmon yairs are known to have existed. There was one at Spittal, on the east side of the River Cree, Kirkcudbright. The river here is several miles broad at high water, though at low water it is contained in a narrow channel. Extreme velocity of the tide-stream is at times experienced in this passage where there used to be a ferry (to Wigtown).

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ILLUSTRATIONS

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