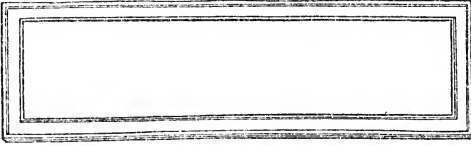


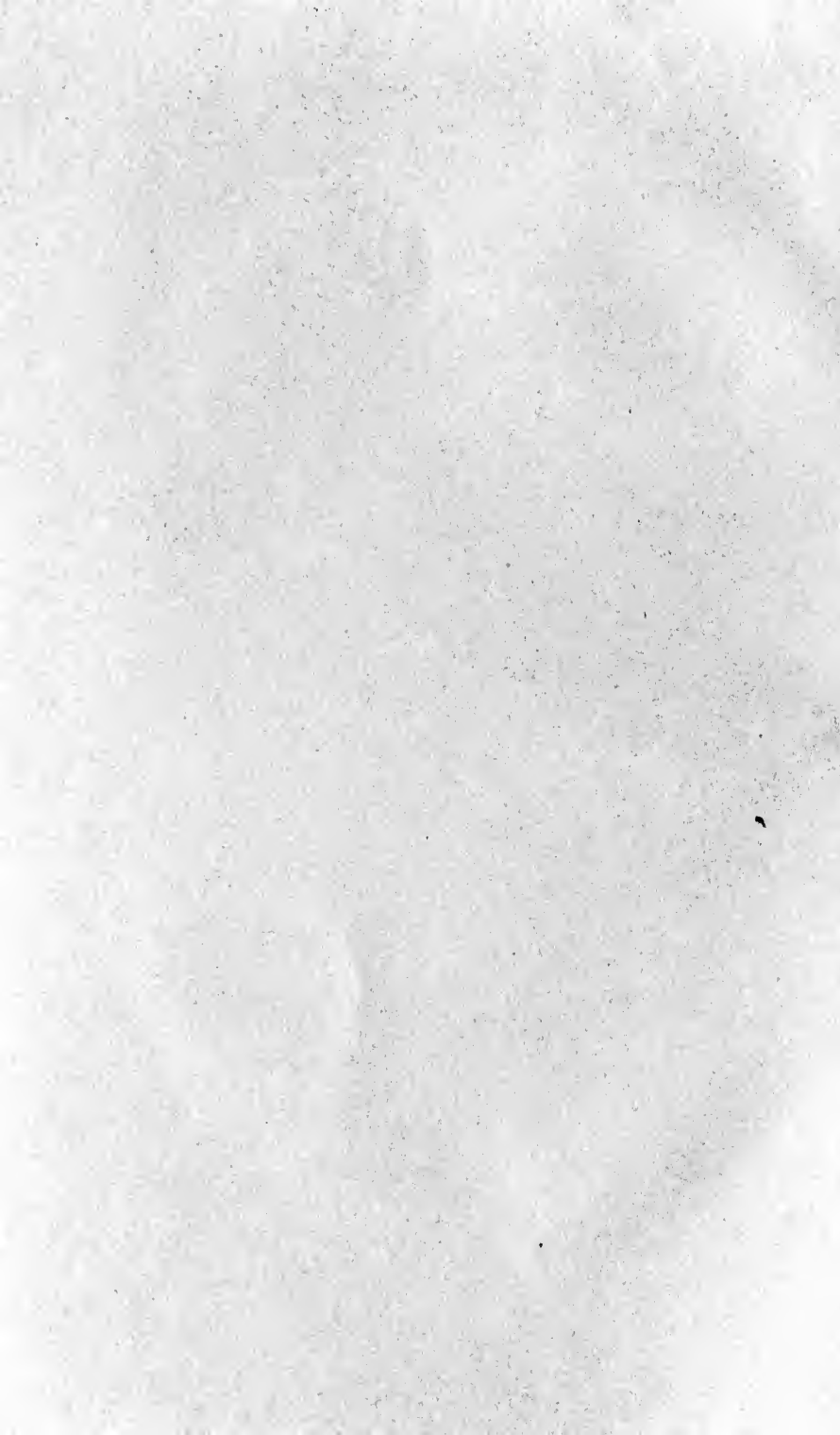
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Samplets on the fishing
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OBSERVATIONS

REGARDING

THE SALMON FISHERY

OF

SCOTLAND.

ESPECIALLY WITH REFERENCE TO

THE STAKE-NET MODE OF FISHING;

THE REGULATION OF THE CLOSE-TIME;

AND

THE NECESSITY OF A LEGISLATIVE REVISAL OF THE
ANTIQUATED SCOTS STATUTES AT PRESENT
APPLICABLE TO THESE SUBJECTS.

SECOND EDITION.

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PLATE P3

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OBSERVATIONS, &c.

IN the lakes, rivers, and seas of Great Britain and her dependent islands, there abounds a rich and choice variety of fish ; and the situation of the country, the habits of the people, and the nature of the coasts, are peculiarly favourable for carrying on the fisheries.

Accordingly, the fisheries have at all times been considered, not merely as an important source of individual wealth ; but even as of much national importance. Great efforts have been made to foster and protect the Herring and White fisheries, more particularly, by bounties, and exemptions from duties,—in short, by a continual watch over their interest.

But there is one national fishery,—that of the Salmon, —which, though once, perhaps, in greater favour with the Legislature than any other, has latterly been altogether neglected : while the antiquated enactments of a rude age, intended to give it support, unfortunately remain in force, only to injure and depress its best interests.

It will be the object of what follows, to direct public attention to the importance of the Salmon Fishery in Scotland,—leaving the fisheries of England and Ireland to those better acquainted with them,—and to point out the

necessity of a legislative inquiry, preparatory to an amendment of the laws by which that fishery is regulated.

In early times, the Salmon fishery of Scotland attracted, perhaps, a greater share of the attention of the Legislature, than any other matter of public police. As a branch of national subsistence, it was eminently important in an age when agricultural industry was scarcely awakened; and, instead, therefore, of being abandoned to casual occupancy, or attached as an appendage to the property of land, it was considered as constituting a separate estate in the crown, to which a right could be acquired only by special royal grant. But, in the exercise of this right, the interest of the public,—or, at least, what was then considered to be the public interest, according to the narrow and imperfect views of the times,—was not lost sight of; and various provisions and limitations were framed by the Legislature, which, however inefficient, and even hurtful, some of them may now appear to the sounder knowledge and wider experience of the present times, had the preservation and security of that interest alone, for their object.

The professed and well meant intent of all these enactments, was one equally important to the public, and to the proprietors of the fisheries,—the propagation of the Salmon species, and the protection of the *fry*, or young brood of Salmon, against the rapacity of individuals, and against the consequences of injudicious and destructive modes of fishing. This object was attempted to be accomplished in two ways:—partly, by limiting the period during which the fishery might be carried on; and partly, by prohibiting the use of those devices and modes of fishing, which were calculated to prevent the spawning fish from reaching the grounds in which the

spawn is deposited, or afterwards to intercept or destroy the fry in their descent from the spawning ground to the sea.

Experience, and the observation of fishers, have, however, discovered that the period during which, by the general law in the statute-book, the fishery is forbidden, is not the proper period for attaining what the Legislature had in view.* And, in like manner, as to the *modes* of fishing;—how extraordinary soever it may appear, the regulations which were intended for the protection of the fry or young brood of Salmon, are now acknowledged, in their operation, to have the very opposite effect;—protecting, on the one hand, the very engines which, in the present state of the law, destroy the fry and ruin the fishery; and, on the other, preventing the use of apparatus, harmless as to the propagation of the species, and, at the same time, powerful beyond all other known means, for increasing the produce of the fishery.

The real value of the Salmon fishery has thus, in a great degree, been lost sight of, both by the public, and by the Legislature. It has been regarded as a source of profit to individual proprietors, but seldom, in modern times, considered as of importance to the state. The experience of the last twenty years in some parts of Scot-

* Accordingly, in some of the rivers of Scotland, special statutes have altered the season, and in others, local usage, by common consent, from time immemorial, has overcome the general law: while, in many of the principal rivers, the original statutory regulation is still in force. And, in consequence, as will be afterwards noticed, the most extraordinary diversities exist, in regard to the periods during which the fishery is allowed to be carried on in the different rivers in the kingdom.

land, and, perhaps, more particularly the experience of the last four or five years, on the northern parts of the east coast, has, however, opened the eyes of many, and displayed a source of national wealth and national strength, which was before unknown. And, as a conviction of the great importance of the fishery, must spread wider and wider every day, there can be no doubt, that, sooner or later, the attention of the Legislature *must* be directed to it.

The *modes* of Salmon fishing in use in Scotland, were, until within the last thirty years, extremely rude and inartificial; and were adapted only to the narrow rivers. There was, indeed, it may be said, *no* Salmon fishing in the friths or estuaries,—none of the modes in use, being suited for such situations.

The most simple mode was by the *moveable net* or *seine*, still in use, generally known by the name of the *coble-net*. But the indolence of a rude people naturally looked for a fixed apparatus, which would perform its work without the necessity of constant attendance; and, accordingly, such an engine seems to have been early resorted to in most rivers.

The oldest of which we have any account, was called a *croe*, or *cruive*;—examples of which, supported by prescriptive usage or special grant, are still in existence. It consisted of a dike, or solid mound of earth, stone, or wood, running across the river from bank to bank, wherein, at intervals, were placed certain pieces of machinery for detaining and entangling the fish in their transit up and down the river.* This dike or

* It has been said, that, properly speaking, it was to this machinery, inserted in the mound or dike, that the name of

mound, with its boxes or traps,—which were generally of close spars, or wattled work,—must, of course, have totally interrupted the navigation of the river. And it must also have prevented the transit of the fish, and been utterly inconsistent with the propagation of the species; as well as destructive to the brood, not of the Salmon only, but of all kinds of fish frequenting the river.

Cruives were adapted for fishing in any river not of too great magnitude for such an erection,—whether the station was above or below the influence of the tide. There was, however, another species of engine, termed a *yair*, which in many respects resembled the *cruive*, but was used only within the influence of the tide. Its nature and formation is not precisely known; but, like the *cruive*, it appears to have been possessed of most injurious qualities;—destroying the brood, and preventing the transit of the spawning fish. One important part of this apparatus, consisted of mounds of wood, stone, wattled work, or other materials, forming, as in the *cruive*, a very extensive inclosure. And it may, perhaps, convey some idea of its nature, to notice, that, in statutes regarding *yairs*, *mill-dams* are mentioned; and, as of the same class, that, in some charters, *yairs* are denominated *fishing-stanks*.

These *cruives* and *yairs*, attracted, at an early period, the anxious attention of the Scots Legislature. There is a statute extant, so early as the time of Alexander II,

croe or *cruive* was given. And,—with some plausibility certainly, considering the structure of such machinery, even at the present day,—etymologists have described the word *croe* to be the same with *crib*.

subjecting them to certain restrictions, remarkable for their rustic and ludicrous simplicity;* and there is subsequently a regular series of statutory regulations in various reigns, down to the time of Queen Anne, all having one common object,—the propagation of the Salmon species, and the protection of the *fry* or young brood of Salmon. The act of Queen Anne, (21st September 1705, cap. 11), which ratifies and approves all the former laws and acts of parliament, enumerates them as being ‘made

* This curious production is entitled ‘*Lex Aquarum*,’ and is in the following terms.—‘*Hæc est assisa Regis Alexandri, facta, apud Perth, die Jovis, ante festum Margaretæ, per Comites, Barones, et Judices Scotiæ, quod filum aquæ seu medium aquæ, lie streame, debet esse liberum, usquequaque in tantum, ádeo quod unus porcus, trium annorum bene pastus, posset se vertere infra filum aquæ: Ita quod neque rostrum porci, nec cauda appropinquat sepi, vel ripæ. Et debet aqua esse libera, ita quod nemo ibidem pisces capiat, a die Sabbathi, post vespervas, usque ad diem Lunæ post ortum solis.*’—*Alexander II, cap. 16.* The Scots translation of this Statute, as given in *Skene’s Regiam Majestatem*, bears, ‘that the streame of the water sall be in all parts swa free, that *ane swine of the age of three zears, weell fed, may turne himself within the streame, round about, swa that his snout nor taill sall not touch the bank of the water.*’ But Lord Hailes, in his *Annals of Scotland, App. I, No. 3*, shews that the latter part of this translation is incorrect; and that the sense of the statute is, that *the mid-stream should, for a certain breadth, be free from any hedge or heck, palisadoes or rails, placed for interrupting the course of the salmon: this breadth being expressed according to a form of measurement adapted to the notions of a rude age.*

‘ anent the slaying and destroying of *red-fish, smolts, and fry of Salmon.*’

At the date of this act, and, indeed, for some time after the Union, the modes of fishing appear to have been little farther advanced than they were centuries before. The fishery was still confined to the narrow rivers. It was not attempted,—at least, not by any efficient mode,—in the friths or estuaries. And it may fairly be doubted, whether it was then known that Salmon could be caught on such stations, in any considerable numbers.

Gradually, however, as the country awakened, and enterprize was encouraged, and markets were opened, the fishery began to advance, particularly in the Tweed and the Solway, and various means were attempted to render it more productive. What was called a *toot-net* was tried; and at some stations another engine called a *stage-net*, was introduced. The *toot-net*, in some respects, resembled the common seine, or coble-net; but it was much larger and stronger, and extending to an indefinite length from the beach into the water, was secured at its extremity by an anchor. The construction of the *stage-net* was more complicated. The fish were here, by means of a long line of net-work, fastened like the *toot-net* by an anchor, conducted into *gins* or *traps*, or what were termed *pock-nets*, placed below a wooden platform on which the fisher stood to watch; and when they were inclosed in these *gins* or *traps*, he raised them to his stage or platform, and so secured them.

None of these modes of fishing, however, effected any material improvement upon the *produce* of the fisheries, which remained almost unaltered, until a more efficient species of apparatus, which was introduced about the

close of last century, by some enterprising fishers in Anandale, opened up new views, and caused a total revolution in the Salmon fishery of Scotland.

On the extensive *flats* or sand-banks in the Solway Frith, excavations are made by the eddies of the current, which, at ebb-tide, form on the banks large *pools*,—or *lakes*, as they are termed by the fishers. At these lakes, the fishers erected what was at first called a *tide* or *floating-net*, in consequence of the net being so constructed, that it was the operation of the tide which secured the fish. It consisted of strong and coarse net-work, the meshes of which were ten or twelve inches in circuit, placed along the margin of the lake and surrounding it on all sides. This net-work was fastened to stakes driven into the banks, at considerable distances from each other; and at various places in the lower or flood side, it was so constructed as to open and shut with the current. These places, were kept open by the flood-tide, so that the fish, during the flood, were allowed to go freely into the net; but when the current of the tide changed and took the opposite direction, the loose net-work, pressed by the receding water, was closed,—thus forming a complete inclosure, in which the fish were detained. And as the tide ebbed, they sunk down into the lake, where they were caught by the fishers, at low water.

Such was the origin of what is now called the **STAKE-NET**. And it is a curious circumstance, worthy of particular notice, that, induced by the success of the fishery in these *lakes*, two brothers, William and James Irvine,—experienced fishers on the Solway, and nearly related to Messrs. Little, who afterwards introduced the invention into the Tay,—visited the Tay, for the purpose of ascer-

taining whether there were any suitable *lakes* in that frith, upon which *tide-nets* might be erected. But they returned, reporting to their friends that there was none.

It turned out, however, that these lakes were not essentially necessary for the successful prosecution of the new mode of fishing. Accordingly, Mr. John Little,—one of the Solway fishers, and a gentleman of great ingenuity and intelligence in other matters,—having accidentally visited the Tay about the year 1797, resolved to try the experiment in that frith, and before he left it, he took, for himself and three brothers, a lease of the Salmon fisheries on the estate of Seaside.

A net, precisely similar to those on the Solway, having, accordingly, been erected at Seaside, the success exceeded the most sanguine expectations. Previous to this time, there was, it may be said, *no* fishing at that station, the width of the frith being there not less than two miles. But now the produce was such as excited the astonishment of the district, and occasioned the utmost alarm among the proprietors in the upper parts of the river.

This net had not, however, been long in operation before a material improvement was made in its construction. The *entrance* to the inclosure of the net, as originally used on the Solway, was shut by the action of the ebb-tide. But it was observed at Seaside, that, for some time after it had been thus shut, the fish continued to gambol on the banks; and that many might be caught, were the net so constructed as still to admit them into the inclosure. Instead, therefore, of the former entrance, which, like a valve, opened and shut with the tide, the net was now so constructed, as to leave the passage always open; but, with such a degree of intricacy in the *chambers*, or divisions in the body of the net with which it communicated, that the fish, after being led from one to another, found

themselves completely entangled, and could not again get into the passage out. By this highly ingenious invention, which at once displayed and depended upon an intimate knowledge of the habits of the Salmon, the operation of the net was extended to the *ebb*, as well as the *flood-tide*; and its produce was, in consequence, much greater than ever.

Induced by their success at Seaside, Messrs. Little became tacksmen of many other fisheries; and, gradually, the newly invented engine,—now familiarly known as the *stake-net*,—came into general use in the Frith of Tay. Upwards of *seven thousand* Salmon, a quantity equal to a fourth or a fifth of the previous produce of the whole river, was caught in one season by a single net at Seaside; and at Birkhill, Balmerino, Mylnefield, and other places, the success was corresponding.

All of these stations, however, are in the *upper* part of the Frith. But, at the very mouth of the Tay, and at stations which most men would describe as in the ocean itself, the stake-net was resorted to, with no less extraordinary success. The fisheries on the north shore, belonging to the Honourable Mr. Maule, became, in consequence, of very great value. Before the introduction of stake-nets, they were let for £100;—afterwards they produced £2,750. The fisheries on the opposite shore, again, belonging to Mr. Dalgliesh of Scotsraig, which, before the invention, had produced annually only a few pounds, were now let for £2,105 of yearly rent. In short, it may be stated, as a general fact, that a corresponding increase took place in the value of *all* the fisheries in the Frith of Tay.*

* The *full extent*, however, of the value of the fisheries in the Tay, was never ascertained. Some of the principal stations

By one of those coincidences which sometimes occur, the latter end of last century was likewise remarkable for a valuable discovery by the late George Dempster, Esq. of Dunnichen; by means of which, the fishers were enabled to transmit the Salmon, preserved in ice, to distant markets. Without this discovery, although the benefit of the improved mode of fishing would have been experienced in the markets, near the fishing stations; yet the Salmon could not have been sent, in a fresh state, to any distant place. But now, with its aid, the fishers being enabled to preserve the Salmon fresh as they came from the sea, the advantages were spread all over the nation. And, in consequence, a great additional tonnage of shipping was constantly employed, during the summer months, in carrying the Salmon, packed in ice, to the different markets in the kingdom.

It seemed, in short, as if a new source of wealth had been opened up. And while proprietors found that their fisheries were, in many instances, nearly as valuable as their lands, a considerable number of individuals found employment as fishermen, seamen, &c. &c., and wealth was rapidly acquired by all concerned with the fisheries.

Nor was this state of matters confined to the Tay.

were not fished at all, or were only partially fished. On the extensive coast belonging to Lord Dundas, on the south side of the Frith, almost immediately opposite to Seaside, not a stake-net was erected. The same may be said of the Errol estate, adjoining to Seaside. And the Town of Dundee's valuable stations were only partially fished. In fact, from the small number of individuals engaged in the fishery, few proprietors had an opportunity of ascertaining the real value of their property.

The use of stake-nets gradually extended into other friths, particularly in the north. And although, from the want of knowledge and experience, the success, at first, was not quite equal to that which attended the fisheries on the Tay, yet, everywhere, the produce was beyond all former experience.

So striking and universal was this result, that the *upper heritors*,—the proprietors of the old *river* fisheries,—became alarmed. The new mode of fishing was not suited for their stations; and it threatened with destruction that MONOPOLY which they had so long, and so injuriously for the public, been permitted to enjoy. Accordingly, first, in the Tay, and, afterwards, in other rivers, these proprietors used every effort to put an end to the system which had been adopted in the *friths*. They asserted, that so tremendous a capture of Salmon could not be made without the most pernicious consequences. They complained that the breed of Salmon would be destroyed, and that, unless stake-nets were prohibited, the species would become extinct. A hue and cry, in short, was raised. The prophetic clamour was well calculated to work on the ignorance and credulity of the public; and, with one accord, *all* were in arms.

Whether the upper heritors really believed all that they alleged, it is not necessary to inquire; and it will be seen in the sequel, that never were fears more groundless. But, if they were not truly alarmed by this phantom of their own creation, at least they *certainly* perceived that the *monopoly* which they had until then enjoyed, was in danger; and that, if a quantity of fish, ten times greater, and of a richer quality, and in better condition than had ever before been in the market, was brought into competition with the produce of their

fisheries, the prices which they had been in use to receive, could not be maintained.

This, however, was a ground of alarm in which the public was interested in a sense directly opposite to the private and *exclusive* interests of the river proprietors. It was one, accordingly, which the latter never ventured, and could not venture to state. There was thus some difficulty in getting up a different pretext on which to found the defence of their monopoly. But at length this was thought to be discovered in the ancient Scots statutes already mentioned, which had been passed in dark and rude ages,—centuries before stake-nets, or any thing resembling them, had even been thought of;—at a time, indeed, when there was neither capital nor enterprize for such an establishment,—when there was not industry and activity among the people sufficient for its success,—and when there was not even a market for the produce. The language of these statutes, unfortunately, was general, and at the same time obsolete and of doubtful import; and the usages and interpretations of later times, in the gradual progress of the art, had attached meanings to it, by which the enactments had acquired a very extended operation.

Founding upon these statutes, therefore, the upper heritors on the Tay applied to the courts of law for an interdict or injunction against the use of stake-nets in that river or frith; and they were but too successful in their application. After a long and patient investigation, and a discussion conducted on both sides with great learning and ability, and after much diversity of opinion among the Judges, it was at length decided by the Supreme Court in Scotland, and the decision was affirmed by the House of Peers on appeal, that according to the existing

Scots statutes, the fishing of Salmon by stake-nets, in rivers, friths, and estuaries, is unlawful.

The example of the upper heritors on the Tay, was followed by those on other rivers. And, in consequence, all stake-nets have been removed, not only in the Tay, but in most of the friths in Scotland. If in any frith they are still allowed, it arises from the forbearance or tolerance of the upper heritors; for it is now settled and unquestionable law in Scotland, that any one proprietor, whether actuated by private hostility, or by real or imaginary interest, may put down, or prevent the erection of stake-nets in the frith or river in which his fishery is situate.

In the course of the discussions to which these various law proceedings have given rise, but more especially, perhaps, since the use of stake-nets has been prohibited, the public has discovered that these nets have not the pernicious tendency attributed to them; and a gradual revolution has accordingly been wrought in public opinion on the subject. But although eight years have nearly elapsed, since the illegality of the use of stake-nets in friths and rivers under the existing law of Scotland, was finally declared; yet no effort has been made by the proprietors of the fisheries in the friths, to avail themselves of this change in the public opinion, and to obtain relief from their fetters. They have submitted to them calmly and quietly,—charmed, one would almost believe, by some potent spell, which it is impossible to dissolve,—and have allowed their own fisheries to return to their former state of non-existence. The upper heritors have not been so idle; but have kept united, carefully watching over the welfare of their monopoly. Nay, in some districts, schemes have actually been laid to take

advantage of the lethargy of those most interested ; and, by smuggling a bill through Parliament, to rivet, by the force of a modern statute, the absurd and noxious fetters already existing. And in other districts, emboldened by their former success against the fisheries in the friths, the river proprietors are now aiming a deadly blow against a discovery,—for it truly is one,—even more valuable and splendid than the original.—This is a matter which it deeply concerns *the public* to attend to.

At the time when the use of stake-nets was prohibited, the *tenants*, and those who had been practically engaged in the stake-net fisheries, had large capitals invested in them, which could not be diverted into any other channel of employment but at a very great loss. They, however, have not remained so inactive as the *proprietors* of those fisheries. No sooner were they driven out of the *friths* and *estuaries*, than, with an enlargement of view, and an elasticity of invention beyond all praise, they extended the field of their operations into the proper *ocean* itself. And it is now discovered, and by the test of experience put beyond all doubt, that *stake-nets may be used with success, ON THE OPEN COAST, AND ALL ALONG THE SHORES OF THE SEA.*

This discovery has been made only within the last few years ; and although, comparatively, the sea fishery has not hitherto been carried on to great extent, yet, from the experiments which have been made, it appears to be certain, that unless the proprietors of the river fisheries be allowed, in this instance also, to destroy the hopes and interest of the public, a very few years more will introduce a total and most unexpected alteration on the Salmon fishery of Scotland.

On various parts of the north-east coast, stake-nets have been erected, and everywhere with the most complete success. At Woodston, the property of Lord Chief Commissioner Adam; at Duninald, the property of Mr. Arklay; at Rossie, and several other stations within a very few miles of each other, on the open sea coast near Montrose, the fishery has been carried on with remarkable effect. Four years ago there was not a stake-net on that coast; and already, those erected produce a revenue to the proprietors, of about L.4,000 yearly. But this is a small sum in comparison with what may yet be received. The fishery is in its infancy. Those stations, even, at which the nets are erected, have been only partially fished. Their full value is thus still unknown. And there are a great many other stations on the same coast, admirably fitted for the fishery, which have not been tried.

On the Aberdeenshire coast, in like manner, the fishery has made considerable progress. Between the Don and the Ythan, it is understood that eleven stake-nets were lately erected, all of which have been attended with more or less success. And the invention is also employed at various places on the coast towards Peterhead,—in the Murray Frith, and in Cromarty Frith.

But the practicability of this description of fishing has remained so completely unknown until the present time, that although, in all the *rivers*, fishing grants have existed from the earliest ages,—even at places where the fishery is hardly worthy of attention,—yet the right to the *sea fishing* is still in the Crown. And at this moment, there is under consideration of the Barons of Exchequer, a number of applications by landed proprietors, for grants of a right of fishing on the sea coast opposite to their re-

spective properties, which, if obtained, may ultimately perhaps, become more valuable, in many instances, than the land to which the fishings are naturally attached.

All such applications are now opposed by the proprietors of the river fisheries. And even where grants of sea fishings have already been obtained, these proprietors—perceiving, that, by this new discovery, if its operation be not checked, their *monopoly* will, after all, be equally endangered, as it was formerly threatened to be, by the fishings in the friths and estuaries,—*have again united to put an end to the sea fishery also.* The proprietors of the Don and the Dee have instituted actions, to have it declared illegal to fish with stake-nets in the open ocean. The proprietors of the Findhorn have commenced proceedings, to put an end to a stake-net fishery on the coast, *eight miles* distant from the mouth of their river. And the upper heritors of the Tay and other rivers, are ready to lend their aid! Such is the state of things at this moment: The actions are in Court; and,—though no one will *now* believe that the question involves any thing but the protection of a highly injurious and impolitic *monopoly*,—the probability seems to be, that if the existing laws shall not be amended by the wisdom of Parliament, the new hopes of the Salmon fishery will soon be at an end.

It is true, that the decisions regarding stake-nets, which have hitherto been pronounced, apply only to friths, and that the point of law,—Whether the operation of the statutes, extends also to the ocean?—is still unsettled, and, indeed, has never been discussed. But, until within these last few years, it was even unknown that a successful fishery could be prosecuted in the ocean. It is impossible, therefore, to anticipate what views our courts of law may entertain on this subject; though it is not to

be forgotten that when the decisions in the Tay cases were pronounced, more than one Judge is reported to have expressed an opinion that the operation of the statutes extends to the ocean,—‘ to *wherever* the tide ebbs ‘ and flows.’

Without presuming, however, to say any thing on this question,—which the courts must dispose of, according to the law as they find it,—at least it may be remarked, that after the experience which has been acquired in the case of the frith proprietors, of the consequences of a tedious, expensive, and doubtful litigation, it is more than probable that many proprietors of sea fishings will submit, rather than encounter their opponents;—that the fishery will thus not be attempted at any new stations;—and that unless Parliament interfere, the public interest, as well as the rights of individuals, will be weighed down purely by the dread of oppressive and protracted discussion in courts of law.

The first step towards Parliamentary interference, is to ascertain distinctly the nature and extent of the evils to be remedied. The chief of these seem to be referrible, 1. To the defective state of the existing law as to the regulation of the *close-time*; and, 2. To the prohibition of the *stake-net* mode of fishing.

I. As to the regulation of the *close-time*.

A general regulation of the fishing season, originally applicable to all Scotland, is contained in a statute of King James I, passed in the year 1404. By this act, it is forbidden, ‘ that onie Salmound be slaine fra the ‘ feaste of the Assumption of our Ladie, quhill the ‘ feaste of Saint Andrew in winter, nouthur with netts, ‘ nor cruives, nor nane uther waies.’ And this statute

still regulates the fishery in the Forth, the Tay, and many others of the principal rivers,—the fishing season ending, and the close or forbidden time beginning, on Assumption Day, old style, that is 26th August;—and the close or forbidden time ending, and the fishing season again beginning, on St. Andrew's Day, old style, being 10th December. But, although it regulates the Forth, the Tay, and some others, yet it does not regulate *all* the rivers. In many of them the seasons are altogether different;—special enactments, in some instances, and in others, common consent, supported by prescriptive usage, having sanctioned a departure from the regulation of the ancient statute. Thus, in the Tweed, the Solway, the Don and Dee, the North Esk, and other rivers, the fishery is allowed to be carried on until a much later period than 26th August;—in some until near the close of September; and, in others, until the middle of October. And, on the other hand, while, as already noticed, the close-time ends, and the fishing season begins in the Forth, the Tay, and most other rivers, on 10th December; it begins so early as 30th November in the Spey and some others, and not until 10th January in the Tweed, and 2d February in the North Esk and the rest.

This single circumstance, that the existing laws permit of such diversity as to the time of fishing within the different districts of the same kingdom, is of itself a satisfactory proof that the present regulation of the close-time is not what it ought to be. There can be no *natural* principle, arising from change of climate or any other cause, to warrant so great a variation as exists between the fishing seasons in the various rivers. And from experience, we are warranted in drawing the same conclusion: for practical fishers,—as well in the fresh water

as in the friths,—all concur in reprobating the present most anomalous state of the law. There is, no doubt,—as at all times, there will be, when private interests interfere,—some difference of opinion as to the nature and extent of the necessary alterations. But all are agreed that, to some extent or other, revisal and amendment are indispensable.

The present system, however, is not defective in uniformity alone; nor would its evils be corrected though any one of the local regulations now in use, were to be fixed on, and extended in its operation as an universal rule over the whole kingdom. The duration of the fishing and close seasons ought to be regulated, and can be regulated properly, only by accommodating it strictly to the known habits and history of the fish.

The common Salmon is a native of the North, and delights in rather a cold climate. It is to be found upon the northern coasts both of Europe and America. But the remarkable purity and moderate temperature of the rivers and seas of this country,—neither so warm in summer, nor so cold in winter, as the rivers and seas in the same latitude in other parts,—render them more particularly the haunts of the Salmon. We have,—at least until within these few years,—been accustomed to see the fish chiefly in our rivers; and, therefore, it is vulgarly regarded as a river fish. But its proper and natural abode is in the ocean and the estuaries on the coasts: though at particular seasons, and when impelled by the various instincts to which it is subject, it leaves the sea for a time, and resorts to the fresh waters.

The most important of these instincts,—and it is the one with which, at present, we have to do,—is that con-

nected with the propagation of the species. The proper spawning place of the salmon, is in the upper parts of the rivers and brooks having alpine sources. And it prefers to all others, a gravelly pebbled bottom, where there are large stones free from every kind of slime. To attain these stations, it leaves the sea, and ascends the rivers with impetuous violence, disregarding the rapids and cataracts, and overcoming obstacles almost incredible. When the spawning season is over, it returns to the sea. Somewhat later, the young brood comes into life, and, as it gains sufficient strength, it also descends to the sea.

The fish conceive about the end of July, or early in August; and in September they begin to leave the sea and ascend the rivers. This transit continues during the months of October and November. About the beginning of November the spawning commences; and it continues until towards the close of December. But though these are the usual periods; they are, of course, liable to be affected, in some degree, by various causes.

Having reached the proper stations, the spawning fish generally betake themselves to retired shallows, where a kind of trough or furrow is formed in the gravel, in which they deposit their spawn. They then proceed to cover it, by throwing up the gravel upon the troughs, which they level with wonderful precision. But they pay no more attention to it.

The exertion required for these operations, aided, perhaps, by the effects of the fresh water, reduces the fish to a very weakly state, and retains them for about a fortnight on the spawning ground. They then begin to move downwards, and, gradually as they gain strength, seek their way back to the sea. In the month of January they have begun their course; and,

in February, they are found in great numbers in the lower parts of the fresh water rivers, and in the friths. In March, particularly at the beginning of the month, many are still to be met with. But, by the end of March, they become rare; and although they are occasionally found even in April, yet the number is small.

It is a considerable time before the spawn become animated, and assume the appearance of fish. Early in the spring, under the influence of the sun's heat, they begin to grow up, (as was forcibly described by witnesses in the Tay case), 'like beds of young onions,' or 'the thick briard of a well manured field;' the head, continuing imbedded in the gravel, and the other parts of the body rising in the water. In the end of March, or beginning of April, the young fish separate from the *ova*, and are finally detached from the gravel. They are then extremely diminutive and delicate. After growing,—which they rapidly do,—to the length of a few inches, and while yet without much appearance of muscular vigour, their natural instinct leads them towards the sea, and they are aided in their progress by the vernal floods.

At first, they keep near the margin of the river, avoiding the current of the mid stream as too impetuous, and seeking what fishermen call the *easy-water* at the side. In most rivers, this migration takes place about the end of April, or beginning of May; and, as the fry pass downwards through that part of the river which is not affected by the tide, or only so affected as to moderate the current, they may be seen in myriads, moving along slowly and with seeming timidity.

But there is a certain point in the course of every great river, where the margin ceases to be *easy-water*, where the tide operates more directly, and where there

is a constant and considerable agitation along the shore. At this part of the river, the same cause which before compelled the fry to seek the banks, induces them to resort to the waters in the mid stream, which have now become deep, and comparatively quiet and tranquil. Here, accordingly, they disappear. And though no longer to be seen, they fall gently down with the tide to the sea.

From this account of the habits and history of the fish, the error of the existing regulations of the fishing season is apparent. If there be any truth in what has been said,—and the statements are in substance what all naturalists and fishers are agreed upon,—it is evident, that the general regulation under the statute of 1404, allows the fishery to begin at the very time when it ought to be most strictly fenced; and that the regulations applicable to the Tweed, the North Esk and South Esk, and other rivers,—which allow the fishery to continue until the middle of October,—authorize the destruction of the fish at the moment when, loaded with spawn, they are seeking a place in which to make their deposit.

What particular limits should be assigned to the respective endurance of the fishing and close seasons, is a question, however, of some nicety, and one on which individual proprietors, weighed by their private interests and habits, will of course differ considerably. Perhaps, in conformity to the present system, it will be maintained by some, that, during certain periods, the fishery might, with safety, be allowed at some stations, when at others it ought to be prohibited. For example, it may plausibly be said, that the fishery might be prosecuted with public advantage in the sea, and in friths and estuaries, at times when it would be attended with noxious effects in narrow rivers; that, when in the rivers, *fry* would be destroyed,

or none but spawning fish taken, and so every capture be injurious,—the fishery might, in the open ocean, be carried on without any destruction of the spawning fish, and without the slightest injury to the fry, which would then be either in the fresh water, or imbedded in the depth and stillness of the mid-stream. On the whole, however, from the great number of private interests, which are involved in the question, as well as from other considerations, the more expedient course seems to be, at once to put down this plan of local or partial legislation. The best and surest chance of legislating with advantage to the public, is assuredly to introduce one broad and uniform system, alike applicable to every possible diversity of station.

Without, then, intending to say, absolutely, what ought to be the duration of the *fishing season*, it may be suggested generally, that the present period of its closing, agreeably to the general regulation under the statute 1404, viz. 26th August, is, perhaps, not far from what it should be. Some fishers, indeed, say, that so many sound fish might be caught after 26th August, with comparatively little injury to the *breeders*, that the fishing should be continued for a fortnight longer;—there would remain, they say, a number of breeding fish, fully sufficient for propagating the species, although it were continued until the end of the first week of September. But other fishers contend, that the season ought to close on the 1st of August. And between such conflicting opinions, it is difficult to ascertain the truth.

With regard to the duration of the *close* or *fence-time*, and the period when the fishing should be allowed again to commence, all are agreed that it should be much later than is prescribed by the general statute of 1404.

At the statutory period, (10th December,) the fish are in the very act of depositing their spawn; and, for some time afterwards, they are still in the upper parts of the rivers, incapable of exertion and unfit for use. Even the period observed in the North Esk, &c. (2d February), is acknowledged to be too early. It is chiefly in February that the fish, after having deposited their spawn, are found, under the name of *foul* fish, seeking their way to the sea:—and, while these fish are almost useless, though taken, there are scarcely any others in a sound state to be met with. Even in March, some of the unwholesome fish are in the fresh waters, and few sea fish have entered the rivers.

But this is not the only reason why the close-time should be prolonged. The spawn does not become animated, and leave the *ova*, until the end of March or beginning of April; and even in the end of April, or sometimes in the beginning of May, the *fry* are still in their progress to the sea. Now, taking this fact in connection with the destruction of the fry necessarily attendant on the present modes of fishing, it is evident, that so long as those modes are continued, the close season ought to be greatly prolonged.

The mode generally in use,—laying out of view the cruives, at particular stations,—is by the *coble-net*; which is a loose floating net, the upper side being buoyed up by cork or blown bladders, or other means; and the under side kept upon the gravel, by ponderous weights,—lead or iron, or heavy knotted ropes.

This net is used,—or *shot* as it is termed;—in different ways, according to the local currents and the nature of the station at which it is employed. But, in general, in the upper parts of the rivers, one end being first connected

with the shore by a rope, the net is placed in a coble, which is rowed across the river as near as convenient to the opposite bank, and, as the coble proceeds, the net drops into the water; the lower side with its weights or ropes sinking to the bottom, and the upper being buoyed to the surface of the river. The current operating upon the net, presses the body of it along with the stream, so that to keep it always extended, it becomes necessary for the fishermen on the shore, to drag the inner end along the bank; and for those in the coble, in like manner, to drag the outer end along with the body of the net, as it is carried onwards by the pressure of the current. In the course of its progress, a bay or chamber is gradually formed towards the centre of the net, into which all the fish which it encounters are received. The outer end of the net is afterwards brought rapidly to the bank, thus enclosing all the fish within the bay; and, by means of windlasses, the net, and all that it contains, are then dragged on shore.

While the net is in this manner, impelled down the river and drawn on shore, its weights or heavy ropes are dragged along the banks, and upon the bottom of the river, tearing up the gravel, and crushing and bruising every delicate matter they fall upon. The effect of thus dragging the net, with its ponderous weights, along the bottom, where the spawn is deposited or the young fish are rising into life, tearing them up, and crushing and bruising them among the gravel, must be destructive to a degree beyond the power of numbers to state. And how great also must be the destruction, even at a later season, after the young fish are detached from the *ova*, and are gaining strength, or seeking their way to the sea!

These are matters deserving of serious consideration,

in framing any new regulations of the close and fishing seasons. And they demonstrate, beyond all question, the necessity of the fishery being forbidden, in rivers at least, until a period greatly later than is at present in observance.

II. We come now to consider, whether the old Scots acts, under which the use of *stake-nets* has been held to be prohibited, ought not to be repealed.

And here it may be remarked, in the outset, that there seems to be no reason for holding, what the heritors on the fresh waters have sometimes maintained, that their *private rights* would be invaded, if stake-net fishings were permitted. This is an argument against the use of stake-nets, which any one who considers the subject dispassionately, must perceive to be totally without foundation. The statutes by which stake-nets are held to be prohibited, are *public* statutes; having no other object in view but the *public* advantage, and liable to be repealed the moment it shall appear that they do not promote the interests of the *public*. This, indeed, is the only legitimate ground on which the Legislature could ever have taken the fishery under its controul. It would have been in opposition to the interests of the state, as well as to common justice, to prohibit the most successful mode of fishing at the stations belonging to one heritor, had no better end been in view than the private advantage of another heritor, who might not happen to possess the same local advantages. Such an act would have been absurd and iniquitous. No man would venture, in these times, to advocate such a policy; nor can it ever have been, in any age, the policy of the Legislature. That the existing statutes, accordingly, were viewed by the Supreme Court, as exclusively directed to *public* objects, every one

must be aware, who has attended to the legal discussions which have taken place since the introduction of the stake-net mode of fishing. Nay, so forcibly was this view urged by some of the Judges, in advising the Tay case, in 1812, that they deprecated the very idea of the statutes having been framed for the *private* interest of individuals, as ‘*inexpedient,*’ ‘*absurd,*’ and ‘*unjust;*’ as ‘*abominable,*’ as an ‘*imputation on the Legislature.*’*

* The observations of the late Lord Meadowbank, and of Lord Gillies, on this subject, are well deserving of attention.

Lord Meadonbank, (whose opinion, by the bye, was hostile to stake-nets upon the *law* of the case), said, in explanation of the grounds of his opinion, in favour of the pleas of the upper heritors, that ‘*I by no means rest on this, that the legislature would have been even justified in depriving the inferior heritors, on the estuaries at the mouths of great rivers, of their right of fishing in any manner they pleased, upon any principle or purpose of destroying their monopoly. They could NOT BE JUSTIFIED if they had done so. It would have been AN ABOMINABLE ACT to have destroyed the right of the fortunate proprietors, who had their valuable interests within reach of the sea, in order merely to have favoured the naturally less productive fisheries of the upper heritors. It would have been just the same thing as to have prohibited a proprietor on the sea shore from cultivating the better sorts of grain, &c. upon his lands, in order that the proprietors situated on the mountains might not be outdone by him. It is SO ABSURD, that there can be no ground for it. It is AN IMPUTATION UPON THE LEGISLATURE to suppose so. The only legitimate purpose they could have, was to preserve the fry, and favour the increase of the fishery generally; and, on that footing, they were entitled to stop every engine that they thought might tend to displenish*

It may also be noticed, that the question of the expediency or in expediency of allowing stake-nets to be

‘ the rivers of fish,—every kind of engine which was incompatible with keeping the rivers in a full supply of fish. There was no intention that the inferior heritors should be deprived of any part of their right, in order to give the superior heritors more valuable fishings.—That purpose would have been *quite illegitimate.*’

Lord Gillies said, that he had no doubt that the upper heritors ‘ are wrong in their proposition, that it was any part of the object of the legislature to prevent inferior heritors from monopolizing the Salmon. *They meant to preserve the breed; and not only do I conceive that such was their object, but that, neither in point of justice or expediency, could they have had any other object.* In the first place, *IT WOULD HAVE BEEN INEXPEDIENT to prevent Salmon from being caught in the greatest possible quantity, and the nearer the sea the better, as the fish are the most likely to be in a good and firm state.* In the next place, *IT WOULD HAVE BEEN UNJUST to deprive inferior heritors of the natural advantages arising to them from their actual situation.* Many such advantages there are, and they are inseparable from property. *One man has an estate near a sea-port, or adjoining a great turnpike road, and he has benefits thence arising, which place him in a better situation than the generality of his neighbours. In the same way, where a person has a Salmon-fishing, his property is enhanced in value by it; and where it is near the sea, the property is still more enhanced than if it were situated far up the river. All these are adventitious benefits resulting from natural situation.* Such are the benefits enjoyed by the lower heritors in the present case, and it would have been **A MOST ABSURD AND UNJUST POLICY**, if the legislature had intended to prevent them from catching as many Salmon as they could.’

used, did not at all enter into the consideration of the Judges, in determining the question of law, whether the mode of fishing fell under the prohibition in the statute-book. They had nothing to do with it. They had to take the law as they found it, fettered by the precedents and usages of former times. And one and all of them, accordingly, laid out of view the question of expediency, leaving it to the legislature, to whom it properly belonged. The late Lord Meadowbank is reported to have expressed himself in these distinct and decided terms.—‘ Much,’ said his Lordship, ‘ has been said of the immense patrimonial ‘ and national importance of the question. I beg leave ‘ to say, that I divest my mind as much as possible of ‘ the great value of the interests in competition. I com- ‘ pel my mind to consider it as if it were the case of an ‘ individual merely ; for *it is a question of law which I ‘ am bound to construe as a judge, tied by precedents, and not ‘ biassed by its consequences in any way. As to the various ‘ questions of expediency, as to the new light which has ‘ been thrown, by great ability, on what it is alleged ‘ ought to be the construction of the statutes, I am hum- ‘ bly of opinion, that it is the province of the legislature ‘ only to appreciate these, and apply the remedy, if wrong has ‘ been done, not of your Lordships. You must tread in ‘ the footsteps of your predecessors ; you must separate ‘ the new lights, which have been recently thrown upon ‘ this subject, from the case as it stood upon the old acts ‘ of parliament, and the decisions of this Court. That ‘ is all that you have to do ; you must consider these ‘ matters only, and decide upon them, whatever injury ‘ may be occasioned thereby to any person or body of ‘ men ; and if there shall be any wrong done to the public ‘ interest, by any judgment that you may pronounce, you*

may rest in tranquillity, in the assurance that THE WRONG
 WILL BE RECTIFIED BY THE POLICY AND WISDOM OF
 THE LEGISLATURE.'

The general question, then, whether as a great *public* measure, Salmon fishing, by means of stake-nets, ought or ought not to be prohibited, remains still to be determined by the result of an inquiry into their expediency or in expediency. It is not fettered by private rights in the upper heritors, nor has it been judged of by the courts of law. It lies with the legislature to inquire into the policy and effects of the prohibition, and to alter and amend the laws accordingly.

Now, with reference to the simple question of the expediency or in expediency of allowing stake-nets to be used,—the objections which have been stated to this mode of fishing are chiefly these:—1. That it is injurious to the breed of the Salmon, by capturing the spawning fish and the fry; and, 2. That, by means of it, such immense numbers of Salmon are caught in the sea and in the friths, that eventually the species itself may be annihilated.

1. The first objection,—that the use of stake-nets is injurious to the breed,—is deserving of much attention.

But, in the first place, so long as the fishery is allowed to be carried on at a period of the year when the spawning fish and the fry are exposed to capture, *all* modes of fishing, more particularly in the rivers, must more or less affect the breed. It is in this view, accordingly, that we have already pointed out the necessity of some alteration in the existing law, as to the fishing and close seasons. But if these were properly regulated, the spawning fish and the fry would be protected, whatever the nature of the fishing apparatus. It is, therefore, an absurd and

narrow policy to prohibit any mode of fishing, in other respects beneficial, merely because, under the existing regulations, it affects the breed of the fish. Instead of prohibiting this or that engine, the Legislature ought to direct their attention to the *time* of fishing; and if the regulations, in that respect, were once made suitable, the nature of the engine, so far, at least, as respects the breed, would comparatively be of little importance.

It is unnecessary, however, to shelter the stake-nets, under any general argument of this nature. The charge, that the breed is injured by this mode of fishing, is altogether unfounded.

This point was set at rest in the Tay case. Two careful, intelligent, and impartial persons were in 1809, employed to make a survey of the Tay; and were furnished with written instructions, prepared and signed by the present Lord Cringletie, (then Mr. Wolfe Murray), counsel for the lower heritors, *and which had previously been communicated to the upper heritors.* These persons were instructed, that they ‘should go up the Tay till they found
 ‘ the fry, and saw them distinctly seeking their way
 ‘ downwards to the salt water; that when the fry were
 ‘ discovered, they should be carefully traced till they
 ‘ change their situation in the water, that is, when they
 ‘ leave the sides, or easy water, and go more into the
 ‘ stream; that the fry should then be farther traced and
 ‘ watched minutely, till they disappear entirely; and,
 ‘ that under the point where the fry disappears, between
 ‘ that and the ocean, nets, with very small meshes,
 ‘ should frequently be drawn in the water, between high
 ‘ and low water-marks, in order to prove whether any
 ‘ Salmon smolts are to be found in that body of the tide.’
 And they were also instructed, ‘that the stake-nets should

‘ be daily examined, in order to discover whether any ‘ Salmon fry were to be seen in them.’ These instructions are quoted, in order to shew the care with which the matter was investigated. The result was a confirmation of what has already been noticed in considering the question as to the *close-time* ;—that, in their progress to the sea, the fry are so guided by instincts, or affected by obvious physical causes, as invariably to prevent their approach to those parts of the coast where stake-nets are used. They keep at first the easy water at the margin of the river, avoiding the impetuosity of the *filum fluminis* ; but at the point where the margin ceases to be easy water, where the operation of the tide, the flux and reflux, agitates the sides of the stream, they leave the banks, and seek the peace and stillness of the deeper waters in the middle ; and thus, without ever afterwards approaching the coast, beyond this point,—without being more seen,—they find their way, undisturbed and uninterrupted, to the ocean.*

* Mr. James Sime, tenant at Wester Flisk, one of the persons appointed to make the survey in the Tay, was examined upon oath, as to the result. He swore, that having been desired to select a person to make the survey along with him, ‘ he chose Stewart Shepherd, tenant at Balmerino, ‘ as being the person, so far as the deponent knew, best qualified, without any interest in the fishing, to assist in the proposed survey.’ And he afterwards depones, That ‘ the result of the survey is, that he has inspected the whole *stake-nets* which are erected this season in the Tay ; and *he has never found in any of them, either Salmon-fry or small fish of any kind, except a few flounders.*’ And with regard to the

This point in the river Tay was found to be near Carpow Bank, immediately below the junction of the Earn

progress of the fry towards the sea, he depones, That he has been acquainted with Salmon-fry for twenty-seven years; and, on the 28th of April last (1809), he saw a great quantity drawn ashore at Stockgreen, *by the nets used in the net and coble fishing*, part of which were left on the bank, and part went back into the river with the net. Depones, That the deponent and Shepherd never used the small meshed net above the mouth of the Earn, as *the Salmon-fry was visible to the naked eye in the Tay* a little above that spot; and the reason for using the small meshed net at Carpow was, because *the Salmon fry there ceased to be visible*. Depones, That the result of this survey is, that *below Carpow-Bank the deponent and Shepherd found no Salmon-fry*, although they fished the river with the small meshed net, both in the eddy water and in the stream. Depones, That during all the time he has fished for spirlings, he has never found any Salmon-fry in these spirling-nets, although the deponent believes that the fry goes down the river in the month of April; and the nets used for catching spirlings are so small in the mesh, that they would catch Salmon-fry, as they have caught spirling-fry, which is smaller than Salmon-fry. Depones, That during the survey of the stake-nets, along with Shepherd, *the deponent just saw one foul fish or kelt in the Monorgan stake-net, which was taken out and thrown back into the river*. Depones, That during their survey, *the deponent was generally in the stake-net before the fishers came to take out the fish*. Depones, That they observed no Salmon-fry in the Tay till the 28th day of April, when *they first saw them at the Coal Shore, immediately below Perth, in thousands, and found them downwards all the way, till within half a mile above the junction of the Earn with the Tay*. Depones, That at high water, and at

with the Tay. Until the fry approached to within half a mile, or three quarters of a mile, of Carpow Bank, they were seen distinctly at the margin. When they first disappeared, they were found, by trials with the small meshed net, to be in the mid-stream: but a short way farther down, they were so completely in the depth, that they could no longer be discerned. Now, no stake-nets were ever erected in the Tay above Carpow-Bank. And from the very habits and instincts of the fry, therefore, none could be within the reach of the stake-nets in the Tay.

These habits and instincts, indeed, afford a general protection to the fry from injury by the stake-nets; for, although in most rivers, it would certainly be possible to use such nets with success, at stations above the point where the fry disappear,—for example, farther up than Carpow-bank in the Tay,—yet at most places, the coble-net might be used with equal, if not perhaps with greater advantage*. It is chiefly in the open sea, and in the wide

‘ the first of the flood, the deponent observed the fry in the
 ‘ easy water, near the side of the river, and when the tide eb-
 ‘ bed, they appeared to go into the current; and *the last fry*
 ‘ *which the deponent caught with the net in going down the river,*
 ‘ *was in the channel opposite to Carpow-Bank.*’

* No stake-nets, it is believed, were ever erected in the Tay, even so far up as Carpow Bank. But there seems to be no reason to doubt that they *might* be successfully used even as far up as Kinfauns. And it is the same in other rivers. The chief difficulty arises from the navigation, which might be materially interrupted were the use of stake-nets allowed at the upper stations, where the river is narrow, unless they were

friths and estuaries, that the superiority of stake-nets is experienced. In the upper parts of rivers, the coble-net may be extended from bank to bank, so as to intercept all the fish which come into them : thus accomplishing all that could be expected from the most efficient stake-net, and at infinitely less expence. In the sea and the friths, however, a more extended apparatus is indispensably requisite, in order to procure such a circuit as will bring the fish within reach of the net. And it is, accordingly, only in the sea and the friths that the full value of the stake-net invention is experienced.

Before the fry enter the friths, however, they have left the margin of the river, and sought the depth of the mid-channel, far from the shore, upon which alone the stake-nets can be erected. And, in the sea itself, none are ever to be observed. Neither, therefore, in the Tay, as has been seen, nor in any other frith, and far less in the sea, have any Salmon fry ever been destroyed by the stake-nets. The contrary, no doubt, was at one time alleged,

subjected to suitable regulations. But, at the same time, there are two things which, perhaps, merit consideration. In the *first* place; would the stake-nets be a greater interruption than the cruives or fishing dykes which are at present allowed to run into rivers? And, *secondly*, might not the navigation be in some measure even benefited by the stake-nets, in as much as, by obstructing the free course of the tide and so in effect contracting the outlet of the water, they would have a tendency to deepen the mid-channel of the river? If any general legislative measure shall be adopted in reference to the salmon fishery of Scotland, careful provision should be made with respect to the navigation of the rivers,

and believed ; but it is now unquestionably established, that never was a charge more destitute of truth.

But, even were the habits and instincts of the young brood not so decisive of themselves, it would still be impossible that any injury to the fry could arise from the stake-nets. The structure of a stake-net is such that it cannot detain the fry. The net does not hang loose, but is extended on stakes ;—and every mesh is open, presenting a circuit of from ten to twelve inches, and a side fully three inches in length. Now, it is evident, that such an apparatus could not injure or intercept the fry, even if they were within its operation. They would, on the contrary, pass through it as freely as the tide.

It is extremely worthy of notice, however, that though the charge of injuring the fry, falls altogether to the ground, when applied to the stake-nets, it holds good, and is highly applicable with regard to the *coble-nets* of the fresh water. These nets are to the utmost degree, destructive of the fry, by intercepting them as they float along the margin of the river. The meshes are small, and, from the nets hanging loose, they are at all times close ; so that the fry, in their progress downwards to the sea, get entangled in them and cannot afterwards extricate themselves : by which means, great numbers of the brood are lost. Much greater numbers are destroyed by being inclosed in the net itself, when it is rapidly swept along the bank, and all that fall within its circuit are dragged to the shore. But the loss which is occasioned by the weights attached to the nets, tearing up, crushing, and bruising the yet inanimate beds of spawn deposited at the bottom of the river, is altogether incalculable.

So far as respects the *fry*, therefore, nothing farther needs be said. It is established, as clearly as evidence

can establish any thing, that it is the coble-nets alone,—those favourites of the law,—by which the fry is injured or destroyed; while the stake-nets, which the same law at present prohibits and puts down, are altogether harmless.

How, then, stands the case, next, with reference to the *spawning fish*?

It is very evident, that there must be a destruction of these fish, in a greater or less degree, at *all* stations to which they resort, whether the engines in use be stake-nets or coble-nets. But here, again, as in the case of the fry, the result is infinitely more favourable to the stake-nets than to the other.

The stake-nets, it will be kept in view, are not fitted for narrow rivers, neither can they extend through the depth of the mid-channel,—the place of navigation. They can be used with advantage, only upon the banks and shoals of the friths, and the sloping shores of the ocean, which the tide leaves when it ebbs. But it is not at these stations that the spawning fish are to be found in any great numbers. Stray fish may, no doubt, find their way within reach of the nets; and at stations in friths *immediately* below the fresh water, they may even be found, in considerable numbers, at late periods of the season, waiting for the *floods* to aid them in ascending the rivers to the spawning grounds. But, generally speaking, the spawning fish, impelled by their natural instinct, rush from the sea to the fresh water with great impetuosity. And both in ascending the rivers, in order to spawn, and afterwards, in returning to the sea, they almost uniformly keep the direct course afforded by the mid-channel, where they have the assistance of the tide. It is seldom, therefore, that such fish are

to be found at the sea fishings. *It is in the fresh waters that they are caught in the greatest numbers.*

Accordingly, in the Tay case, on a particular investigation of this point, it turned out that the number of *red* or unspawned fish, which had been taken by the stake-nets, was very small; and that the capture of *foul* or newly spawned fish, or *kelts*, as they are termed by the fishermen, was equally inconsiderable:—while, on the other hand, the destruction of both descriptions, by the coble-nets, was very serious. A regular survey was made in the month of August 1809, of some of the upper fisheries, and it appeared that the coble-nets there, captured *forty-six* Salmon between the 14th and 28th of August, and that of these forty-six, *twenty-three* were *red fish*, or fish ready to spawn, and seeking the spawning ground. And as to the *kelts*, it was likewise given in evidence, that they were taken in vast quantities by the net and coble fishers,—even cart-loads of them at a time,—and were sold at a low price to the poorer class of people. At the stake-nets, however, the capture of a *red fish*, or of a *kelt*, during the same period, was a circumstance that rarely occurred. Can there be conceived any thing more decisive as to the relative effects of the respective modes of fishing? *

* The deleterious quality of *red fish* and *kelts*, has been frequently experienced, especially in Ireland, where greater freedom is used in destroying them than in this country. One remarkable and very melancholy case, however, occurred here, several years ago, in the parish of Moffat in Annandale. The men of two families had been very assiduous, and but too successful in killing *red fish*, in October and November; which

As to the *first* objection, therefore,—that the stake-net mode of fishing is injurious to the breed of the Salmon, by destroying the fry and spawning fish,—it may now surely be assumed, that it is worse than groundless. It appears that that mode of fishing is not nearly so destructive as the one at present generally in use. And, hence, so far from its being expedient to prohibit the use of the invention, it would seem that a totally opposite conclusion must be drawn; and that the protection and fostering hand of the law, cannot too speedily be extended in its favour.

2. But another objection which has been stated against the use of stake-nets, is, that by means of them, such an immense number of Salmon is caught in the sea, and in the friths, that there is great danger that the species will become altogether extinct.

The secret ground, however, of this objection, is an apprehension on the part of the upper heritors in rivers, that the produce of their fisheries would be greatly reduced.

That an extension of the salmon fishery by means of stake-nets, would be deeply injurious to these heritors, by at once breaking in upon their present *monopoly*, is un-

were salted for winter use, and served for some months, as almost the only food of the families. In spring, a putrid and virulent fever, arising from this circumstance, took place in both houses. The one family consisted of seven, and the other of nine persons; each comprehending a husband, wife, and some sons and daughters, grown up to be men and women. In the course of three months, and in spite of medical assistance, the sixteen persons of these families, were all swept off by this mortal fever, except one young man, who with great difficulty recovered.

doubted. But this, so far from being prejudicial to the *public*, has already been shewn to be a very great benefit, and consequently to afford an insuperable argument in favour of the extension of the new mode of fishing. And it is not true, that the introduction of stake-nets at the fisheries of the lower heritors, would, in any other way, affect the interests of the upper heritors, than as an opening up of their monopoly.

It is not necessary to dispute, that an immense number of Salmon *might* be caught by stake-nets, if the use of them was freely allowed, as it ought to be, in the friths and estuaries, and all along the open shores of the sea. It is the immense increase in the produce of the fishery, which would follow from the permission of stake-nets, that forms one chief ground for desiring a revision and amendment of this part of the existing law. The produce of the fishery would possibly exceed all that has ever been contemplated.* But it is a vulgar error to

* The progress of stake-net fishing, has hitherto been retarded, both by its fluctuating and hazardous character, and by the want of persons of sufficient capital, knowledge, and experience, to prosecute the fishery. To construct a stake-net properly,—while it requires some capital, and an intimate knowledge of the habits of the fish, and of the currents and tides on the coast,—requires also, no small portion of natural talent. It often happens, that one man will catch a vast number of fish, where another, wanting the same skill and ingenuity, altogether fails. There is so much difficulty in selecting a proper station,—in placing the *leaders* of the net, so as to be effective,—in choosing the proper scite for the chambers, where the fish will be most subject to capture,—and in con-

suppose, that any increase in the produce of the nets in the friths and in the sea, would materially, or in any perceptible degree, affect the produce of the river fisheries. And it is utterly absurd to suppose that the species itself would be endangered.

In the *first* place, let us consider the effect of the stake-nets upon the produce of the river fisheries.

The Salmon, as was formerly noticed, is not a river fish, but chiefly, though not exclusively, an inhabitant of

structing them, so as to entrap the fish in the greatest numbers, and, at the same time, with sufficient intricacy to detain all which they receive ;—that it is not every fisher who can display the full value of a station, or the efficacious powers of the engine. Messrs Little,—to whom, and their partners, the country is chiefly indebted for the invention,—left the Scots fisheries, after the stake-nets were prohibited in the friths and estuaries, and removed to Ireland, where they have now extensive establishments. But Mr. John Holliday, of Broughty Ferry,—the nephew and formerly the partner of Messrs. Little,—is still engaged in the fishery here. He is the tacksman of several of the principal stations on the coast near Montrose, and at other places ; and is, perhaps, better qualified than any other individual in Scotland, to prosecute the fishery with advantage. Indeed, the successful fisheries are, for the most part, in the hands of those who have received their knowledge from Messrs. Little and Holliday : And even the sea-fishings, so far north as the Murray Frith, are held by fishers from the Tay, recently connected with them. Were the use of stake-nets legalized, however, persons possessed of the requisite qualifications, would not be wanting, to prosecute the fishery to an extent hitherto unknown. But the law, in regard to them, is so calculated, in its present

the ocean. And it is a migratory fish,—wandering from coast to coast. It frequents the fresh waters only when impelled by its natural wants and instincts, but it cannot remain in them without becoming wasted and diseased. So serious is the effect of the fresh water, that a full-grown salmon, proceeding in all its richness and firmness from the sea to the river, will lose, in a few days, two or three pounds of its weight. This is a fact quite familiar to fishers; who have no difficulty in distinguishing a fish which has been in the fresh water, even for a very short time. In those places,—common in Ireland,—where the salmon are caught in *cruives*, or *cuts* as they are sometimes termed, and *kept alive* in the fresh water, until an opportunity occurs for sending them to market, a very few days detention diminishes considerably the weight of the fish. And, as might naturally be inferred from these facts, it is ascertained that the Salmon avoids the fresh water, unless when compelled to resort to it.

It has already been seen, that the most powerful and direct impulse under which the Salmon leaves the sea, is that which tends to the propagation of the species. But, occasionally, it resorts to the shores and to the fresh water, to seek relief from certain small insects with which it is tormented in the ocean. It is then seen along the banks and shores of the friths, rubbing its body on the

state, to repress the spirit of enterprise, that it is not to be expected that stake-net fishing will be a favourite mode of investing capital, or that any will engage in it, who were not, in some measure, connected with the fisheries before the law was finally declared.

gravel, to drive the insects from it; and sometimes, it rushes into the fresh water, where these insects cannot exist;—and having thus obtained relief, it returns to its natural haunt. Other wants and instincts of a similar kind, likewise influence its motions. And thus it is, that although the great body of the fish are always in the ocean, numbers of them are in a continual state of transition, from the ocean to the friths and rivers, and from the friths and rivers back again to the ocean.*

What has now been stated, involves the whole merits of the question. In supposing that the river fisheries are seriously affected by the success of the stake-nets, it is assumed, that the fish which are captured below, would have gone to the upper fisheries, if they had not been intercepted. But this is not the fact. The fish which are captured by the stake-nets, are not those which would frequent the fresh waters. The latter are almost invariably under the impulse of some powerful instinct; and as it is the habit of the fish, when so impelled, to take the direct course of the mid-channel, they are thus seldom within

* The insect by which Salmon are annoyed, after long residence in the sea, is called by fishermen, *the sea louse*. It adheres to every part of their body; but dies and drops off after they have been a very short time in the fresh waters. Scarcely, however, have the rivers become their temporary element, than the Salmon grow wasted and diseased. Their appearance gradually changes, and a species of worm, (said to be the *lernea Salmoinea* of Linnæus), now infests their gills. In the salt-water, however, this worm cannot exist. And the fish soon after their return to the sea, gradually recover their former good condition and richness.

reach of the stake-nets. No doubt, some fish seeking the fresh water,—a few, which, if not intercepted, would have found their way to the upper fisheries,—*may* fall within reach of the nets in the sea and the friths. But the number is small. The fish captured by the stake-nets, are, almost exclusively, those which, if not so intercepted, would have gone back to the ocean, or pursued their gambols on other shores.

This is evident, from many considerations; especially from the fact, that the success of the stake-nets is equally great in the *ebb*-tide as in the flood. In the Tay, the Solway fishers excited some surprise when they proposed to turn the opening of the court or chamber of the net, to the *ebb*. Who, it was said, can believe that the fish will be caught in the *ebb*, when they are all seeking their way up the river? But the knowledge and skill of the fishers was soon apparent; for the nets which had their chambers to meet the *ebb*, were as successful as those which received the flood. There were as many fish daily going down the frith, as there were daily coming up. And, accordingly, a great number of the most successful fisheries, not only on the Tay, but everywhere else, have had *ebb*-nets. One half, it may be said, of all the fish which were caught by the stake-nets in the Tay, were caught by *ebb*-nets,—in other words, were fish going out of the frith. To some situations, indeed, the *ebb*-net is most applicable. Thus, at Kirkside, near the mouth of Montrose Bay, by which the North and South Esk fall into the sea, a stake-net has lately been erected, which has all its chambers to the *ebb*, so that it receives no fish except what are going out, and yet it captured last season (and the season was generally unproductive,) about 1700 fish. At Burghhead, at the mouth of the Murray Frith, and about eight miles,

along the open sea coast, from the river Findhorn, which is the nearest river, an *ebb*-net caught, in the year 1822, about 2,000 fish. And in like manner, numerous examples might be given throughout all Scotland.

There is, however, actual experience as to the effect of the stake-nets; and, therefore, it is not necessary to defend them by what some will be disposed to term theoretical speculation. In the Frith of Tay, the stake-nets were for a considerable number of years in general use. And, in the processes to which this gave rise, their effect on the upper fisheries was the subject of minute and patient investigation.

The general result of this investigation shewed, at the first view, that even if the upper fisheries were seriously injured, at least there was a vast *public* benefit arising from the new mode of fishing. The average produce of the frith and river, *before* the introduction of stake-nets, appeared to have been about *thirty thousand* Fish; while the average produce, *subsequent* to the use of stake-nets, (even limited and fettered, and only partially in operation, as they were,) was about *sixty thousand*; so that, if the upper fisheries suffered, at least the public were gainers to the number of thirty thousand fish.

But the investigation referred to, shewed farther, that *the produce of the upper fisheries was not sensibly affected*; and that the injury complained of, was altogether imaginary, except, indeed, in so far as it operated in reducing the price in the market.

The upper heritors on the Tay had alleged, and were allowed by the Court to prove, that the produce of their fisheries had *decreased* since the introduction of stake-nets. But when the time for proving arrived, they not only failed to substantiate their averments; but even, by producing

mutilated and fallacious statements, left room to believe, that, if the truth were told, the very opposite of what they had alleged would turn out to be the case. From one statement which was exhibited by them, it appeared that the *average produce* for the ten years immediately preceding the introduction of stake-nets, was 31,063 salmon, and 6,443 grilises. And if a corresponding statement of the produce during the immediately succeeding ten years had been exhibited, there would have been a fair means of comparison. But, instead of the statement exhibited for those years, being a counter-part to the first, it did not comprehend all the fisheries, an account of the produce of which had formerly been given. It contained only some of them,—some fisheries one year, and some another. In the first statement, the fisheries included, were *eighteen* in number; but only *seven* of these eighteen, were noticed in the account for the year 1807;—and so, in a similar proportion, for other years. Of course, no direct comparison could be instituted. There was no second average to set against the first. And thus, it is a fair and natural presumption, that, if the whole truth had been exposed, it would have appeared that there was no perceptible diminution in the produce, while the stake-nets were in operation.*

* No useful result could be derived from contrasting the produce of the river fisheries, for one or two years, with the produce for any other one or two years. It fluctuates so much, that no regard would be due to the result of such a comparison. A curious example of this fluctuation may be thought worthy of notice. During the year 1804, in consequence of an interdict which had been granted, but which

But although there could be no direct comparison between the produce of the river, *as a whole*, before the use of stake-nets, and the corresponding total produce after their introduction, yet it was possible to institute a comparison in so far as respected the *particular* fisheries noticed in both statements. This comparison, accordingly, (and it will be kept in recollection, that the upper heritors themselves had selected the fisheries), demonstrated, that, at those fisheries at least, there had been no perceptible diminution in the produce. Thus, at the Earl of Mansfield's fishery, in the upper part of the Tay, the *average* produce was as follows, viz.

		Salmon.	Grises:
For ten years preceding 1798	-	10,324	1,692
For do. subsequent to do.	-	11,694	3,326

INCREASE, during the time when			
stake-nets were in use in the frith			
below	- - - - -	1,370	1,634

was recalled in the immediately ensuing year, *there was not a stake-net in the Frith*; and the produce this year, at the upper fisheries, appears to have been 11,752 fish. In the following year, 1805, *the stake-nets were restored, and in active operation*, and the produce of the upper fisheries,—of the coble-nets,—was no less than 25,527. Thus, when there were no stake-nets at the lower fisheries, there was a scarcity of fish at the upper fisheries: But plenty returned to the coble-net fishings when the stake-nets were restored in the Frith. The explanation of this anomaly is to be found in the fluctuating nature of the fishery,—depending on causes totally unknown. This

At the town of Perth's fisheries, again, the *total* produce was as follows, viz.

	Salmon.	Grilises.
During ten years preceding 1798	31,536	6,070
During do. subsequent to do.	32,477	10,518

INCREASE during the last period when the stake-nets were in use in the frith below	941	4,448
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A still more striking illustration, perhaps, is afforded by the Moncrieff fishery. During the last three years of the first period, viz. 1795, 1796, and 1797, the number of Salmon taken at that fishery was

6,356.

While, during the corresponding years of the second period, viz. 1805, 1806, and 1807, when stake-nets were more extensively employed in the frith below than at any previous period, the number taken was

7,398

INCREASE on the last three years	-	-	1,042
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The results at other stations were similar. And although no account of the produce, *since* the removal of the stake-nets, has been exhibited or can be referred to, yet it is perfectly notorious that the river fisheries have not, during the period which has elapsed, been more productive than they were previously.

But it is unnecessary to pursue the inquiry farther. Nei-

shews, however, that for the purpose of instituting a fair comparison, the experience of a number of years must be resorted to. And, accordingly, *ten* years was fixed upon in the Tay case, by common consent.

ther is it desired to attach greater importance to these results than is reasonable. There is no necessity for denying what may be held as certain, that out of the thirty thousand fish annually caught below, *some* would, in all probability, have found their way to the upper fisheries, and there have been captured, if the stake-nets had not intercepted them. But it is very evident, and after the investigation, of which the result has been stated,—after the experience which has been had of the river fishery, *before* the use of stake-nets, *during* their use, and *since* they were removed,—it cannot reasonably be disputed, that the diminution of the produce of the upper fisheries in the river, by the success of the stake-nets in the frith, must, on the whole, have been so very small as to be utterly imperceptible.

This is certainly a very satisfactory conclusion. But, though it had been otherwise, it would appear that the question,—whether the success below would diminish the success above,—is rather curious than important: for, in natural justice, there is no reason for preferring the upper proprietors to the lower; and assuredly, it is of no consequence to the *public*, whether the fish are caught by this or by that individual. As already observed, however, it is sufficiently evident, both from the habits of the fish and the actual experience in the Tay, that the success below creates no sensible diminution of the produce above.

It *next* remains, to consider the other branch of the objection,—that if the use of stake-nets be allowed, the consequent destruction of so many fish may, in the end, annihilate or materially affect the species.

This is an objection which no one, who has any knowledge of the subject, will be disposed to urge. It would

be quite as reasonable to suppose that the race of the Herring or the Cod is in danger, in consequence of the multitudes which are taken, as to believe that any perceptible diminution of the Salmon species, would arise from the success of the fishery. Every one knows that the herring and the white fish exist in myriads past number;—that they compose the food of the larger marine animals;—and that although man vindicates his right to a share, yet all that he obtains, or indeed all that he could consume, bears no sensible proportion to what are destroyed within the ocean itself. And it is just the same with the Salmon. The Salmon is not destined for the food of man alone;—there are hordes of voracious animals in the ocean which continually prey upon it, and of which it composes the principal food. Wherever Salmon are to be found, there are these animals also. At some stations, porpoises may be seen, in vast numbers, rolling along with the tide, in pursuit of their prey;—while seals, again, abound on every rock and sand-bank, as well as in the open sea, and sometimes they even find their way into the nets, and deliberately, in presence of the fishers, destroy the fish. Who, will venture to say what are the limits to the destruction effected by these animals? or, in how many such ways, unknown to man, the Salmon is destroyed*?

* In the Tay case, some of the witnesses incidentally mentioned the destruction of salmon by porpoises and seals. *Andrew Crichton*, who had been a fisher for twenty years, “depones, That there are great numbers of porpoises in the Tay, and the deponent has seen above A THOUSAND AT ONE TIME : That he has seen a great number as high up as Balmerino : That these porpoises are very destructive to salmon, and it is in quest of them that the porpoises go so far up the Tay : That

The belief, that the existence of the *species* may be affected by the increased produce of the fishery, has been more readily believed, in consequence of the fact, that in many rivers,—as, for example, in the Thames,—where, in former times, the Salmon-fishery was prosecuted with great success, almost no fish are now taken.

But the falling off, of the fishery in such rivers, has its origin in causes different altogether, from the success of the fisheries below. The Salmon is a fish peculiarly fastidious and delicate in its habits. It delights in pure cool waters, and avoids those which have become, even in a

“ *he has caught hundreds of salmon which had been bit by porpoises* : That there are a great number of seals on the banks below the bar, which are also destructive to salmon : That *he has seen a seal opened, and a salmon taken out of its belly.*” He might have added, that that salmon was afterwards sent to market, a fact not without precedent. *Alexander Boyter*, another fisher, “ depones, That for the last twenty years the deponent has annually killed a number of seals ; that he has received a premium from Messrs John Richardson & Co.” (the then principal tacksmen of the Tay fisheries,) “ for his success in killing them, for about a dozen of years ; but this premium has been discontinued for the five last years, but he still continues to kill them on his own account : That *he knows that seals are very destructive to salmon, and he has seen them caught and eaten by them* : That porpoises are still more destructive than seals to salmon ; and there are great numbers of them in the Tay : That upon one occasion, about a year ago, *he opened a porpoise, and found as much SALMON WITHIN IT AS THE DEPONENT COULD HAVE CARRIED.*” And the testimony of these witnesses was confirmed by that of several others,

slight degree, impregnated with deleterious substances. This is the reason why the Thames is deserted; and, for the same reason, other rivers also will be deserted in their turn.

It is a familiar fact, that lime is extremely noxious to the Salmon. If lime be put into a stream or pool, the Salmon very soon die; and knowing this, the peasantry frequently *dam-up* the small rivers, and put lime into the pools, for the purpose of obtaining the fish. The very improvement of lands, therefore, by the use of lime, has, in a greater or less degree, the effect of injuring the waters in rivers. But how much greater must be the effect arising from the ingredients used in chemical bleaching, in dye-works and such establishments,—from the refuse of gas-works,—and from the many other noxious substances which, in modern times, find their way into the rivers? What, even, must be the effect arising from the increase of navigation, and from the copper on the bottoms of the vessels? Consider the state of the water in the wet-docks in any of the great ports,—the West India docks on the Thames, for example; and, consider what must, for a time, be the state of any river into which the contents of these docks are discharged!

If all these things, then, be put together, there can be no difficulty in accounting for the falling-off of the Salmon Fishery in such rivers as the Thames, the Clyde, &c. Every where, more or less, these causes now exist; though they must more especially, be found in operation, in those rivers which run through the seat of improvement, and of trade and manufactures. Accordingly, we find that the river fisheries have been injured exactly as improvement has advanced, and trade and manufactures have increased.

And the proprietors of such fisheries, throughout the country, may expect, that as the district is improved, the produce of their fisheries will diminish.

In connection with this part of the subject, and as a striking illustration of what has been said, the case of the Coquet, a small river in England, may be noticed. The produce of the Salmon-fisheries in the Coquet, was at one time very considerable. But, all at once, it was found that the fish had deserted the river. This at first excited some surprize; but it was soon discovered that the change was occasioned by the operations and ingredients used at *one tin manufactory* in the upper part of the river. The water had in consequence become impregnated with deleterious matter; and hence, although a coarse species of trout still frequented the river, not a Salmon would enter it.*

It is clear, therefore, that, any diminution in the produce in particular rivers, may be accounted for from causes very different from a decrease in the number of the fish. If the Thames, the Coquet, &c. were restored to their former state of purity, the Salmon would again frequent them. But so long as they continue in their present state of pollution, Salmon will not enter, unless compelled by disease, or some such cause. The fish naturally seek more salubrious waters, and, according as these become insalubrious, they will desert them.

If, indeed, it could be shewn, that, in rivers not affected by any noxious change, there has been an unequivocal fal-

* This is stated on the authority of a highly respectable and intelligent fisher, who visited the Coquet almost immediately after the change took place.

ling off in the produce, such a fact *might* be urged with some degree of plausibility against a further extension of the fishery. But this cannot be done; and in the only instance where it has been attempted, viz. in the Tay, the attempt, as has already been seen, was attended with signal failure. There was positive evidence adduced, not only that the produce of the upper fisheries had not been lessened, but that the salmon caught below were sea fish;—fish not seeking the fresh water at all, and the capture of which, therefore, could in no degree affect the produce of the upper fisheries.

There is, then, a want of all argument in support of the theory that the species is in danger by the success or extension of the fishery.

But there is another consideration, which must satisfy every unprejudiced mind, that the idea, of an ultimate total extinction of the Salmon species, is visionary and absurd.

It has been ascertained, by a very simple process, that the roe of an ordinary Salmon contains from 1700 to 2000 *ova*. But even supposing, that the number of fish brought into life from each *spawner* was much smaller, how few spawning fish would be sufficient for the production of all that man could consume! The average produce of the Tay fisheries is supposed to be about 30,000. Suppose, however, that, by permitting the use of stake-nets, the produce of the river and frith, and adjacent coast, were to be increased to ten times the number, or 300,000, how small is the proportion of breeding fish necessary for rearing this number, when compared with the number of fish which actually spawn in the Tay and its tributary streams!

It is the same in other rivers. The young fish which must

be produced by the spawners, in each considerable river, are far beyond the power of calculation. Indeed, every season we have evidence of it, in the countless myriads of smolts which, in all our rivers, are to be found pursuing their course to the sea.

Looking in this way to the altogether *unlimited* extent of propagation, it is absurd to suppose that even the most successful fishery could affect the existence of the species. By a proper regulation of the close time, let every obstacle only be removed, whereby the *breeders* are prevented from reaching the spawning ground; let the *spawn* be kept undisturbed after it has been deposited; and, finally, let the *fry* be protected in their descent to their natural element, the ocean;—and during the fishing season, when there will thus be neither spawn, nor fry, nor breeders, to be affected, the most extensive and powerful modes of fishing may be freely indulged in, without the most distant danger to the species. Indeed, under a properly regulated system of this description, there will be infinitely less danger of the Salmon becoming extinct, than under that now in operation; because, for every full grown fish that would then be caught, millions would be saved, which are at present destroyed, almost in embryo.

Why, then, it is asked, should there be any prohibition of the stake-net mode of fishing? Nay, since no valid objection can be urged against it, why should not its operation be at once extended in the freest manner, and the protecting arm of the law be stretched out in its favour, so as to place it, at the very least, upon a footing of fair and equal competition with those other modes, which at present enjoy all the exclusive privileges of a monopoly? Is it in

the salmon-fishery alone that the spirit of improvement is to be repressed,—because, forsooth, of certain antiquated and absurd enactments in the Statute-book? Or is there any one good reason which can be assigned, why a vast public benefit should not be secured, where the means are so obvious, and the opportunity so naturally presents itself?

The *public advantage* which would be derived from an extension of the Salmon-fishery, by the legalizing of stake-nets, needs scarcely be pointed out.

(1.) In the first place, it would break down, *in favour of the public*, that *unjust monopoly*, which has already too long subsisted in favour of a single class of proprietors. It would give to every heritor along the coast, that natural use and enjoyment of his property, from which he ought never to have been excluded. It would open the general market of the country to a wide and extensive competition. And by securing an inexhaustible supply, it would, at a moderate and comparatively steady price, place within the reach of all classes of the population, as an ordinary article of rich and wholesome food, what is at present to be found only as a luxury at the tables of the opulent.

(2.) Nor would the resulting benefit be confined to this. The quality of the Salmon caught, would be as much improved, as its quantity would be increased. The Salmon of the ocean, is well known to be infinitely superior to the Salmon, which is taken in the fresh-water. From the moment it seeks the rivers, it loses its strength, diminishes even in weight, and gradually sickens, and becomes emaciated and diseased. The firmness and richness of the sea-fish is by this time gone; and the Salmon now grows comparatively soft and insipid,—at certain seasons absolutely unwholesome.

(3.) Besides, even in a national point of view, the extension of the salmon fishery is an object of no small importance. The general prosperity of the country is mainly dependent on the prosperity of *all* the various classes of individuals composing its population. Here, then, is a vast additional source of private revenue opened up. An extensive line of coast, which yields no return whatever, holds out a promise of riches at present incapable of calculation. Nor is it the mere proprietors of the coast, and those directly employed at the fishery, who will be benefited. Employment, and, of course, a correspondent remuneration in the shape of wages, will spread on all sides. A new impetus to exertion will be given, in districts where, at present, all is inactivity and silence. Villages will rise up along the shores, still further to disseminate the progress of amelioration. And what, in a maritime State such as this, may perhaps, to the eye of the statesman, appear still more important, the new mode of fishing will add both to the resources and strength of the country, by rearing a race of hardy and indefatigable seamen, and giving employment to a very great additional tonnage of shipping, which would otherwise never have existed.

After what has been said, it is presumed no one can entertain a doubt, that there is much to be amended and altered in the existing laws, on the subject of the Salmon-fishery of Scotland. That the present regulations as to the close and fishing seasons, must be totally new-modelled, seems, indeed, a point disputed by none. But the important change to be effected, is a repeal of those absurd and impolitic enactments of a rude age, which hang like a dead weight on the spirit of improvement, and pro-

hibit a mode of fishing which, but for their baneful operation, would, long ere this, have been universally adopted. The *stake-net* fishings must now be legalised; and the treasures of the ocean, which have been shut up for ages, must be freely exposed to the enterprise and public spirit of the coast proprietors, who have quite as sound a claim to the protection of the Legislature, as the upper heritors of any petty stream in the whole kingdom.

But how is this important change to be effected, and what must be done to secure an object so highly beneficial, in the surest and most speedy manner? An act of the Legislature, of course, must be obtained. But a matter of such national moment must not be left in private hands, however respectable or talented.

There is, indeed, a recent instance of the inexpediency of leaving a matter of such general concernment in the hands of individuals. The upper heritors of the Tay introduced a private bill into Parliament last session, for prolonging the *close season*. But it turned out, that the private interests of some of the heritors and their tenants, interfered, and the body could not agree on any general period. What was for the *general* benefit did not suit the interest of this or that individual, and, in consequence, they could not come to a right understanding. It so happened, also, that the lower heritors appeared in Parliament, and prayed to be heard in fixing the period. This had never been contemplated by the upper heritors, as a measure at all probable. And the result was, that the bill had to be withdrawn. It is reported, however, that the upper heritors have since come to a proper understanding among themselves. They have made an amicable compromise in regard to their individual interests and wishes, and are now prepared to introduce the bill a second time. But, is it

expedient,—is it even decorous,—to permit this private legislation in such a matter? The public interest is involved, and ought not to be sacrificed by a mode of legislation which is never resorted to, but for the advancement of private interests. In so far as regards the duration of the close time, there is an admitted,—an undeniable necessity, for a revisal of the laws. And did not the *exclusive* interests of the upper heritors interfere, there would be no objections made to a general alteration of the antiquated Scots statutes, by which the fishery is at present regulated.

The subject, *as a whole*, is one which possesses more than sufficient interest to command the attention and services of his Majesty's government:—And the liberal policy which characterises the acts of the present administration, in every thing connected with the commercial prosperity of the nation, proves that an appeal, properly supported by facts, would, in that high quarter, not be neglected. Let those, therefore, interested in the result, boldly step forward;—and, firm and united amongst themselves, let them respectfully, but earnestly, impress upon His Majesty's Government,—upon Parliament,—upon the Boards of Trade,—the justice and expediency of an alteration of the laws. If such an alteration cannot be obtained at once, at least INQUIRY may be granted. Let such inquiry, then, by all means be urged. With such a case as may be made out for the stake-net fishings, it is impossible that *inquiry* can be refused; and, if once granted, it is equally impossible to fail in ultimate success.

INQUIRY will put down the clamour, detect the falsehoods, and expose all the selfish and interested views of the monopolists in the rivers. It will dissipate every charge that has been brought as to the injurious tendency and

operation of the stake-nets. It will establish, that the change asked is not only due, as an act of private justice to the proprietors of estates along the coasts; but is deeply interwoven with some of the best interests of the public, and eminently calculated to advance the prosperity, increase the riches, and promote the general industry and wealth of the nation.

POSTSCRIPT.

ONE great purpose of submitting these Observations to the public, has been attained. A degree of attention to the subject has been excited, which cannot fail to do infinite good.

This good, however, is not to be secured without active exertions; and what has occurred since the meeting of Parliament, shews that such exertions, if meant to be effectual, must be immediate.

The enemies of the stake-net mode of fishing, have introduced a Bill into the House of Commons, which has already been hurried, with great precipitation, through several of its stages. In its preamble, it is set forth as being for the *public* advantage. But, from the nature of the enactments proposed, it very obviously is intended to serve the *private* ends of a few interested individuals, and absolutely to *exclude* the public advantage, by rivetting the old monopoly of the river proprietors.

The Bill is in general circulation among those concerned, and is entitled, 'A Bill for regulating and improving the Salmon-Fisheries in the river *Tay*, and the rivers and

‘ streams running into or communicating with the same.’ It proceeds on the preamble, that ‘ *the preservation and improvement of the salmon-fisheries in the river Tay, and the rivers and streams running into and communicating with the same, is an object of great importance to the owners thereof, and also to the public, as forming a considerable branch of commerce.*’ And there is no room for doubt as to the truth of what is here stated. The public is deeply interested;—more so, perhaps, than the promoters of this measure would, in sober earnest, be inclined to acknowledge. But it is not by such a Bill as the present, that the public interest is to be provided for;—as will be evident from a short consideration of the two principal branches of it.

The *first* provision of the Bill,—and, indeed, what is held out to be its chief object,—is an alteration of the fishing season and close time. *Here* there was room for a substantial benefit being conferred on the public, had the proper disposition existed. Under the present regulations applicable to the Tay, the fishing season ends, and close time begins, on 26th August yearly; and the close time ends, and the fishing season recommences on 10th December following. But it has been shewn in the foregoing pages, that the close time, in place of ending on 10th December, ought to be continued until the *Spring* is considerably advanced:—and had the promoters of the Bill proposed an alteration to that effect, the measure might, indeed, have been ‘ of great importance to the public.’ What they are understood to propose, however, is, that the close time shall be extended only to 5th January,—an extension altogether without value, inasmuch as, during the short interval which it embraces, scarcely one wholesome or marketable fish can be got.

But, even such as the change is, it is not, it would appear, to be conceded without an equivalent. These disinterested legislators propose, that, as the close time is extended, on the one hand; so, in like manner, and, as it were, to make amends, the fishing season shall be prolonged, on the other:—in short, that instead of ending on 26th August as it does under the present law, it shall not end until 5th September. Now, if the proposed extension of the close time is not calculated to do good, this extension of the fishing season would do positive harm:—for, during the period involved in it, as has been shewn in the preceding pages, the fishery cannot be carried on without intercepting the spawning fish as they enter upon the spawning ground, and thereby occasioning a destruction of the brood infinitely beyond what takes place even under the present regulations.

The proposed alteration, then, instead of remedying the evils of the present law, is calculated to aggravate them in no slight degree; and to hold it forth as ‘an object of great importance to the public,’ is downright mockery. In truth, this part of the Bill is the merest pretext in the world, and has obviously been introduced only as a colour for promoting designs which dare not openly be avowed.

This, accordingly, leads us to the *second* important branch of the measure,—the *real*, though covert object of the Bill.

Now this, there needs be no hesitation in affirming, is —not merely to procure, indirectly, the sanction of a British statute to the old prohibitions of the Scots acts, under which the fishing by stake-nets in friths and estuaries has been declared illegal;—but, farther, to extend

the operation of those prohibitions, so as to reach and put down the stake-nets which have been erected IN THE OCEAN, on the coasts in the neighbourhood of the Tay.

In pursuing this object, the word *stake-net* has been carefully avoided. But this circumstance only evinces more strongly, the insidious policy by which the originators of the Bill are guided.

The principal clause in the Bill, by which it is attempted to effect this purpose, and to which the others are entirely subsidiary, is in these comprehensive terms.—

‘ And be it further enacted, that from and after the _____, if any person or persons shall
 ‘ place ANY THING in, over, across, or NEAR the said river
 ‘ Tay, or the rivers or streams running into the same, so as
 ‘ to prevent the fish from ENTERING, or going up or down
 ‘ the said river or streams; then, and in every such case,
 ‘ every person so offending, shall, for every such offence,
 ‘ forfeit and pay a sum not exceeding _____,
 ‘ and not less than _____.’ By a subsequent clause, the cruives, yairs, dam-dikes, or other works, already *legally* erected, are specially excepted.

Under the expressions here employed, it is not difficult to see, that the Bill, if carried into a law, would in fact amount to a prohibition of all modes of fishing, except those presently in use. It would prevent all future improvement. And it would secure and perpetuate the monopoly at present enjoyed by the river proprietors.

Its more immediate effect, however, would be to put down all stake-nets which have been erected in the ocean, ‘ NEAR the said river Tay.’ As the law now stands, there is at least a doubt as to the illegality of stake-nets in such a situation. And it certainly is at present a pos-

sible thing, that, in the actions brought into Court on this subject, the rights of the *coast* proprietors may be sustained, in opposition to all the efforts of the river monopolists. But, let the proposed Bill be passed, and all this is at once rendered impossible. The coast proprietors will no longer have even a chance:—For, while the above clause declares, that no person ‘shall place *any thing* in or ‘NEAR the said river Tay, so as to prevent the fish from EN-‘TERING or going up or down the said river;’—it is, by another clause, enacted, that the river shall be held to extend down to where the Tay joins or empties itself into ‘the GERMAN OCEAN, at the Abertay or the bar.’

How, then, are the stations to be ascertained, which shall be considered as ‘near the said river?’—Or to what distance from ‘the said river,’ where it ‘joins or empties itself into the *German ocean,*’ are proprietors to be prohibited from making a free use of their property, on the pretence that they are ‘preventing the fish from *entering* the ‘said river?’ Is Montrose Bay, in this sense, *near* the Tay? Is St. Andrews Bay *near* it? In short, is there any limit to the operation of this most indefinite term? The river proprietors will have no difficulty in tracing the progress of shoals of fish, from place to place, along the coast, towards the entrance of the river.* And as it is

* The course of the fish is known by the rippling of the water above them, which is easily perceived by experienced fishermen. When, indeed, they are going against the wind, they keep near the surface, and the rippling, in this case, is such as to be perceptible, even to common observers.—By this means, shoals of fish are sometimes followed from one part of the coast to another, till a proper opportunity occurs for capturing them.

only out of such shoals that the sea-nets can make captures, it is an inevitable consequence, that the erection of these nets, must in some degree 'prevent the fish from 'entering or going up' the river. The right of the river proprietors to put down or prevent the erection of stake-nets in the ocean, would thus, in the event of an act passing in terms of the present Bill, be no longer open to question. Such an act would destroy, at a blow, the whole sea fishings on either side of the Tay, and at once annihilate all the future prospects of the coast proprietors.

But why, it may be asked, enter so minutely into a measure which, after all, is to have a merely *local* operation, and cannot, therefore, affect the broad and general question, which alone is of serious importance to the country? This is an extremely shortsighted objection. It is very true, that the Bill on which the above comments have been offered, is, *nominally*, and, on the face of it, applicable only to the Tay. But is it not plain, that if the principles of it be once recognized by the Legislature, as applicable to one river, the proprietors of fisheries in every other river in the kingdom, will be entitled to a similar boon? And may it not be expected, therefore, if this Bill shall pass, that within the course of a very few

Thus, a fisherman belonging to Fifeshire, has walked along the sands by St. Andrews Bay, keeping his eye all the while on a shoal of Salmon going to the Tay. He has followed them along the coast, and round the point into that river, where they were finally taken. And the only clew which he had to their course, was from a constant observance of the rippling of the water above them.

years, the regulations contained in it, will be extended to all the rivers in Scotland? In this way, a system of law applicable to the whole kingdom, may ultimately be established, not upon grounds of general expediency, but in order to suit the views, and promote the private interests of a single class of proprietors.

Such is the effect of permitting private legislation in a matter of vital importance to the state! And, surely, if any thing were wanting to demonstrate the utter impolicy and inexpediency of leaving the regulation of the Salmon fishery of Scotland, in the hands of individuals, the very possibility of such a result, ought to satisfy even the most doubtful.

From a curious coincidence, indeed, the present Session of Parliament is placed in a strange situation, in consequence of this and suchlike attempts at private legislation.

It is not perhaps generally known, that the Solway is exempted from the operation of those Scots acts which affect the other rivers in Scotland; and that the fisheries in it, are regulated by special statutes passed on very different principles. The last act on the subject, and that by which the fishery is now regulated, was passed in the year 1804. This act, while it contains no prohibition against stake-nets,—which, indeed, are in full operation on the Solway,—enacts various salutary regulations for preventing injury to the breed of the Salmon, suggested by the more extended knowledge and experience of the present times. Still, however, there are defects in these regulations. And a Bill has accordingly been introduced since the sitting down of Parliament, for the purpose of applying a remedy.

The writer of these Observations has not seen this Bill; but it is sufficient to state, that it has been intro-

duced on the part of the *sea fishers*, chiefly to provide against certain injurious practices which prevail in the Solway and its tributary rivers.

Now, it is impossible to overlook the circumstance, that this Bill, and the one brought in by the upper heritors on the Tay, are directly *opposed* to one another. The Solway Bill has been introduced to put down the pernicious practices and modes of fishing pursued in the rivers :—The Tay Bill is meant to protect and perpetuate the practices of the river fishers, and to continue an absurd and impolitic monopoly for their private benefit, and to the detriment of the public. Is it consistent with sound policy, that such a state of things should be allowed to exist; or that Parliament should thus be called upon *by individuals*, to give its sanction to measures of legislation, so palpably conflicting and irreconcilable? Is it possible to deny that there is urgent necessity for a **FULL INQUIRY** into the state of that law, under which such things can occur? And if, after due inquiry, the Legislature shall find itself called upon to interfere at all, ought the measure of this interference to be left in the hands of those very parties, who, from their interested views, are, of all others, the least qualified, as well as the least inclined, to work with effect in the cause of the public?

Every day's experience, indeed, more loudly calls for a revival of the present state of the law, in regard to the Salmon fishery of Scotland. But this revival, to be effectual, must be conducted as a *public measure*, and with the countenance and support of those, to whom the administration of public affairs and the care of the public interests, have been entrusted;—not left in the hands of a few private individuals, acting with a view to their own narrow and selfish ends,—fighting even among them-

selves,—and only combining and harmonizing together, when the public advantage is to be sacrificed at the shrine of that common monopoly which they are all concerned to maintain.

In the meanwhile, every day's delay is productive of incalculable injury. And if some alteration shall not speedily be made, there is every chance that, at no distant period, the Salmon fishery will be completely ruined. The extent to which poaching, during close time, has lately been carried, is almost inconceivable, and the consequent destruction of the breed is immense. But even this source of injury, is insignificant, compared to the destruction in the rivers occasioned by the permission of fishing at improper seasons of the year. It is reported, that, in the beginning of January last, *five hundred* fish were taken in one week, in a river in the north, of which *not twenty-five were clean fish, fit for the market!* The North and South Esk have almost been cleared of fish! In the Ericht, near Blairgowrie, vast numbers of foul fish have been taken, to the extent even of *seventy in one night*; while, in the upper parts of the Tay, it is not uncommon, at various stations, to see more Salmon taken by one haul of the net from the *red* or *spawning-bed*, than would suffice to stock the whole river!

THE END



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