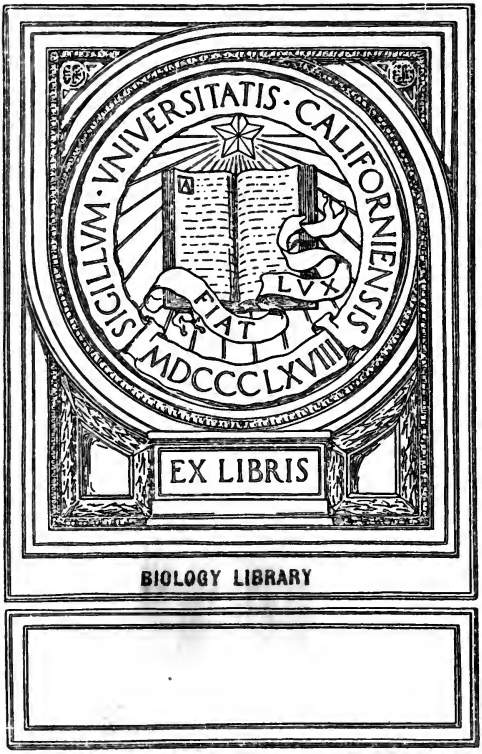
FLY-FISHING

SALMON · TROUT · & GRAYLING

EDWARD HAMILTON M.D.



RECOLLECTIONS OF FLY FISHING FOR SALMON, TROUT, AND GRAYLING.


CALIFORNIA

RECOLLECTIONS

OF

FLY FISHING

FOR

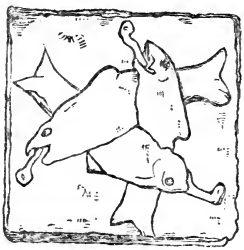
SALMON, TROUT, AND GRAYLING,

WITH NOTES ON

THEIR HAUNTS, HABITS, AND HISTORY.

BY

EDWARD HAMILTON, M.D., F.L.S., &c.



ILLUSTRATED BY A MEZZOTINT ENGRAVING BY FRANCIS SEYMOUR HADEN, ESQ., AND OTHER WOODCUTS.

LONDON:
SAMPSON LOW, MARSTON, SEARLE, AND RIVINGTON,
CROWN BUILDINGS, FLEET STREET.
1884.

" Thus shall memory often in dreams sublime
Catch a glimpse of the days that are over.
Thus, sighing, look through the waves of Time
For the long faded glories they cover."

PREFACE.

"THEY be mighty partikler now-a-days, bean't they, sir? not like when I was a boy;" was the remark of the old keeper (man and boy on the river for forty years) who had been watching my vain efforts to inveigle a big trout greedily sucking in the natural fly and apparently totally regardless of the beautiful and perfect imitation I was persistently presenting to him, the only notice of which he deigned to take was an occasional turn of his head, just to satisfy himself that he was being imposed upon. I had tried him with the dry, the wet, and the sunk fly—had changed from one fly to another till I was tired—and had just given up the fruitless task as these words greeted my ears:

"Mighty particular, indeed, they are; it is

At any rate, I have put my notes together, and have done what Burns hinted Captain Grose would do—

> "A chield's amang you taking notes,
> And, faith, he'll prent it."

To the kindness and generosity of my friend Mr. Seymour Haden, I am indebted for the beautiful mezzotint of a Salmon Pool, which he has engraved expressly for this work. Mr. Haden adds to his many accomplishments that of a most observant and successful fly-fisher.

The woodcuts are from sketches made on the spot by myself during some of my fishing expeditions.

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I.

FLY FISHING FOR SALMON.

"The salmon's praises to my verse belong,
King of the streams, glory of our song!"
The Angler.

"O bliss divine!
A salmon flound'ring on my line."

"THE salmon is accounted the king of fresh water fish;" so wrote Izaak Walton, and so it continues to the present time.

In the early days of angling for this fish, the chief bait was a lobworm. "He is caught," says Walton, "as the trout, with a worm and minnow, which some call a pink, or with a fly, but not often."

Frank also ("Northern Memoirs") says, "But the ground bait was of old the general practice, and beyond dispute brought considerable profit, which happ'd in those days, when the curiosity of

fly fishing was intricate and impracticable." Frank wrote his memoirs in 1658, and dedicates his book to his brother anglers: "The rest of the Fraternity of the Rod, that ramble the margin of famous Thames, Trent, Severn, &c." But he says nothing of the Thames as a salmon river for yielding sport to a fly fisher. These fish, however, must have frequented the river in large numbers.

Thomas Faulkner ("Historical and Topographical Description of Chelsea," 1829), says, "It appears, by authentic documents, that in the reign of Charles II., the fishery was carried on here to a very considerable extent by Charles Cheyne, Esq., the lord of the manor, and others; but, owing to the evil practices of the fishermen, in using unlawful nets, and from other causes, it fell into decay, and finally proved an unprofitable speculation. The right of fishery extended from Battersea to Lambeth. About the year 1664, Sir Walter St. John resigned all his rights to the Rooms of the Salmon Fishery within the River Thames, to the fishermen of Chelsea, between Upper Lindsay Place above the Feathers towards the west, to the creek called York Place Creek on the east, with free liberty to cast and draw up their nets upon part of the waste adjoining, and also to the depasture, and liberty to feed one horse upon the waste for drawing up their fishing boats; and, in the same year, a

bond was drawn up between the following mentioned persons, viz., Charles Cheyne, Esq., Joseph Alstone, John Saunders, Edward Cox, Daniel Burt, and John Colson, who paid the sum of £84 into the hands of John Burgen and John Wild for the half of four salmon nets which were to be employed yearly in the several fishing rooms of Chelsea and Lambeth during the season, and the conditions were, that they should keep the nets in repair, and weekly, during the season, make a just account of all profits arising from the fishery, by equal proportions, to the above-named Charles Cheyne, Esq., and partners, at the dwelling-house of John Colson, in Chelsea.

"On Monday, the 30th of May, 1664, the Chelsea fishermen began to fish, and took from Monday to Saturday nine salmon, weighing 172½ lbs., and sold them as follows :—

	£	*s.*	*d.*
"To the Duchess of Ormond, 13½ lbs. at 16*d.* per pound	0	19	6
To Lord Cheyne, 18 lbs. at 18*d.* per ditto	1	4	0
To Mr. Alston, 18 lbs. at 18*d.* per ditto .	1	4	0
To several fishmongers, 122 lbs. at 14*d.* per ditto	7	1	0
	10	8	6"

He also says, "Salmon fishing on the Thames begins on the 25th of March *above London Bridge*, and

ends the 4th of September. They (the salmon) bear a most extravagant price in the London markets, having been sold at twelve shillings a pound; eight shillings and half a guinea a pound is frequently given for the whole fish together, and the average price is five shillings; although the quality is probably equalled in other rivers, and there is so little other excellence in the fish beyond their being caught so near the metropolis, and not losing their flavour by long carriage before they are brought to table; to be eaten in perfection salmon cannot be too fresh."

The late Mr. Buckland ("Familiar History of British Fishes") gives a list of the number of salmon caught in the Thames from 1794 to 1822, amounting to 483, of the weight of 7,346½ lbs. This record was kept at Boulter's Lock, near Maidenhead, and the Rev. G. Venables, who furnishes this account, says, "If this journal had been begun about twenty years earlier, say about 1774, our figures would have been much higher, both in respect to number of fish, and likewise weight." He also says that his father, in 1780, caught upwards of fifty salmon in the reach of the Thames opposite Cleevedon Spring. The same gentleman has heard his father say that he remembers seeing one Hobbs take twenty salmon in one haul in a net in Chelsea Reach, and that £800 a year was

paid to one net-maker alone in Fenchurch Street for salmon nets for the River Thames. Mr. Venables' father also records that he caught a salmon in the Buck Pool on the 26th June, 1793, weighing 42 lbs., length, 4 ft. 1 in. Yarrell ("History of British Fishes," vol. ii., p. 20) says, "On October 3rd, 1812, at Shepperton Deeps, Mr. G. Marshall, of Brewer Street, London, caught and killed a salmon with a single gut, without a landing net, that weighed 21 lbs. 4 oz., but no mention is made as to the lure, whether by worm, minnow, or fly. We may reasonably conclude that many of the salmon here recorded were taken in nets; indeed, Mr. Venables states that a great many were taken in the Eel Bucks.

Up to the year 1822, therefore, plenty of salmon frequented the Thames; since then they have gradually and entirely disappeared, and it seems that no method of culture is able to bring them back again. What is the reason? The pollution of the water is not sufficient to account for it. The salmon run up to the upper waters of the Clyde and the Liffey, and nothing can be worse in the shape of pollution by sewers than the Clyde at Glasgow and the Liffey at Dublin. However, when Izaak Walton wrote his "Complete Angler," salmon were as plentiful in the Thames as they are now in the Tweed. It may be doubted, indeed,

if Walton ever caught a salmon, although he often went "a fishing with old Oliver Henley, a famous salmon fisher of that day," yet he gives full directions how to do it. Frank calls him a plagiarist, declares he knows nothing about it, and that all he wrote was derived from the brains of others. Sir Walter Scott takes Frank to task for this abuse, and in his preface to the reprint of the "Northern Memoirs," in noticing Frank's pedantic and unintelligible writing, says, "probably no reader, while he reads the disparaging passages in which the venerable Izaak Walton is introduced, can forbear wishing that the good old man who had so true an eye for nature, so simple a taste for her most innocent pleasures, and withal so sound a judgment both concerning men and things, had made this Northern Tour instead of Frank." And he might have added, what a chapter we should have had in the "Complete Angler" on the pleasure and excitement of killing a salmon with the artificial fly.

Henry Vaughan, *The Silurist*, knew how to kill salmon with the fly, about 1646; he sends to that "famous and best of men," Dr. Thomas Powell, a salmon, accompanied by some Latin verses, which have been translated by the Rev. Alex. Grosart:—

> "Accept the salmon that with this I send
> To you, renown'd and best belovèd friend,

Caught 'neath the Fall, where, 'mid the whirling foam
O' the quick-darting Usk, he just had come.

"'Twas thus in brief: the treach'rous colour'd fly,
For a meal, guil'd his unprophetic eye;
So catching at it, he himself was caught;
Swallowing it down, this evil fate he wrought.

"His only purpose being then to dine—
Lo! to be swallow'd swiftly he was mine;
Misled by his gay-painted fly astray,
Of angler's rod he is the welcome prey.

"Benign retirement! (Full reward to me
For all my life's thick-coming misery.)
How safe this salmon, and long years have seen,
If he content in the still pools had been.

"But soon as for the thund'ring Fall he craves,
To bound and flash amidst its tossing waves,
He leaps to seize what seems a noble prize,
And gulps the hidden hook whereon he dies.

"Often are little things the types of great;
Look thee around, and with all this thou'lt meet:
The foaming fall the world is, and man the fish,
The plum'd hook, sin, guis'd in some lordly dish."

Salmon, as is well known, make the most extraordinary efforts to overcome obstacles in the way to their spawning beds, and it is most interesting to watch their perseverance and determination at any great fall; time after time will they throw themselves out of the water, nothing daunted, until at last, by some extra power put on as it were, a

hold will be got on the edge of the rock, and then with a wriggle or two they are safe in the upper water. These leaps have been greatly exaggerated by some writers; it is doubtful whether a salmon can surmount at one leap any fall above nine feet, more likely under eight. That they get over higher falls it is true, but often, without it being noticed, there is a ledge of rock within the white spray, which gives the fish a moment's rest, and then he is up the two or three feet in an instant.

In earlier times it was supposed that salmon made this leap by putting their tails in their mouths before making the effort. Izaak Walton believed it, and quotes Drayton for his authority:—

> "Here when the labouring fish does at the pool arrive,
> And finds that by his strength he does but vainly strive,
> His tail takes in his mouth, and bending like a bow
> That's to full compass drawn, aloft himself doth throw,
> Then springing at his height, as doth a little wand,
> That bended end to end, and started from man's hand,
> Far off itself doth cast, so does the salmon vault."
>
> *Polyolbion.*

It is strange that such an error should so long have prevailed. Mr. Samuel Taylor ("Angling in all its Branches," published 1800), at p. 107 says, "It seems, however, to be performed by a forcible spring with their tails bent to their mouths;" and Captain Williamson ("Angler's Vade-Mecum," 1822), writes,

"The manner in which the salmon leaps is singular. It descends deep into the water, and turning its head towards the fall, makes upwards with all its force; but as it reaches the surface brings its tail up to its mouth, and using it as a spring, casts itself towards the height to be surmounted. I have frequently seen them in this manner ascend about ten or eleven feet, but I have read of their leaping much higher."

Mr. Hansard, in his "Trout and Salmon Fishing in Wales," 1834, says "this assertion (putting their tails into their mouths) has been long and still continues a vulgar error."

It is hardly necessary to say that the leap is effected by the powerful muscles attached to the tail, by which at the moment of leaving the water the fish is sent with great force onwards and upwards.[1]

In a recent little work on fly and worm fishing for salmon, trout, and grayling, the author says, "The chief glory of salmon fishing lies in the rise, which is certainly magnificent, and the only difficulty of the capture as a rule consists in the strike. So much is this the case that I have known veteran

[1] In the Bishop's Palace (now a lunatic asylum) at Rheinau, near Schaffhausen, a place famous for salmon, is a coat of arms, two of the quarterings being salmon with their tails in their mouths in the act of leaping.

salmon fishers who, when salmon were plentiful, made it a habit to resign the rod into the hands of an assistant after checking the first rush or two; not that I blame the salmon fisher."

Few salmon fishers will agree with these remarks, on the contrary, many will say such a proceeding is very unsportsmanlike, and illustrative of the utter absence of that proper spirit which should exist in all who handle the rod or throw the fly. Besides, it shows such ignorance! Why, any Tyro can raise a salmon and hook him, because, in ninety-nine times out of a hundred, the fish, from his mode of taking the fly, hooks himself, and fine casting, although it may be necessary in some cases, is as a rule not so very important; but it requires considerable skill with a proper accompaniment of patience and perseverance to kill a salmon. The cream of the sport is the excitement of playing and killing a fish—not in the rise.

I know of no greater excitement when, after casting the fly, a sudden swirl of the water tells you that a salmon has risen, and the tightening of your line that he is hooked. Then the mighty rush of a fresh-run fish; the rapid whirl (sweet music!) of the reel as the line is carried out; the tremendous leaps and tugs and efforts as the fish tries to free himself. Good fisherman as you may be, the chances are against you. You at one end

of the line doing all you can, and putting all your experience to the test, to keep and bring to bank the prize you covet. The fish at the other end, with all his knowledge of the rocks and bad places at the bottom of the river, doing all he can to circumvent you. Veteran or no veteran, a man who cannot appreciate such a fight is not to be envied. And, after that mighty rush, the reel still spinning round at such a pace as makes your heart jump into your mouth, what a determined effort he makes to reach some stone or snag which you know must break or cut your line, and then, after a slight pause, with skilful management the strain is put on. An anxious moment; he gives, but oh! how slowly, how reluctantly. The question still remains who is to conquer. You feel your power as you wind up; you see his silver side; you know there will be yet one or two terrific struggles for life as he gets a glimpse of you and the gaff; then comes the final rush, the line paying out inch by inch. It is over! Another roll or two and he is on the bank;—and then the soothing pipe whilst you study his fine proportions. But—and there is a but—it may be all "t'other way,"—the fish may be your master. After leading you a dance, straining your arms with half an hour's sulk under a stone, he suddenly wakes up, begins to think he has had enough of this, takes you down the river *nolens volens*, through runs and

rapids, streams and pools, and either cuts your line clean against some sharp rock, or rubs his nose against the bottom, wears your gut to a shred, and you suddenly find yourself minus fly and fish.

This it is that makes salmon fishing so enticing and so exciting. In many salmon rivers there is but little to prevent a fair fisherman killing a big fish, but in some, the Spean in Inverness-shire for instance, the case is very different. Here a big fish has all the advantage. Just get a twenty-five or thirty pounder on your line, and see what will happen ; it is twenty to one in favour of the salmon. Theophilus South says, when his friend observes, "What a splendid fish, but how you tremble!" "Tremble indeed ; do you fight a salmon even of this size (he is speaking of a twelve pounder), and you will find yourself 'another.' Talk of excitement, catching a salmon is the ακμη of it." It is, indeed, and when long continued becomes something more. I once lost a fish after three hours and forty minutes' hard work, and this is how it happened. Whilst playing a fish of 14 lbs. in the Coa Pool on the Spean, a huge salmon, bright as silver, jumped over my line, and almost immediately another, its fellow, not quite so big, showed himself a little lower down. After landing the fourteen pounder it was too late, and the pool had been too much disturbed to try for these monsters,

but on the morrow, on arriving at the Boat Pool, I noticed a peculiar smile on the fisherman's countenance, and as we crossed, he said, "I think we will go at once to the Coa, and try for the big one, not that we shall land him if we do hook him, for we never have, and I believe never shall land such as he in this river." "Why," I said, "what do you think their respective weights were?" "Well," he said, "from forty to fifty pounds." Well, away we went; he took great pains in putting the rod together, in choosing a good casting line, and in selecting, after a careful examination of his book, a fly from his cap which he said my lord L. had lost a big fish with, a day or two ago. After a short time I managed the cast—all who know the Coa Pool will understand what I mean by "the cast"—it is a very long and difficult one, because your fly must drop close to a certain stone on the further side of the pool. I won't say how many yards you have to get out, because people are apt to exaggerate, but it is a very long cast, and that will suffice, particularly as there is a big bank and bushes close behind. As the fly came round there was an awful swirl, the line tightened, and I felt I had him, or more properly speaking, as is shown in the sequel, he had me. Aitken threw up his arms and shouted, "I do believe you have got the big one." There was a run about the pool for

a minute or two, and then with a whirl and a swirl away he went, taking out ninety yards of line, and with a tremendous leap, showing us what he was, he stopped short, and came with a rush back again, so that winding up was a difficulty. "Ah," said Aitken, "he is not the biggest, but it is the other, and we shall never land him; we must try to keep him up in these pools; if he once goes to the rapids we are done." For three hours and twenty minutes he led us a pretty dance up and down, never able to get him up into the deep part of the Coa Pool, where we might have had a chance. At last away he went over the rapids, down into Tumbledown, and after a race or two all round that pool, away again as hard as he and we could go into the next, Fern-a-mór. Now if the casting line will only hold, we may still get him, when lo! the line suddenly came away without the hook, the gut fairly rubbed into a shred, and so the fish beat us, and after three hours and forty minutes we had to throw up the sponge,—not in shame, for it was a gallant fight; he was not hooked foul, for twice we brought him almost to the surface, and saw the hook was in his jaw; but he, as many a big fish has done before in this river, simply beat us.

In Gay's "Rural Sport," published 1720, there is a capital description of killing a salmon, although full of poetical license, and wanting in physiological facts.

"When a brisk gale against the current blows,
And all the wat'ry plain in wrinkles flows,
Then let the fisherman his art repeat,
Where bubbling eddies favour the deceit.
If an enormous salmon chance to spy
The wanton errors of the floating fly,
He lifts his silver gills above the flood,
And greedily sucks in th' unfaithful food;
Then downward plunges with the fraudful prey
And bears with joy the little spoil away.
Soon in smart pain he feels the dire mistake,
Lashes the wave, and beats the foamy lake.
With sudden rage he now aloft appears,
And in his eye convulsive anguish bears;
And now again, impatient of the wound,
He rolls and wreathes his shining body round.
Then headlong shoots beneath the dashing tide,
The trembling fins the boiling waves divide;
Now hope exalts the fisher's beating heart,
Now he turns pale, and fears his dubious art:
He views the tumbling fish with longing eyes,
While the line stretches with th' unwieldy prize;
Each motion humours with his steady hands,
And one slight hair the mighty bulk commands:
Till tir'd at last, despoil'd of all his strength,
The game athwart the stream unfolds his length.
He now, with pleasure, views the gasping prize
Gnash his sharp teeth and roll his bloodshot eyes;
Then draws him to the shore, with artful care,
And lifts his nostril in the sick'ning air.
Upon the burthen'd stream he floating lies,
Stretches his quivering fins, and gasping, dies."

II.

HOW TO FISH FOR SALMON.

IN fishing for salmon there can be no doubt that two conditions are very essential:—1. A knowledge of the river you are going to fish; 2. How to cast a fly over a fish.

The first you gain either by experience, or you trust to the keeper or gillie. The second rests entirely with yourself. Many a fish cast over never sees the fly; some fishermen go floundering on, thinking they have made such a beautiful cast, because the fly has delicately touched the water just where intended, but that won't do in salmon fishing. The working of the fly at the proper angle so as to come well over the fish so that he may see it, is of far greater importance than delicate throwing; and many a fish is missed for want of attention to this rule.

Then we all have our notions about flies. All

rivers, or rather I should say every fly fisher, has his own particular pets, and will fish as a rule with none other. A good fly will generally take in all rivers, but the old fish, who have been some little time in the fresh water, have their fads and require "ticing." The weather has also to be considered as much as the water. Senior Angler says: "One of the received rules for salmon fly fishing may perhaps hold good; viz., that a small and sad-coloured fly is to be preferred in a bright and shallow water; a large and gaudy one in discoloured or very deep rapid water or on a blustering day. The salmon, like the grayling, lies at the bottom even when prepared to rise; in stormy weather therefore, or in discoloured water, he cannot see a small, dull, unobtrusive fly. In such cases, large and gaudy is your only chance." In his Introduction he says, "*Obstinacy* is the vice of little minds; *Credulity*, the failing of little experience; and *Prejudice* a villanous compound of both.

> 'The force of Nature could no further go,
> To form a third, she join'd the other two.'

"'Why do you persevere in using that fly when nothing will look at it?' said I.

"*Obstinacy* went on thrashing the water with greater vigour than ever.

"'Why do you persevere in using that fly?' said I.

"'I read of its being good,' said *Credulity*.

"'Why do you persevere in using that fly?' said I.

"'I hate all new inventions,' said *Prejudice.*

"'No doubt,' said I, and took a copious pinch of rappee.

"*Obstinacy*, *Credulity*, and *Prejudice* looked hard at me, but they could make nothing of it.

"Dear, good, kind reader! listen to *Experience*."

And that is exactly what is necessary. In looking back on the experience of nearly forty years' fly fishing, I find that, in regard to the colour of the fly, I cannot agree with Senior Angler. A bright fly on a bright day, and dark fly on a dark day, is my rule; and in following it I have seldom or ever come back with an empty creel. Salmon have very sharp eyes both in bright and discoloured water. Here are one or two instances. One cloudy, windy day, the water slightly stained and the river pretty big, I and a friend had been fishing alternately the pools and runs of an excellent but small salmon river on the west coast of Scotland, with the flies generally in use, without any success, although the fish appeared to be inclined to sport: on looking over my fly book, I came upon a very dark fly, dressed on a small hook, dark mohair body, mallard wings, and black hackle. It was the only one of the kind I had in the book. The first cast I rose and hooked and landed a salmon of ten pounds, and in two following pools I rose and killed two more

good fish. My friend, who fished the pools before me with what we considered a most killing fly, did not raise a fish. Another day, in a very deep pool in the river, with the wind blowing half a gale and sky very cloudy, two fine fish were killed with this same fly, and I have used this pattern with success, under the same circumstances, for the last sixteen years.

One bright sunny day in August, the water very low and clear, I killed two fish with a small sun fly, body purple mohâir, wings of golden pheasant hackle. I also killed two nice fish, and rose and lost another in a deep pool, with a small Silver Doctor, with bright blue body, from the hook breaking.

In these instances the flies were as dark and as bright as they well could be, but there are plenty of others, dark as well as bright, that will do quite as well; only follow the rule as to colour and weather, and you are pretty certain of sport.

Wheatley truly says:—"In salmon fly fishing, where are the monsters in nature wherewith we tempt the fish? Our salmon flies are, with one or two exceptions, nothing but the children of Fancy, arbitrary arrangements of feathers, silks, worsted, furs, mohairs, and numerous incongruous *et cetera*.

> 'The things, we know, are neither rich nor rare,
> But wonder how the devil they got there.'

Whence comes it, then, that the favourite fly of one river is scouted at another? *Experientia docet,*

cries the learned Pundit, with distended cheek and corrugated brow; a gaudy fly kills best here, and a sober one there. I doubt this much; and though my experience in salmon fishing is not so extensive as that of many others, yet I have killed fish in different rivers with flies not bearing the remotest resemblance to the standard fly of the water,—not only killed fish, but as many as any one. This is not intended as a *boast*, but merely to show that prejudice in angling is just like prejudice in anything else, another phrase for want of reflection or idleness of research."

Quite true. Experience and observation go a great way in making a successful angler. The fishermen of certain rivers are often very prejudiced. In their experience they have seen that certain flies, generally of their own making, are very killing,—that is to say, they have found them so, and do not care for changing. Old Robertson was mighty fond of the *Gled Tail.* "Aye, send me some feathers of the gled, and I'll be muckle obleeged to ye!" I showed him a fly, one autumn some years since, which had been most successful in taking fish in a river I had been fishing, about thirty miles from the Lochy. "Ah," he said with a kind of sneer, "no good on this water." "Well," said I, "I mean to try it." "Weel, ye'll soon change it." We parted, he to fish the lower part of the beat

and I the upper. When we met, I had got five fish,—two salmon, one of 14 lbs., one of 12 lbs., and three grilse, all taken with this fly, and I had risen four or five other fish and lost two.

"Let me look at that flee agin," he exclaimed. "Ah! I did na see that wee bit of blue jay's feather; the fish are verra fond of that colour." He begged the fly of me, and it became a great favourite with him. The old man has gone to his rest, but there never was a better fisherman or a more genial companion, always ready to show you how to get sport, and with a fund of information as regards fishing, which, however, from his strong Scotch accent, was most difficult to understand.

When a salmon rises and misses the fly, it is customary to wait a minute or two before again casting over him, as in a quick stream and with the impulse of the rise, the fish will take that time to return to his original *coin d'avantage;* he may not rise again even to that fly or to any other, but if hungry in all probability he will, and he seldom misses his prey the second time. Again, he may have moved a bit, and you will raise him a yard or so lower down,—many thinking they have raised another fish. But fish are very capricious. I once on the Spean, at the tail of Fern-a-mór,[1] rose a large salmon eleven times without his touching the

[1] The Pool of the Big Alder.

fly, and he then left off,—no other fly would tempt him. "We'll try him again in the evening when we come down," and sure enough at the first cast, a few yards above his morning position, on our return about six p.m., up he came, and I had him, and after an exciting contest of more than an hour, and a terrific run through some rapids, I landed him in the pool below; 23½ lbs. He fought a game battle, and when he gave up it was at the further side of Mac-Kintyre's Pool, and I had to bring the monster across on his side almost a dead weight.

There is nothing like experience in salmon fishing, indeed there is no fish which requires so much attention and observation if one wishes to become a successful salmon fisher.

I have read somewhere, I believe in Scrope's "Days and Nights of Salmon Fishing," of striking a salmon when he rises. I suspect he means fastening the hook well in after the rise. As a rule a salmon always hooks himself as he makes his half-circle somersault in rising at the fly (so different to a trout, or sea trout), his weight, as he turns down again to his stone or hiding-place, being sufficient to hook him without striking, which is a dangerous procedure, and seldom necessary. An experienced and cool fisherman will just drive home the hook, but this requires great caution, or you may tug it out or break it.

When a salmon, being hooked, after a minute or so begins jobbing and shaking your line—a most unpleasant feeling, which sends a kind of nervous dread through you—nine cases out of ten on examination it is found that he is hooked in the upper jaw, leaving his gills full play, and so he is able by this manœuvre sometimes to lose the hold, or break the hook if in the bone, but often it does the contrary—it tightens the hold. The most killing place (when the hook is well fast) is in the lower jaw. The strain of the line prevents in a great measure the free current of water through the gills, and the fish becomes suffocated; a curious instance of this occurred to a friend with whom I was fishing. He hooked a fresh-run salmon of 16 lbs., and to his astonishment, after a rapid whirl of the reel, and a fight of five minutes, the fish came up on his side and was soon on the bank. He found the hook had gone into both jaws, thus entirely closing the mouth and suffocating the fish. Something of the same kind occurred to myself. I had hooked a good fish, had a fearful fight to prevent him getting under some snags lying deep at the upper part of the pool, and in the last struggle, when he was well beat, in keeping him on the top of the water, I nearly lost him from his pertinacity to get down to where he knew he could break me, and I had to gaff him in a very ticklish place. After killing him I threw

again in the same place; up came another fish, and he followed the same tactics, when suddenly he came up on his side completely beat. I found in his struggle he had by some means got the line round his mouth, so that he was suffocated.

That delightful author and excellent fly fisher, Theophilus South, says:—"I never strain a fish except he approaches dangerous ground," and excellent advice it is. Many a good fish is lost by straining him unnecessarily, or in other words, giving him the butt too soon. The *suaviter in modo* and *fortiter in re* is the right motto in salmon fishing—to know when to put the strain on. Some years ago I hooked a good fish in the Ness in the run above the "Twa Stanes" Pool. After two or three minutes he went up stream with the speed of lightning, running out 100 yards of my line. I had only 110 on the reel. Mackenzie, my gillie, was in an awful pucker. "Oh, give him the butt, sir!—stop him!—he will break you!—hold up your rod! Oh dear, what a grand fish!" We were running like mad all this time. If I had moved my rod he must have broke me in an instant. I felt this and was as steady as possible; suddenly he stopped. During the whole course of my fishing experience I have never seen a fish run like this one. The force and rapidity were so great that the rod was fairly bent down. After a quarter of an hour away he went

again down as far as the Twa Stanes, when he suddenly turned up again, but then I put the strain on him, and turned him; down he came again, passed the Twa Stanes, into the pool below and right across it. "He must not go there, we can't follow him if he does," said Mackenzie; so then the butt was given with a vengeance, and what a pleasant feeling came over me when I found he yielded, and we soon brought him to bank, a fine fresh-run fish of 21½ lbs., and the sea-louse upon him.

A fish hooked foul is often an ugly customer, particularly if he is a "big un." In 1880 a fish was hooked in the upper part of the Spean, of No. 2 beat, at five p.m., and landed at the lower part of the same beat at eleven p.m. He never showed himself, and although he was supposed by Aitken to be hooked foul, his rushes and tricks made him doubt. However, when landed they found he was hooked by the dorsal fin, and weighed 20 lbs. only. But sometimes, from circumstances, a foul-hooked fish will give in very soon. A fine fish of 18 lbs. was hooked in the Spean, and at the same time I heard an ominous crack of the top joint of the rod (the only place where I ever strike a salmon is in Tumbledown Pool on the Spean, a deep, silent pool, where you see the great fish come after your fly and just seize it like a trout,

and if you do not strike, they spit it out again, but this is not always the case, as I have seen salmon come up in the usual way and take your fly and turn down again after hooking themselves), —whirr went the reel! and he run out full seventy yards of my line. I kept one eye on the fish and the other on my top joint (although I don't generally squint), which kept its position. I wound up and the fish came again into the pool, and after a turn or two I got on short terms with him, but the moment I got him below me away went my top joint down into the water and I gave him up for lost, but to my surprise, up came the fish on his side. He was close in, and Aitken soon gaffed him. The end of the joint was sticking in his nose. I supposed he was more frightened than hurt, and so caved in. He was hooked by his ventral fin.

It is necessary now and again to put on a tremendous strain, when you know if you do not that the fish must run all your line out, or break you round a stone or snag, but then you take your chance by stopping him or losing him.

I was fishing in the Luing, a lovely little river in Ross-shire, but at times very rapid, and got hold of a good fish just under the Falls. After a bit—the river being in half flood—away he went over rocks and rapids as hard as he could pelt; the line running out at a great rate, and I nearly blown,

running on the steep bank as well as I could. This went on for a quarter of a mile, when we came to a sharp bend of the river, where a great rock prevented any following. Now then! who will be the victor? I put on a strain, just letting him go, almost inch by inch, a little more, still not stopping him. Eighty yards of my line out; now he is trying to get round the corner; I gave him the full strain, and dead-stop. A struggle!—will it hold? Ah, that's a fearful tug! it still holds—he yields—he's mine! I wound him up and got him to the only little still bit in that part of the river; my man was already below, and most cleverly gaffed him as he came by him. But salmon may be lost when fishing for them by putting too much strain on them. I have seen this over and over again with first-rate but obstinate fishermen. Here is an instance:—

A grand fish had been hooked, and after a hard fight he began to tire. The strain was put on too soon; the butt given, and the fish came in. "He's not killed yet; don't press him too hard," but the fisherman was obstinate, and did press him—would not give him an inch; his great back-fin was out of the water, and his broad tail showed he was a big un. "Go in and gaff him, he's not killed yet," said the gillie; "go in and gaff him—I'll hold him fast enough." Well, he obeyed, and lo! a flourish of his tail, and away went the fish; even then,

if the strain had been taken off, he would have been killed; but no; and so the fly was left in the fish's mouth, and he lived to fight another day.

The autumn fishing for salmon on the west coast of Scotland depends very much on the state of the weather. Contrary to the prevailing opinion, the months of August and September are, as a rule, very fine. "Why do you go to the west coast, it always rains there?" is a common question. I can only say, I wish it did; for seventeen autumns I have spent two months on the west coast, salmon and sea-trout fishing, and with the exception of one year, 1879, I have never found sufficient rain to please a fisherman. Still, with patience sport will come some time or another. I give an example from my note-book.

"The greater part of the month of August of this year was dry and fine, occasionally some heavy rain with thunder. The last fortnight of the month I only got seven fish: one of 18 lbs., one of 9 lbs., one of 8½ lbs., one of 7½ lbs., two grilse of 6½ lbs., and one of 4 lbs. The small river I was fishing was very low and very clear. Early in September, in four days' fishing on the Lochy, I took five fish: a salmon of 10 lbs. and one of 8 lbs., three grilse, of 7, 6 and 5½ lbs. The weather was very dry and hot, and fishermen were in despair, and we took to the Trot on the Linnhe Loch for a day or two. The big skate

and ling we landed gave capital sport (the Highlanders will not eat skate, they have a violent prejudice against this fish), and when we got two or three big dog-fish on board there was a deal of excitement. However, this fine hot weather could not last; a severe thunderstorm came on, the wind changed, and on awaking one morning at the end of the second week, I saw, from my window, Ben Nevis covered with snow. At the same time a pressing message arrived from Aitken, begging me to come up to the Spean as soon as possible, as the river was in grand ply. I was not long in getting breakfast, and the six miles were soon got over. The river was getting into fine order, a leetle thick, but the fresh cold water will give us sport. For the first two hours fish rose very short, but towards midday I got a good fish of 10 lbs., and then shortly another of 14½ lbs., then a grilse of 6 lbs., and another good salmon of 14 lbs. after luncheon; about four they left off taking, and I did not get another rise.

"The second day the river was in capital order. I began fishing about ten. My first fish was a salmon of 9½ lbs. A successful long cast over a rising fish at the further end of Mac-Kintyre's Pool, just where the water breaks, brought up a good fish, and the fun began and lasted for twenty-five minutes, a beautiful fish of 19 lbs.; then one

of 12 lbs., another of 8 lbs., and a fine fresh-run fish of 14 lbs. Five fish.

"Third day. One of 9 lbs., one of 12½ lbs., one of 13 lbs., one of 14 lbs., one of 7 lbs., a grilse of 6½ lbs. Six fish weighing 62 lbs.

"Fourth day. One fish, 8½ lbs. I hooked a fish at 12.40 in the Coa Pool, and had him on till 4.20, when I lost him, after one of the most exciting fights I ever had with a salmon. What his weight was,—well, I won't think of it, but he was a monster.

"Fifth day. A grilse of 6 lbs., another of 5½ lbs., a salmon of 12½ lbs., another of 15 lbs., and to wind up, at six I hooked a fish; after an hour's exciting fight, I landed him—23½ pounds."

This day would have been still better, but one of the best pools had been spoilt from the mergansers fishing it. These birds scare the fish, destroy large quantities of parr, and should be destroyed whenever and wherever found.

The five days' fishing on the Spean gave me twenty-one fish, weighing 239 lbs., average of 11¼ lbs.

III.

WHERE TO FISH FOR SALMON.

EVERY salmon river has its fishable and non-fishable pools, barren or prolific so to speak. What a lovely pool, you exclaim, in coming upon an unknown river, there must be salmon there. There may be; but your attendant surprises you by exclaiming, "Fish never rise in that pool." Why I cannot tell, but they don't. You may fish it from morning till night, and not a rise will you get. You see the fish jumping in it; you look down in it, it is swarming with salmon. In the pool below and runs above, they take freely. What is the cause? Is it the light—is it the state of the bottom of the pool (perhaps all sand)—is it that the fly does not come round properly, or what is it? It remains a mysterious problem, but it is a fact.

Pools change considerably every year in many rivers from floods, etc.; deeps are filled up with sand and rubbish, favourite stones and rocks are covered and no longer give shelter, and so become barren for sport. Running fish, particularly in small rivers, only stop where they can find comfortable rocks or stones to lie under, on their way to their spawning ground. A salmon finding what suits him will sometimes remain for days in a pool, but a heavy flood is sure to move him, up or down, for I believe that salmon which have been some time in fresh water, and not able to get on for want of water, will often go down to the sea again on the first heavy spate; however that may be, a flood is sure to move them and often incline them to take the fly, when for a long time nothing would tempt them. They will sometimes in a short river run up from the sea to the loch above, where they rest contented till spawning time, when they again enter the river or stream above and find suitable places to deposit their ova. When the fresh fish are running in a flood, or just after the water has cleared, every big stone holds a fish, and you don't want a guide to tell you what pool or what run is fishable; you may find fish all over the river and they will take. Of course, there are also favourite streams and pools, but you may leave those for less favourite places, under the circum-

stances, being pretty sure of sport there when the river has fallen a bit. Therefore, when she's big, fish a short river in all parts.

When fresh fish are running, what vagaries they have! I have seen them throw themselves so far out of the water, as to fall on dry ledges of rocks; and when you hook a fresh-run fish, what fearful leaps he will take! I had a curious adventure which exemplifies this. I hooked a fresh-run salmon in a deep pool seldom fished, because it was supposed to be unprolific of sport; he made a rush right across the pool and threw a most tremendous somersault, landing himself upon a ledge of rock at least two feet higher than the water on the opposite bank, and there he lay for a few seconds without moving, no doubt as much astonished at his position as I was. However, he soon found that dry land was not his place and he jumped himself back again, and as quick as lightning rushed across the pool to where I was standing, one foot on one rock and one on another, with a small and fast and deep stream of water running between the rocks. Before I could wind him up, he went right between my legs and down through the gully. How I turned I know not, but he was away over rocks and shallows, with his back fin out of the water, to a pool about one hundred yards below. Fortunately he was well hooked and the line cleared

all obstacles, for I had no time to wind up short or get a strain on him; however, I had him safe in the lower pool and quickly gaffed him, a fine silvery fish of ten pounds.

As a general rule, however, a stranger to a river, when first fishing it, must follow implicitly the advice of the gillie or fisherman, if he wishes for sport, as these men know every hole and corner where fish are wont to lie, though they are often much astonished when a fish is taken in any other part of the river. I was fishing in the Lochy, in the autumn, and I hooked a fish in a part of the river usually only frequented by sea trout; as my line tightened and I felt the fish, I said, "Duncan, he's a fish." "No, sir, I don't think it, only a trout; I never saw a fish rise there." Well, his manner of running and tugging made me doubt, but Duncan was obstinate, and persisted "that only trout rose there," but gradually he wakened up. "I think it *is* a fish whatever, and he's bigger than I thought. Perhaps you had better get out of the boat." As I wound up he again sung out, "Only a big trout." "No, Duncan, a fish I'll bet," and sure enough as we got him into shallow water, Duncan had to give up and gaff a beautiful fresh-run grilse of seven pounds. "Well," he said, "I never saw a fish take there before."

Two curious instances of what may be called

singular vagaries of salmon were related to me by a friend, a first-rate salmon fisher.

He was fishing in the Ribble in what is called the Froth Pot, close to Mytton Hall, and the Mytton keeper was netting "Clay Hole," a pool about one-third of a mile above, and as is usual in that country, beating the water with poles to drive the fish. All at once, having just made a cast towards the opposite and deep side of the pool, he heard a violent splashing and hubbub on the shingle behind him, and turning round found that a fine fifteen-pound fresh-run salmon, driven, as he supposed and still supposes, by the netters above, had in his rush down stream run himself high and dry. In an instant, having thrown down his rod, he was upon him, and getting two fingers under his gill covers, and with the other hand grasping him above the tail, he ran with him alive into the kitchen of the hall, and to the astonishment of the scullery maid, who was washing dishes, then and there threw him into the sink. The same friend on another occasion was fishing the Laxford; he had fished the pool above, and while casting into what is called the Duchess Pool, became aware of the presence above him on the river of a large bird, which he believed to be a great northern diver, and which appeared to be doing something on the river, which at the distance he was he could not make out. Presently

the bird, which had then apparently caught sight of him, flew off, and my friend continuing his fishing down stream, was absent from the spot for some hours. In the evening, returning with his rod on his shoulder, he was surprised to see in mid-stream, about the spot where he had noticed the bird, the tail of a large salmon well out of the water, and moving slowly to and fro. Watching this for some time, and seeing nothing of the body of the fish, he determined to wade into the stream, about three feet deep, and get close to him if possible. This he succeeded in doing. Still the undulatory motion went on, and he could then plainly make out that the head of the fish was close against the bottom, and that it neither moved nor appeared conscious of his presence. After looking at it for some moments he gaffed it and carried it out struggling, but faintly and quite unlike a fish suddenly gaffed. On the other hand, the fish seemed to have nothing else the matter with him; he was as bright as silver, in perfect condition, and had no marks upon him as if he had been injured or struck. To this day he is quite at a loss to account for the incident, but the impression made upon him was, that the state of the fish was in some way or other connected with the movements of the bird.[1]

[1] The bird was in all probability the cormorant. The great northern or other large diver would have dived, not flown

At times, when fish are running up fresh from the sea, it is wonderful what freaks they are up to; throwing themselves upwards or sideways, turning somersaults, making tremendous rushes and yet not sporting a bit. One evening on the Lochy I was returning from the upper part of No. 6 beat to have one more cast over the Sloggan, when just above the fox hunter's cottage the river became suddenly alive with running fish jumping and rushing about in all directions. I waded in and threw over hundreds I may say; not a fish would come at the fly, but they would, in their jumps, hit the line often enough. After a change or two of flies I gave it up disgusted and went on my way to the Sloggan. The first cast there with the same fly I had endeavoured to "tice" the running fish with, I hooked and landed a bright fresh-run Salmon of ten pounds.

Many of the smaller rivers on the west coast are what is termed late rivers, that is, the fish do not begin to run up them till July. Others are both early and late, that is, you have fresh-run fish in April and May, and again in July, August, and even in September. It is difficult to account for this in these small and short rivers; for instance, the Luing in Ross-shire has a course of about two miles or

away, and the cormorant possibly may have attacked the fish and injured his brain.

two and a half miles from the falls to the sea, and the falls are too high for any salmon to get over. It affords capital fishing in April and May, and again in August and September, and you rarely get a red fish, all fresh run. Its neighbour, the Elchaig, has a course of some six or seven miles, from a loch ; capital fishing in the spring, but in the autumn you get plenty of red fish as well as fresh run. This river is first-rate for sea trout. Strangers fishing these and other rivers must, as I have previously said, depend very much on the keeper, who knows the localities of the fish, but it is sometimes as well to observe for yourself. Here is an instance : There is a lovely pool on the Luing (which when in ply contains a lot of fish), called the Ladies' Pool, and which is fished from a rock on the left bank, and you have to throw a long line to the other side. When she is big it is a long cast, and there is a nasty bank behind you. But why not fish it from the other side? "Oh, it is never done. The fly won't come over the fish properly from the other side;" but on looking at the run of the stream I thought differently, so I made a long detour, and got to the other side. At my first cast—a short one, just to see how the fly worked—I rose a good fish, and I rose five in rapid succession, hooked and landed two of them, and lost another by my attendant letting him drop in the river after he had

gaffed him. In fact, when the river is in order the right bank for this pool is the best.

All salmon fishers have experienced that most unpleasant feeling of disgust and disappointment when, on arriving at the river side, although everything appears to be right for fishing—water right colour, clouds ditto, no glare on the water—the fish appear to be rising, at least they are moving and jumping, yet not a fish will come at your fly. You change it from this to that colour, from big to little ; you carefully fish every part of the pool, and then the stream ; you wait and fish it again, and yet no result : there are the fish—there a big one shows himself—here another jumps. The miseries of Tantalus are nothing to yours, at least you think so. You sit down, smoke your pipe, eat your luncheon, and try again : the same result. Many give it up and go home, but in such cases there are two friends who often have given me a help, Patience and Perseverance ; depend upon it if you trust these they will not send you home empty-handed. I will give an instance. Once fishing on the Ness in Lord Saltoun's water, I had come down from the upper part, fishing all day without a rise. I came upon a well-known fisherman flogging a favourite pool above the castle, " Lady Saltoun's pool." I put my rod down and sat on the bank, and observed with what care and skill my friend fished

the pool. Not a rise; not a fish moved, and he came out and sat by my side. We had a pipe and discoursed about "the brutes that would not rise," compared our flies, and found we were fishing with the same. In about twenty minutes I got up and waded into the river. "What are you going to do?" said he. "Fish the pool," said I. "Fash the pool!" he cried, with indignant astonishment, "why, I have just fashed it, mon." "I know that, but I have nothing else to do, and there is nothing like trying." "Weel, it is just labour lost." He had hardly said these words when, at my second cast, up came a fish, and in twenty minutes I landed a beautiful fresh-run salmon of fourteen pounds. "Weel," said he, "I'd raather have given you ten shilling than seen you done that." "Why, you are not jealous, are you?" "Ah, no, *but it is tantalising*." "Well, how do you account for it?" "Just a gleam of light at the right moment, and naething else."

When the water is very bright and clear in the pools many a fish may be hooked and landed by allowing the fly to sink as deep as you can, and then slowly sink and draw, never bringing the fly near the surface. You see a movement in the water —a swirl and a twist, and your line tightens. You might fish all day in such times, with the fly near the surface, and never move a fish.

Salmon may be Lost after being Hooked, in Many Ways.

When he rushes away after feeling the hook, the chances are he is very slightly held, and his first leap loosens the hook, or, being pretty well hooked, if you are not sharp to lower the end of the rod when he takes his leap, he may get off, or break the hook. He may cut you on a sharp rock, or get round a snag, or may drown your line round a stone, and you have the pleasure of feeling the grating of your gut against the rock, and of seeing your antagonist take a somersault in gladness of getting free, in quite a different place to that in which you supposed him to be. Then again, if a big fish, he will rub the line against a sharp rock or stone at the bottom, and so wear it into a shred. Again, he may break the hook in his last struggles if the hook has got hold of the bone, or he may break by having the butt given him too powerfully, or too great a strain put on the line too soon. Many think stronger gut, double or treble, would be better for such powerful foes, but give me light, strong tackle. You may lose fish certainly. Still I think in the long run you come off best. Senior Angler says that in some waters a heavy rod, a cable line, treble gut, and a huge fly are used. "This would be fine angling for the giant, whose hook

"Was baited with a dragon's tail,
Who sat upon a rock and bobbed for whale."

but to us it sounds like coarse fishing, and so it is. Yet the Salmon is a noble fellow, and when hooked affords noble sport, and what is more, the tackle, when comparatively fine, will raise, and with skill likewise land, more fish than rougher materials. With the strongest tackle we do not haul out at once even an eight or ten-pound salmon. Our material cannot break, it is true, but how are we to ensure the hold which the hook may have taken in the fish's mouth? Cleopatra's diver, who stuck the salted fish on Antony's innocent hook, might feel quite secure; but we, who are satisfied to skim the surface, to rank among the *superficials*, to sport o'er the glad waters like any other ephemeral, must take our chance. Where, then, is the advantage of such coarse stuff? Fish are killed with it, I know, "—and fish are frightened with it, too."

Salmon should be fished for with salmon tackle, or what is usually termed such, but not with trout tackle, as some do who pride themselves with fine casting lines and small trout flies. They do a vast deal of harm to their brother anglers. They hook and lose many fish by their mode of proceeding, thus preventing them rising again for some time.

There is, however, one important maxim to remember,—wherever you may be fishing, you never

know when salmon may be in the humour, therefore—"Never throw your fly without expecting a fish."

A Few Words about Flies.

This is a somewhat difficult subject to touch upon.

When one sees the gaudy paraphernalia in the fishing-tackle makers' shops, one's heart sinks, but I suppose they must be of some use. It would be interesting if we could get a record of the results of the well-known flies, the Pophams, the Butchers, the Doctors, etc., etc., as to their killing powers,—something in the same manner as Mr. W. Balderson has done with the trout flies, as lately given in "The Fishing Gazette."

My experience in salmon fishing has been principally in the autumn months, August, September, and October, and with the exception of the Blue or Silver Doctor and the Jock Scott, and occasionally the Sun fly, I always use sober-coloured flies, with excellent results. There are four especial patterns which I never am without; the Western Butcher, a very different fly to the gaudy gentleman we find in the shops (but he also is a capital fly at times), dressed on two different sized hooks, Nos. 6 and 9, Limerick. Body of dark maroon mohair, silver twist; wings,

grouse feather with two strands of blue macaw; hackle, jay's wing mixed with some few dark strands; tail, golden pheasant hackle.

The Harriet.—Body, purple mohair, silver twist; wings, turkey; hackle, blue jay; tail, golden pheasant. No. 5 and No. 8 hooks. A deadly fly when fish are in the humour.

The August Brown.—Body, light brown mohair, gold twist; wings of the gled tail or bittern; hackle, dark brown. Nos. 5 and 8 hooks. A first-rate fly in full water dressed on No. 5.

The Black Doctor.—Body, black mohair, silver twist; wings, grouse feather; hackle, a few strands of blue jay and black; tail, yellow strands of golden pheasant; also without the tail. A splendid fly dressed on two-sized hooks, Nos. 6 and 9.

The later in the autumn the smaller should be the flies.

However, as all fishermen know, the fish must be in the humour, and this so much depends on circumstances over which we have no control. There is one thing, however, worth observing, viz., the barometer. I have often found that fish will not sport with a falling barometer, however well the day may look or however softly or favourably the wind may blow. Still this is not always so; fish are curious customers, and there is no accounting for their vagaries.

I usually have my flies dressed on two sized hooks, and I prefer the double hook, it is not more clumsy and gives a better chance of a kill. Here is a good instance :—

I was fishing on the Spean, and after a very provoking day, the fish rising and just touching the fly, towards evening I got hold of a good fish. He kept shaking his head very persistently, and I felt the hook was not well fixed : however, I landed him, just over twenty pounds, and found he was hooked in the upper jaw. He had managed to get rid of one hook, and there was the laceration caused by it in the mouth, but fortunately the other held. Had I been fishing with a single hook, considering the way the fish had been rising all day, I probably should have lost him.

My friend S. H. differs from me. He says :

"I cannot think you are right in this. Twice the force is required to make two hooks enter than to make one, and in the case you quote it is probable that neither hook had entered well till one got loose and allowed the other to go in. I have long given up the double hook, persuaded that the single hook enters better. I fancy, in fact, that I have often felt from the jigging of the fish on the double hook that he was only *entangled*, not caught."

Some flies, however, remain persistently good in all weathers and all states of the water. I have

spoken of the Luing and the Elchaig; in both rivers, when the fish were in a taking humour, invariably the Silver or the Blue Doctor would raise them and kill not only salmon but sea trout, and although there was a certain dark fly most deadly for sea trout, yet for the salmon we would constantly try other flies without effect, change to the Doctor and up they would come, and if the river happened to be big so much the bigger the fly. I discovered this by one day fishing a pool most carefully with a very favourite fly without any effect; I changed it for the Blue Doctor, and I immediately rose four fish and hooked three of them. Not thinking enough of this, on another day I fished the pools and runs with a fly I have usually found most killing in the rivers of the west coast, without a rise; I then changed to the Blue Doctor, and killed in a very short time a fine salmon and four or five good sea trout.

IV.

THE NATURAL HISTORY OF THE SALMON.

WHAT has not been written about the salmon, its habits, its history, natural and otherwise, how to catch him, and how to eat him! And yet even now, after all the experiments, after all the trouble of breeding and observing the fish, from their first expulsion from the ova to the full-grown salmon, their lives are still in a great measure a mystery. Scientific as well as practical observers differ in so many respects, that it may not be uninteresting to give a *résumé* of the various theories and opinions which have been advanced about this most interesting species of the *genus Salmo*.

The Tweed Fishery Commissioners appointed a small committee of their number to make inquiries regarding the natural history of the Salmonoids

frequenting their river, and more particularly, as points of interest:

1. What were the different species of Salmon in the Tweed?

2. Did all migrate to the sea and return to the river once a year?

3. How old were they when they first left the river?

4. Could Salmon be detained in fresh water all the year without altering their constitution and condition?

5. What were the circumstances injurious to Salmon, and hindering the increase?

These were the chief objects of inquiry, but sixty questions were printed and circulated. In the answers the difference of opinion was most remarkable.

First, as regards the species:—

W. PAXTON, Superintendent of Tweed fisheries, states that he has observed two varieties of the *Salmo salar* besides the common one, but they are both comparatively rare. The first is a very handsome and large fish, distinguished from the common kind by having *the second dorsal or short fin* (the adipose fin) *nearly twice as large, with a very short space between it and the caudal fin, which is large and finely forked.*[1]

[1] In many of the fine salmon sent over in ice from Nova

The second variety is commonly called a Norway salmon, and sometimes a mongrel; it has the blunt and short head of the sea trout, with the tapering tail and forked caudal fin of the salmon, the scales and markings are also those of the bull trout.[1]

He also thinks that there are hybrids, between salmon and bull trout.

MR. MITCHELL, formerly Superintendent of Tweed Water Bailiffs, says: "Salmon and bull trout and their progeny. (*Salmo salar* and *Salmo trutta*). (He makes no distinction between sea trout and bull trout:) the fish in the Tay, called a bull trout, bears not the slightest resemblance to the bull trout of the Tweed."

MR. THOMAS STODDART of Kelso, the well-known author on angling, says: "1. *Salmo salar.* 2. *Salmo eriox.* 3. *Salmo albus,* of which there are two species, grey and white."

MR. SMURTHWAITE, Berwick, Superintendent of Tweed Water Bailiffs, says: "Salmon proper—Grilse, Bull trout or sea trout. There is a kind of

Scotia, I particularly noticed this peculiarity and pointed it out to several persons. (H.)

[1] A fish of this kind, weighing 28 lbs., was exposed for sale at a fishmonger's in Bond Street. It was called a lax salmon, but was really a bull trout, as shown by its shape and markings, by the colour of its flesh—yellowish pink—and by the teeth. (H.)

salmon particular to the Tweed, termed the grey salmon, which appears in the river the latter end of November, and at times later." This observer states that "*grilse do not become salmon*, as is proved this season, a kelt grilse, marked in March or April last, was recaptured at North Bells in August as a clean grilse."

JOHN WEATHERSTONE, Fisherman, Horncliffe, says: "I know only two kinds of salmon that enter the Tweed, the Tweed salmon and the Norwegian salmon. The latter is known chiefly by its having maggots or worms on the gills, and having the scales of a trout and the fins and tail of a salmon. Then we have the grilse, which is easily known to the practical fisherman, although many times larger than the salmon; but the marks and distinction between salmon proper and the grilse is so fine, that I cannot convey or use words to make the difference known;" he also distinctly states in answer to the question, "If you consider grilse become salmon," "I believe that a *grilse never becomes a salmon*, but it continues to be a grilse."

MR. JAMES SMITH, Water Bailiff, says: "*I don't consider grilse become salmon.*"

JAMES SMAIL, ESQ., Bank Agent, Earlston. "1. Salmon, *Salmo salar.* 2. Salmon trout or bull trout, *Salmo trutta.* Trout, *Salmo fario* or fresh water trout."

JOHN DUNDAS, ESQ., says: "Salmon proper, grilse, and sea trout."

GEORGE SMITH, ESQ., Ancroft: "Salmon, grilse, trout;" and in answer to question 60, "I have never seen a marked grilse kelt return but as a grilse. The bones, scales, vertebræ, back, etc., of the grilse kelt are generally fully developed or denote maturity, while those of the spring salmon all denote youth, or those of young if not virgin fish."

MR. ALEXANDER PRINGLE: "Salmon proper, and *Salmo eriox*, or bull trout."

MR. GEORGE DICKINS, Cornhill, Coldstream, says: "*Salmo salar*, including grilse, *Salmo eriox*, and *Salmo trutta*." He goes on to say, "The differences between bull trout and salmon are sometimes so slight, as to be scarcely perceptible to an inexperienced eye."

MR. WILLIAM ROCHESTER says: "1. *Salmo salar*, salmon proper, including grilse. 2. *Salmo eriox*, or bull trout, including whitling. 3. *Salmo trutta*, or sea trout, called silver white."

It will be thus seen what a great diversity of opinion prevailed when this report was issued. Some see no difference between sea trout and bull trout, others make a decided distinction. Some consider that there are two if not three species of the *Salmo salar;* others, that the grilse is a distinct fish and never becomes a salmon. One would have

thought that from such men, so continuously employed in observing these fish, something definite might have been expected, yet the Stormontfield and later experiments prove how unreliable is the evidence from these inquiries.

However, all state that the three species *Salar*, *Eriox* and *Trutta* go down to the sea after spawning, or at any rate into the brackish water, and remain there for a certain time, and then either go further into the salt water or return to the river.

In Dr. Günther's report to the Commissioners, he gives four kinds of the Salmonidæ frequenting the Tweed.

1. *Salmo salar.*

2. *Salmo trutta*, known by the various popular names of sea trout, bull trout (phinok), whiting or whitling, herling.

Dr. Günther considers the bull trout a variety only of the *Salmo trutta.*

3. *Salmo brachyopoma;* this, he says, is one of the best marked species of *Salmo*, but it is very rare, only nine examples having been noticed by him.

4. *Salmo fario*, or common river trout.

He also states that in the Beauly River there is a hybrid between the salmon and the sea trout, which in that river is called a bull trout; and in his "Introduction to the Study of Fishes," he enters more fully into the subject. Although many

of his remarks apply to the trout as well as the salmon, they are, with his permission, introduced here :—

"We know of no group of fishes which offers so many difficulties to the ichthyologist with regard to the distinction of the species, as well as to certain points in their life history, as this genus (the salmonidæ), although this may be partly due to the unusual attention which has been given to their study, and which has revealed an almost greater amount of unexplained facts, than of satisfactory solutions of the questions raised. The almost infinite variations of these fishes are dependent on age, sex and sexual development, food, and the properties of the water. Some of the species interbreed, and the hybrids mix again with one of the parent species, thus producing an offspring more or less similar to the pure breed.

"*The coloration* is, first of all, subject to variation ; and consequently this character but rarely assists in distinguishing a species, there being not one which would show in all stages of development the same kind of coloration. The young of all the species are *barred*, and this is so constantly the case that it may be used as a generic or even as a family character, not being peculiar to the *Salmo* alone, but also to *Thymallus* and probably to *Coregonus*. The number of bars is not quite constant, but the

migratory trout have two (and even three) more than the river trout. In some waters, river trout remain small, and frequently retain the parr marks all their lifetime. At certain seasons a new coat of scales overlays the Parr marks, rendering them invisible for a time, but they reappear in time, or are distinct as soon as the scales are removed. When the Salmones have passed this Parr state the coloration becomes much diversified. The males especially, during and immediately after the spawning time, are more intensely coloured and variegated than the females, specimens which have not attained to maturity retaining a brighter silvery colour, and being more similar to the female fish. Food appears to have less influence on the coloration of the outer parts than on that of the flesh; thus the more variegated are frequently out of condition, whilst well-fed individuals with pinkish flesh are of a more uniform though bright coloration. Chemistry has not supplied us yet with an analysis of the substance which gives the pink colour to the flesh of many Salmonoids; but there is little doubt that it is identical with, and produced by, the red pigments of many salt and fresh water Crustaceans which form a favourite food of these fishes. The water has a marked influence on the colours; Trout with intense ocellated spots are generally found in clear rapid rivers, and in small open alpine pools; in the large

lakes with pebbly bottom the fish are bright silvery and the ocellated spots are generally mixed with or replaced by X-shaped black spots; in pools or parts of lakes with muddy or peaty bottom, the trout are of a blacker colour generally, and when enclosed in caves or holes they may assume an almost uniform blackish coloration.

"The change of scales (that is, the rapid reproduction of the worn part of the scales) coincides in the migratory species with their sojourn in the sea; the renovated scales give them a bright silvery appearance, most of the spots disappearing or being overlaid and hidden by the silvery scales. Now some of the species, like *Salmo fario* (the common trout), inhabit all the different waters indicated,[1] even brackish water; and in consequence we find a great variation of colour in one and the same species; others are more restricted in their habitat, like *S. salar* and *S. ferox*, etc., and therefore their coloration may be more precisely defined.

"With regard to *size*, the various species do not present an equal amount of variation. Size appears

[1] Fine specimens of what are supposed to be sea trout are sometimes caught in the smelt nets at the mouth of the Medway. They are in splendid condition, and as silvery as a salmon. Are they not the *Salmo fario*, altered in coloration and appearance owing to the brackish water? *See* p. 69. (H.)

to depend on the abundance of food and the extent of the water. Thus the Salmon and the different kinds of great Lake trout do not appear to vary considerably in size, because they find the same conditions in all the localities inhabited by them. A widely spread species, however, like *Salmo fario*, when it inhabits a small mountain pool, with scanty food, may never exceed a weight of eight ounces, whilst in a large lake or river, where it finds abundance and variety of food, it attains to a weight of fourteen or sixteen pounds. Such large River trout are frequently named and described as Salmon trout, Bull trout, etc. Further, in Salmones as in the majority of fishes and tailed Batrachians, there is an innate diversity of growth in individuals hatched from the same spawn; some grow rapidly and normally, others more slowly, and some remain dwarfed and stationary at a certain stage of development.

"The *proportions of the various parts of the body* to one another vary exceedingly in one and the same species. Besides the usual changes from the young to the sexually mature form observed in all fishes, the trout undergoes an extraordinary amount of alteration of shape. In the mature males the intermaxillaries and the mandible are produced in various degrees, and the latter is frequently more or less bent upwards. Hence the males have the snout much more pointed and produced, and the

entire head longer than the females; with the intermaxillary bone the teeth, with which it is armed, are also enlarged, sometimes to four times the size of those of the females. And if this development of the front part of the head happens to be going on while the individual is able to obtain only a scanty supply of food, the usual proportions of the head and trunk are so altered that the species is very difficult to recognize. Barren male fish approach the females in the proportions of the head and body, but hybrid fishes do not differ in this respect from their parents. The abundance or scarcity of food, and the disposition or indisposition of the Salmonoids to feed, are other causes affecting the growth or fulness of the various parts of the body. In well-fed fishes the head is proportionally not only smaller, but also shorter, and *vice versâ*.

"The *fins* vary to a certain degree. The variation in the number of rays is inconsiderable, and of no value for specific distinction. The caudal fin undergoes considerable changes of form with age, and dependently on the sexual development. Young specimens of all species have this fin more or less deeply excised, so that the young of a species which has the caudal emarginate throughout life, is distinguished by a deeper incision of the fin, from the young of a species which has it truncate in the adult state. As the individuals of a species do not all

attain to maturity at the same age and at the same size, and as mature individuals generally have the caudal less deeply excised than the immature ones of the same age and size, it is evident that the variations in the form of the caudal are considerable and numerous, and that it is a very misleading character if due regard be not paid to the age and sexual development of the fish. Further, species inhabiting rapid streams as well as still waters show considerable variations in the form and length of all the fins; those individuals which live in rapid streams, being in almost constant motion and wearing off the delicate extremities of the fins, have the fin rays comparatively shorter and stouter, and the fins of a more rounded form, particularly at the corners, than individuals inhabiting ponds or lakes. Moreover, one and the same individual may pass a part of its life in a lake, and enter a river at certain periods, thus changing the form of its fins periodically.

"Finally, to complete our enumeration of these variable characters, we must mention that in old males, during and after the spawning season, the *skin* on the back becomes thickened and spongy, so that the scales are quite invisible, being embedded in the skin."

We now pass on to another and most interesting subject, the hybridism and distinction, etc. of

the Salmonidæ. Dr. Günther says: "We have mentioned that many points in the *life history* of the Salmonoids still remain very obscure.

"1. Johnson, a correspondent of Willoughby ('Hist. Pisc.' p. 194), had already expressed his belief that the different Salmonoids interbreed, and this view has since been shared by many who have observed these fishes in nature. Hybrids between the Sewin (*S. Cambricus*) and the River Trout (*S. fario*) were numerous in the Rhymney and other rivers in South Wales, before Salmonoids were almost exterminated by the pollutions allowed to pass into those streams, and so variable in their characters that the passage from one species to the other could be demonstrated in an almost unbroken series, which might induce some naturalists to regard both species as identical. Abundant evidence of a similar character has accumulated, showing the frequent occurrence of hybrids between *S. fario* and *S. trutta.* Hybrids between the *S. fario* and species of Char have been abundantly bred by continental pisciculturists. In some rivers the conditions appear to be more favourable to hybridism than in others, in which hybrids are of comparatively rare occurrence. Hybrids between the salmon and some other species are very scarce everywhere. The hybrids are sexually as much developed as the pure breed, and nothing what-

ever is known of their further propagation and progeny.

"2. Siebold has shown that some individuals of every species are not sexually developed, and that such individuals differ also externally from those normally developed. However, he appears to have gone too far when he stated that this state of sterility extends over the whole existence of such individuals, and that, therefore, the external peculiarities also remain permanent throughout life. According to Widegren, this sterility is merely a temporary immaturity, and a part of the individuals arrive at a full sexual development at a later, or much later, period than others. To this we may add that many salmonoids cease to propagate their species after a certain age, and that all so-called overgrown individuals (that is, specimens much exceeding the usual size of the species), are barren. Externally they retain the normal specific characters.

"The Salmon offers a most remarkable instance of irregularity as regards the age at which the individuals arrive at maturity. Shaw has demonstrated, in the most conclusive manner, that those small Salmonoids which are generally called Parr, are the offspring of the Salmon, and that many males from seven to eight inches long have their sexual organs fully developed, and that their milt has all the

impregnating properties of the seminal fluid of a much older and larger fish. That this Parr is not a distinct species—as has been again maintained by Couch—is further proved by the circumstance that these sexually mature parr are absolutely identical in their zoological character with the immature Parr, which are undoubtedly young Salmon, and that no Parr has ever been found with mature ova. But whether these Parr produce normal Salmon impregnating the ova of female salmon, or mingle with the river trout, or whether they continue to grow and propagate their species as fully developed Salmon, are questions which remain to be answered. We may only add that, as far as we know, barren old Salmon are extremely scarce.[1]

"3. The question whether any of the migratory species can be retained by artificial means in fresh water, and finally accommodate themselves to a permanent sojourn therein, must be negatived for the present. Several instances of successful experiments made for this purpose have been brought forward; but all these accounts are open to serious doubts, inasmuch as they do not afford us sufficient proof that the young fish introduced into ponds

[1] Dr. Francis Day is at the present time making some most interesting experiments on Hybridism of the Salmonidæ, and particularly as to the fecundity of the milt of the Parr in producing healthy offspring. (H.)

were really young migratory salmonoids; or that the full-grown specimens were identical with those introduced, and not hybrids or non-migratory trout of a somewhat altered appearance, in consequence of the change of their locality. We have seen the experiment tried at two places in South Wales, and in both cases the Salmon and the pure Sewin died, when not allowed to return to the sea. On the other hand, hybrid fishes from the Sewin and the Trout survived the experiment, and continued to grow in a pond perfectly shut up from communication with the sea. In that locality neither those hybrids nor the trout spawn.[1]

"4. Although the majority of the mature individuals of a migratory species ascend a river at a certain fixed time before the commencement of spawning, others enter the fresh water at a much earlier period, either singly or in small troops, and many appear to return to the sea, before they reascend at the time of the regular immigration.[2] It is not improbable that one and the

[1] Sea trout, *S. trutta*, can certainly live and propagate their species in land-locked lakes. The experiment in the Island of Lismore distinctly proves this. (H.)

[2] Salmon begin ascending all the *larger rivers*, as early as February, but chiefly in March, and fresh fish are constantly ascending (and perhaps descending again) up to the end of September; in some rivers, the Tweed for example, even much later. (H.)

same individual may change the salt or fresh water several times in the year.[1] However, this is the case in certain rivers only, for instance, in those falling into the Moray Firth; in others one immigration only is known to occur. The cause of the irregular ascents previous to the autumnal ascents is unknown. A part at least of the hybrid fishes retain the migratory instinct; but it is not known whether sterile individuals accompany the others in their migrations.

"5. It is said that the migratory species invariably return to the river in which they are bred. Experiments have shown that this is normally the case,[2] but a small proportion appear to stray so far away

[1] It is a well-known fact that they do; observers have noticed that after a long drought, numbers of fish go down to the sea on the first flood from the pools within a reasonable distance of the salt or brackish water. (H.)

[2] An exemplification of this occurs yearly at the junction of the Rivers Lochy and Spean. The former river at the junction has a high fall, and it is only when the Spean has risen to a certain height, that the fish can get up these falls into the Lochy proper, and so into the Loch. The salmon in great numbers lie here waiting for this flood; not one will go up the Spean, to which there is ready and easy access; and very few will go up the artificial salmon ladder, which at a great expense has been prepared for them. But the moment the Spean comes down in spate, which it does generally before the Lochy, up go all the fish that have been bred in the Loch.

from their native place, as to be unable to find their way back; almost every year salmon in the grilse state, and sea trout make their appearance at the mouth of the Thames (where the migrating salmonoids have become extinct for many years), ready to re-ascend and re-stock the river as soon as its poisoned water shall be sufficiently purified to allow them a passage.[1]

"6. There has been much dispute about the time required for the growth of salmonoids. The numerous and apparently contradictory observations, tend to show that there is a great amount of variation, even among individuals of the same origin, living under the same circumstances, some of them growing much more quickly than others, and being ready to descend to the sea twelve months before their brethren. The cause of this irregularity is not explained; on the other hand, when we consider the fibrous condition of the salmonoid skeleton, which is much less solid and more wanting in calcareous substance than that of the majority of Teleosteous fishes, we shall be quite prepared to adopt the truth of the observations that the young salmonoids return to the fresh water after a few months' sojourn in the sea, and after having feasted on nourishing

[1] The Thames for some years past has had a great number of parr put into the upper waters. Are they the grilse and sea trout constantly found at its mouth? (H.)

crustaceans, sand eels, etc., with their former weight in ounces increased to pounds.[1]

"It is apparent from the foregoing remarks that the distinction of the various species of Salmonidæ is a matter of considerable difficulty, and that there is scope for great diversity of opinion; at any rate, it is only by a close, long-continued study, and constant comparison of specimens of various ages and from various localities, that one is enabled to find a guide through the labyrinth of confusing variations. However, it is a significant fact that the very same characters by which we are enabled to distinguish European species occur again, though in an exaggerated form, in American Salmonoids (which everybody will admit to be of distinct species), and therefore our faith in them necessarily becomes strengthened. In accordance with acknowledged principles in zoology, forms which differ from their congeners by a combination of two or more constant characters, are to be distinguished under distinct specific names. Most likely they have been derived, at a not very remote period, from common ancestors, but the question of their specific distinctness is no more affected by this consideration, than the question whether *Salmo* and *Coregonus* are distinct

[1] This entirely depends on the amount of food, and locality; I have killed grilse (*i.e.*, salmon of the first return from the sea) of twelve pounds and of two pounds respectively. (H.)

genera. Whenever the zoologist observes two forms, distinguished by peculiarities of organization, such as cannot be conceived to be the effects of an external or internal cause, disappearing with the disappearance of that cause, and which forms have been propagated and are being propagated uniformly through all generations within the limits of our observations, and are yet most probably to be propagated during the existence of mankind, he is obliged to describe these forms as distinct, and they will commonly be called species." [1]

From so great an authority as Dr. Günther, it would seem almost presumptuous to differ; yet practical experience and more extended observations will certainly tend to lessen, and not increase, the number of species of the *genus Salmo*.

Dr. Francis Day, a very close observer and a very practical ichthyologist, in stating the various characters which have been relied on to distinguish the different species enumerated by various authors, writes as follows:—

"Having enumerated the character stated to be

[1] It is well to know what is now usually meant by the term species, and Dr. Günther defines it as above. Formerly, species signified an individual form with distinct and permanent characters; but what is termed *species* now, would be much simplified under the term, *variety;* and so get rid of a number of useless names, which confuse and mislead the non-scientific naturalist.

most constant among the two first generic groups in the *genus Salmo*, I arrive at the conclusion that most of them are fallacious, and that too great a stress having been placed upon them, many errors have resulted. The consequence has been that the number of species has been unduly augmented, and local races have been accorded generic rank, intermediate forms have not been searched for; but new ones constantly hunted up. Thus the synonymy will be the cause of endless confusion to future ichthyologists. Besides this, every little variety of form, colour, or structure, has been accounted for by terming such hybrids." ("The Fishes of Great Britain and Ireland," vol. ii. p. 59.)

As regards this hybridism, which no doubt does often occur, very little is yet known; but the experiments now going on under the superintendence of Dr. Day will probably throw great light upon this subject.

Dr. Francis Day has gone largely into the study of the Salmonoids, and I would advise all who take an interest in the subject to read his observations.

It appears that although many of these characters are not to be relied on as being not sufficiently persistent, and dependent on locality, food, etc., yet there are others, which are more constantly permanent, viz.—the teeth on the vomer and the X

spots. As far as can be judged by studying the various works on the Salmonidæ, Günther, Cholmondeley Pennell, Day, and others, these may be divided into three classes.

FIRST. Those with single series of vomerine teeth, mostly disappearing at mature age, as the salmon (*Salmo salar*), the sea trout (*Salmo trutta*), and, if the bull trout (*Salmo eriox*) is a distinct species, it may be put into this class.[1] The teeth of these are gradually lost, but for some time from one to four remain. In the large salmon, from the examination of a great number, I have generally found the teeth on the vomer are absent or reduced to one. These species are all migratory, and are all found in Great Britain; but the same distinctive difference is to be found in all foreign migratory salmonoids, as the so-called *Salmo argenteus* from the Atlantic rivers of France, *Salmo mistops* from Norway, *Salmo venernensis* of Sweden, etc.

SECOND. Those with single series of vomerine teeth, persistent during life, viz.,—*Salmo Orcadensis*, the Orkney trout. *Salmo ferox*, the Great Lake

[1] Some suppose the bull trout is a hybrid, but if so, it certainly propagates its species, or from whence come the enormous number which frequent the Tweed and its tributaries? Dr. Günther makes *Salmo eriox* and *Salmo Cambricus* the same, but the Sewin and the Sea trout rarely attain a very large size. The bull trout, on the contrary, often reaches from 20 to 30 pounds.

trout or Buddagh. *Salmo nigripennis. Salmo Levenensis,* Loch Leven trout.

These are all non-migratory, the same characters are found in the so-called *Salmo hardini* of Lake Wenern, Sweden, *Salmo Lemanensis* of the Lake of Geneva, etc.

All these inhabit great internal lakes, most of them landlocked or only communicating with the sea by a most tortuous and difficult course.

The question at once arises: Are not all these so-called species derived from the *Salmo trutta,* and only altered by altered circumstances?

THIRD. With two series of vomerine teeth.

1. Disappearing with age.

Salmo brachyopoma. White salmon of Pennant. According to Dr. Day, this is a variety of the sea trout. Parnell says it is the same as *Salmo eriox.* Günther says it is migratory, and is found in the Forth, Tweed, and Ouse. It is more probably a hybrid between *Salmo fario* and *Salmo trutta.*[1]

2. Persistent during life, and non-migratory.

Salmo fario, the brook or river trout, which Dr.

[1] In March, 1881, I examined a very fine specimen of what was sent to me as sea trout (*Salmo trutta*), caught in the smelt nets at the mouth of the Medway. It was in very fine condition, and to all appearance, externally, was a *Salmo trutta.* On examining the teeth, however, there was a distinct double set on the vomer. Was it a *Salmo fario* or *Salmo brachyopoma,* or a hybrid? I am inclined to think the latter.

Günther divides into two species:—1. *Salmo fario ausonii.* 2. *Salmo fario gaimardi.*

Another distinctive character in the salmon is the position of the X spots. In the *Salmo salar* these spots, with the exception of one or two, are chiefly confined to the upper part of the body, above the median line. In the examination of many hundred salmon I have found this to be the case, as a rule: the proportion of those with any X spots below is very small indeed. In the Sea trout, *Salmo trutta*, and all other species and varieties the spots are equally distributed below and above. The size and variety of the spots depend on other circumstances, to be noted further on.

It is to be hoped that this confusion of varieties with species, of hybridism, of the power of hybrids to procreate, and of the ability of the male parr to fructify the ova of the salmon, may soon be satisfactorily cleared up. At present, after examining thoroughly the various theories on both sides of the question, it appears almost conclusive that the *Salmo salar*, *Salmo trutta*, and *Salmo fario*, are the three chief species of the *genus Salmo*, and that many of the so-called species are nothing but varieties arising from certain conditions produced by external causes.

Whether the true *Salmo salar* can be retained

from the salt water and still continue to grow and propagate its species, is as yet uncertain. All the experiments which have been recorded appear to have failed (perhaps from want of thorough knowledge). Those that Mr. Upton put into the Loch Lillymere in 1835 were certainly the young of the Sea trout (*S. trutta*).

In the early months of the year, beginning in April, we see displayed at the fishmongers' shops a great number of beautiful silvery fresh salmon, many very large, varying from 15 lbs. to 50 lbs. and even 60 lbs. weight, and sent chiefly from the Tay and the Irish rivers, which go by the name of spring salmon.

What is a spring salmon? has been a question asked for many a year, and as yet never satisfactorily answered.

The Tweed Commissioners put the following question. The answers are worth attentive perusal, from the very curious ideas enunciated.

Quest: 18. If, as has been surmised, Salmon leave the sea and enter a river for no other purpose except to spawn, explain how it comes that Salmon ascend the Tweed in early spring and summer, and grilse in May and June, seeing that they are never known to spawn between November and December?

MR. PAXTON. "Salmon seem to enter the river frequently in pursuit of food, or to escape from their

enemies, or perhaps sometimes to clear themselves of the sea lice, or to free their intestines from worms with which they are often infested."

MR. MITCHELL. "Salmon have been seen spawning at Sprouston in September, and many spawn in October. Nothing more than surmise can be given why salmon enter the river in the earlier months of the year: it has been attributed to the presence of sea lice, which may partly be the cause, but we see the swallow come before it begins to breed, and remain after such breeding is over. It is instinct in the one case as in the other."

MR. T. STODDART. "The surmise has no foundation, not even a shadow of one. Our salmon are born in our rivers, up to a certain stage nurtured, fed, and trained in them. What is more natural and intelligible than the instinct which impels them to revisit their birthplace, irrespective altogether of sexual inclinations? The early spring and summer salmon are quite unserviceable as breeding fish. As I said before, a portion of these return to the sea in company with the late kelts; what remain in the river, present, when caught, a sorry appearance in autumn, and the ova found in them, although considerably distended, have an unhealthy look."

He says further on: "Spring salmon rarely affect the higher parts of the river, by which I mean the

seat of the principal spawning grounds, their object not being to spawn."—But how would he account for the spring fish in the Garry, in Inverness-shire? These fish make their way from the Moray Firth, up through the River Ness and Loch Ness to the Garry, where they give grand sport in the spring, when not a fish is to be caught in either the River Ness or Loch Ness. Mr. Stoddart also asks the question: "What is a spring-run kipper grilse so termed?"

"I have observed, in regard to spring or clean salmon, having been in the habit for some years back of daily scrutinizing the supply received by our local fishmonger, Mr. Steel, of Kelso, that at least nineteen out of twenty of them are females. Indeed, it is extremely rare in March or April to set the eye upon a male fish unless it be in the doubtful shape of what is termed a kipper grilse. What is a kipper grilse? I do not, in putting this query, make reference to the kipper grilses of the back end—those male grilses which manifestly take the river for the purpose of consorting with the baggits, and which, as everyone knows, are amply provided with milt capable of being duly shed. But I allude to a description of *Salar* which enters our rivers in spring, having a kipp, or protruding under jaw, yet in its provision of milt being so deficient as to stand comparison, in that respect

with the spring salmon, female in sex. I have taken these fish, kipper grilses, in the months above mentioned, of the average of six or seven pounds, the milt in them not weighing so much as two ounces. They evidently do not take the river for spawning purposes. As diet they are certainly inferior to what is called clean fish, being paler and less curdy. What are they? Are they not the males of the clean salmon?"

MR. SMURTHWAITE is of opinion they enter the river for change of water, and being safer, naturally speaking, from their enemies, who prey upon them in the sea, and also likely to enjoy more repose in the river. The salmon is the earlier fish; grilse later.

MR. WHEATHERSTONE says: "Salmon do not come into the river for the sole purpose of spawning, as we find them coming in in a perfectly clean state."

MR. SMAIL: "They ascend, in my opinion, both for spawning purposes and for enjoyment, which they find in the change from salt water to fresh."

MR. DUNDAS believes that the early spring and summer fish would spawn in due time if spared, but he believes they are all killed.

MR. GEORGE SMITH takes another view: "The spring and summer fish of all denominations seem to enter the river under the supreme laws of nature as food for man. Those that enter in October and

November (Tweed) are our principal breeders. For what purpose they enter the river seems clothed in mystery."

DR. GÜNTHER. "The causes inducing migratory Salmonoids to ascend rivers long before the spawning season are not apparent. A number of sterile fish,—that is, individuals which attain to maturity at an unusually late period of their life, or which are not again ready for propagation in one year (although they may have bred in the preceding year, and may breed again in the following), or which remain barren all their lifetime—a number of such sterile fish ascend rivers evidently for some other purpose than to spawn."

MR. WILLIAM ROCHESTER says, the cause is inexplicable. He says he has his own opinion on the matter, "an opinion not entertained by any known writer whose works have fallen into my hands," but he does not give us his opinion.

MR. BUCKLAND says: "Having examined the anatomical conditions of several of these clean-run spring fish, and at the same time fully considered this most difficult subject in all its bearings, I now venture to propose a solution to the question. These clean-run fish are a secondary migration of salmon, a spring migration in contradistinction to an autumn migration. I have shown that the amount of fat upon the pyloric appendages will be

a safe guide to ascertain the real history, travels, and position of a given fish. These clean-run fish, therefore, in my opinion, are those who have laid up a sufficient amount of fat during the time they have remained in the sea (dating from the kelt stage) to last them during their stay in fresh water, and I fancy (although I have no direct grounds as yet to prove it) that they are the early kelts of the previous year who have reached the sea, say, in January, 1868, now reappear as clean-run fish in February, 1869, or may be, as large fresh-run fish in 1870. Much, however, depends on the quantity and quality of food they find in the estuary. There are, I understand, enormous numbers of smelts in the estuaries of the Dutch rivers, and the food afforded by these, combined with other causes, goes a long way to make the Rhine fish lay up his stock of fat quickly, and therefore renders it ready to proceed all the earlier on its upward pilgrimage. I believe large numbers of smelts are found in the estuary of the Tay. The early fish, therefore, having laid up a sufficient quantity of fat for their inland sojourn, do not wait till the descent of the autumn floods, but they avail themselves of the spring floods, being tempted by the state of the temperature and the great body of descending water, which informs them their road is clear, and also by the non-necessity of their remaining longer in the sea.

This theory, I think, may be strengthened by the fact that the fat upon the pyloric appendages of most of the fresh-run British fish which I have examined is not nearly so abundant as in the fresh fish later on in the season ; these very fish, if there had been no floods in the spring, would probably have remained in the sea, and would have appeared in the river either in the first floods in July or August, or if there were no floods in these months they would have come up in November and December. The large fish which, as experience shows, are generally the latest to come into the river, and which for the most part spawn in the lower portions of the river—these fresh-run fish which form the 'secondary migration' are certainly not, as some suppose, barren fish; they will, I believe, spawn the following winter. Thus, a fish ascending the river in the month of February, 1869, will, if not caught, deposit her eggs about Christmas, 1869, or even earlier. These fish do not, as a rule, come in large numbers, and they are caught here and there singly. Both to the angler and the owners of commercial fisheries they are of great importance, to the one as affording excellent sport, and to the other as fetching large prices in the market. It becomes, therefore, a problem of the greatest importance, severely taxing the resources of science to multiply their number."

Mr. H. Cholmondeley Pennell, in his "Angler Naturalist," broaches another solution to the question. Alluding to what erroneously are called barren fish, he says: "The appearance of these so-called barren salmon at a time when most fish are spawning or are just recovering from the process, illustrates what I believe to be a most important fact connected with the history of the Salmon, and one which does not appear to have been hitherto understood, although following as a natural corollary to the propositions of Mr. Ffennell, and hinted at by Mr. Brown in his account of the Stormontfield experiment, viz.: that the principle of a *divided migration* is not confined to the Parrs on going to the sea, or to the Smolts on their return from it, some as Grilse and some as spring Salmon, *but that it also extends to the old and adult fish after spawning*, one portion of these latter coming back into the rivers during the following summer, and the rest not until the spring succeeding it; in other words (and this is the gist of the whole), that at least a proportion of salmon *spawn only every alternate year*."

May not the spring salmon be accounted for in the following manner? Are they not the early spawners (females)? say those which spawn in October (it is very rare to find any salmon spawning earlier than this month) and early in November, and that many

of them go down to the sea with the floods in December and January. Now is it not probably *instinctive* that the fish should again ascend into *fresh water* as soon as their renovated powers will permit them, and hence their early departure from the sea, and hence the cause of fish running up during the spring and summer months to spawning time, dependent upon the time they left the fresh water as kelts. There may be occasionally barren fish, but they must be rare, as it is contrary to the law of nature, and so is the theory of spawning only alternate years.

Mr. Aitken, the head fisherman of the Spean and Lochy—a most intelligent and careful observer, who knows the habits of Salmon as well as anybody—sent me the following answers to my questions :—

"Salmon only begin to run up the Lochy in March, but few in number. In April and May they come up very freely. The greater portion of the early fish are females. These spring fish remain in the river all the season and are *early spawners*, reaching the spawning grounds before the later fish, and there is no doubt some of them go down to the sea much earlier than is supposed.

"The spring fish in the Lochy are of all sizes, from ten to forty or fifty pounds. The largest grilse caught in the Spean are generally from 7 lbs. to 7½ lbs. The smallest salmon rarely below seven pounds, but one has been killed as small as five pounds.

"Never saw a salmon without milt or roe. Never saw what is called a bull trout in the Lochy or Spean."

Thus it may be considered most of the spring fish are the early spawners of the previous year (October and November), and having gone down to the sea, return as soon as invigorated, to the rivers in which they have been bred, and there remain until the spawning season recommences.

Amongst the numerous errors of the early writers on the salmon, that of Izaak Walton, as regards the fatness of the salmon, is very remarkable, the reverse being the fact. He says: "And it is to be observed that though the salmon grow big in the sea, yet he grows not fat but in fresh rivers, and it is to be observed that the farther they get from the sea they be both fatter and better." We have only to compare the beautiful silver sides and plump shape of a male salmon fresh-run from the sea with the harlequined big-beaked, big-headed, lean, lanky fish which has got up as far as he can in the autumn months. I wonder if Walton ever saw one of these fish, and what he thought it was? These colours, which are so varied and so really beautiful in the male salmon before spawning time, are no doubt connected with generative process, and are put on as a wedding garment, just as

the plumage of the male pheasant, bird of Paradise, mallard, etc.

The beak of the male salmon—which Walton says the fish casts off when he gets to the sea, "as the eagle is said to cast his bill"—is of very curious growth: it is a cartilaginous protuberance from the lower jaw, and if carefully observed, a ring is seen surrounding its base, which is intended when the beak has done its work to facilitate the process of shedding, just in the same manner as the deer sheds its horns. This beak is entirely connected with the generative process, and is intended, not for the purpose, as Walton and many other writers supposed, for digging a hole in the gravel for the female to deposit her ova, but for the purpose of defence and attack on other males intent on taking the female, just as the stag uses his horns against other stags. Salmon do not pair, but the strongest, not necessarily the biggest, fight and retain the female until the process of vivifying the ova is accomplished, and then they seek other females and renew their battles, and in this way many a male salmon is killed.[1] This beak is of

[1] Ramsbottom of Clitheroe believes the gib to be for the assistance of the female fish during parturition,—the forefinger of the accoucheur to press upon the abdomen and about the vent to facilitate the expulsion of the ova, much as the fisherman uses his thumb to press out the fœcal residue before putting a fish into the basket.

gradual growth in the fresh water. Now it is a question worth considering whether the male fresh-run fish in the autumn have a sufficient sized beak to contend against the old fellows who have been up in the fresh water for weeks, and whether the milt in these fresh fish is capable of generating the species. Some assert that the male salmon when he has put on this great beak never recovers his condition, but either dies in the river, or returns to the sea in so weak a state that he easily falls a prey to the seals and otters. No doubt many fish, male and female, are killed in this way; but the great male fish we see displayed in the shops, of fifty, sixty, and even seventy pounds weight, must have been up and down the rivers many times; and also it must be borne in mind that the male grilse of six or eight or ten pounds, puts on as relatively great a beak as the salmon of twenty or thirty pounds.

That the salmon is extremely voracious whilst in the sea there can be no doubt, and lives chiefly upon small fish and crustaceæ. Young herrings he delights in. On certain parts of the northern coast salmon are taken in the coble nets baited with bits of herring. In Robin Hood Bay, on the coast of Yorkshire, this is a common occurrence; put the net down however without the herrings and not a salmon will be caught.

That the sea water is necessary for salmon to

increase in size is evident, chiefly for the abundance of food which they are able to procure.

The question has often been asked : "Why is it that as no food is ever found in the stomach of salmon in fresh water, he rises at the fly? For what does he mistake the gaudy image by which he is so marvellously allured, taking it even at a very short distance from the sea?"

The salmon takes the fly because he thinks it something to eat, and for no other reason. Because nothing is found in his stomach is no argument that he does not feed as other fish; he may have a very quick digestion, or he may eject the food when alarmed, this I have myself seen done by sea trout. If the fly is carefully watched as it is drawn across the stream in short jerks, it will be seen that it is wonderfully like a living thing, and for that it is mistaken by the fish, and if hungry, or inclined to feed, or what in fishing language is called, to sport, up he comes at it, not as Sir Humphry Davy supposes, from any recollection of its food when a parr, but simply from the natural instinct to take something living when in the humour. That that humour is most capricious every salmon fisher knows, to the cost of his temper and patience. Also salmon run eagerly at a bunch of lob worms; would they do so if they were not hungry and

wanted food? They lose weight after being in fresh water for some time, the food being not so abundant; the males also lose more weight than the females, because as the spawning period approaches their laid-up fat on the pyloric appendages is wanted for other purposes. They get thin and lanky, put on their nuptial dress, become of various colours, and are no doubt very attractive to the females, and less so to their enemy the fly-fisher, but although unfit for food they can still show rare sport when hooked.

It has been a matter of controversy as to how far the salmon go into the sea. The general opinion is that they remain always near the coast, and do not inhabit the deep sea. A doubt has arisen lately as to whether the great salmon found in the early spring in Loch Tay ever go to the sea proper at all; whether they do not merely go to the estuary of the river, and there find sufficient food to renovate their strength, and return in the early spring to the loch in the finest condition. That they can invigorate themselves quickly in brackish water is proved by the salmon in the Gulf of Bothnia, where owing to the enormous quantity of fresh water which is poured into it, and the narrow outlet into the sea, the water is very brackish, yet the salmon thrive wonderfully in it; still these fish can go if they wish into the North Sea.

The Salmon has many provincial names. In its young state, before it goes to the sea, it is known as parr, pink, smolt, salmon fry, samlet, brandling, fingerling, black fin, blue fin, skegger, gravelling, last spring, skerling, and sparling. Some of these, however, may apply to the young of the sea trout.

On the first return from the sea, the general term is a grilse; on the Severn, however, it is called a botcher. On the second return from the sea, in Scotland, it is a salmon or a "fish" (this also applies to a grilse, to distinguish it from the sea trout, which is a "trout"). In the Severn, a gerling. In Northumberland the male is called a summer-cock, or gibfish. A fish remaining long in the fresh water on the Severn is called a laurel. After spawning a male fish is a kelt or kipper; a female, a shedder or baggit. In Lancashire a grilse is a sprod; a salmon of the second year a mort;[1] of the fourth year a fork tail; fifth, a half-fish; and salmon only after the sixth year.

The usual terms for the salmon as it passes through the different stages of its life are, parr, smolt, grilse, and salmon.

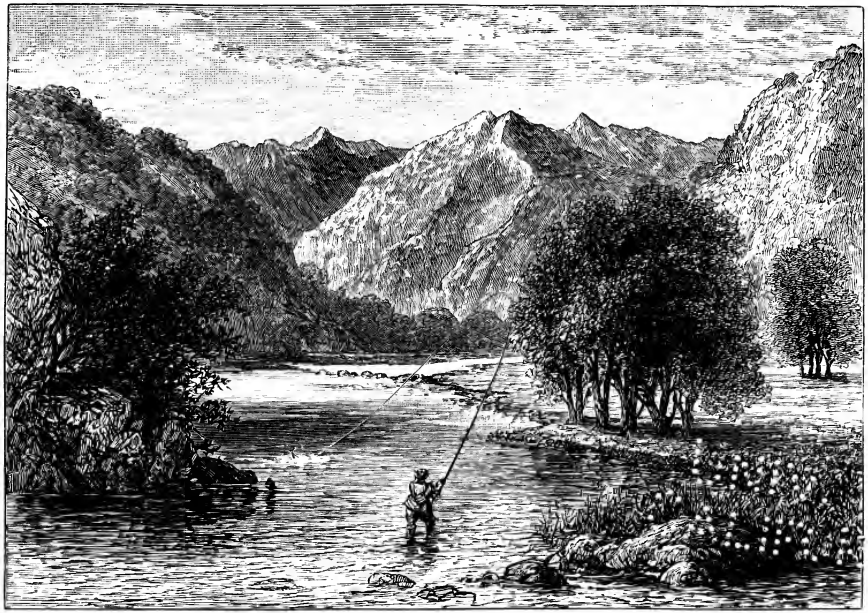
[1] According to others a sprod is a sea trout; a mort is the same fish on its second return from the sea.

V.

FLY FISHING FOR SEA TROUT.

"Ha! well done, fly! a leap; a salmon-peel,
Strike smart! he's hook'd! now gently with him deal!"
The Angler.

MR. FRANCIS FRANCIS in his book on Angling says that the sea trout is one of the gamest fish that swims: "like the champion of the light weights, when he is hooked, he is here, there, and everywhere, now up, now down, now in the water, and now out." And Mr. Cholmondeley Pennell ("Angler Naturalist") writes: "It is not only in its edible character that the sea trout deserves the good word of anglers; indigenous in almost all salmon and bull trout rivers, and frequently abounding in streams which produce neither one nor the other, there is no fish that swims which will rise so boldly at the fly, or which when hooked shows for



SEA TROUT FISHING—THE ELCHAIG, ROSS-SHIRE.

its size such indomitable English pluck, I was about to say, but at any rate, such gallant and determined courage; in fact, the bright, graceful *Salmo trutta* is the most game and mettlesome, if not on the whole the most beautiful, fish known to Europe, or probably to the world."

My first introduction to fly-fishing was with the sea trout, and it came about in this way: Forty-two years ago, strolling down Princes Street, Edinburgh, I came to a shop in which the goods were being sold by auction. The lot then selling was "a beautiful fly rod, reel, book of flies, line, and basket, all going for ten shillings." I bid sixpence more and the lot was mine, and I became the happy possessor of what to me at that time was a white elephant. I had never fished. The lot was deposited in a cupboard. I will not say what I thought of myself in cooler moments for having thrown away what was then to me a considerable sum. However, some few weeks after, strolling along the banks of the Eden in Fifeshire, I came upon a fisherman, and after watching him casting his fly and killing some fine sea trout, the thought struck me: Why not try and do the same with the lot in the cupboard; it appears very easy. So that evening the fishing paraphernalia were rummaged out, and the next morning I made an early start for the river. No one there to give

me a hint what to do; but the rod was put together, the line run through the rings, the reel adjusted, the casting line clumsily attached, and a fly selected from the book, I well recollect, a green body and grey wings, and I tried to cast the line into the stream. Well, never shall I forget that first cast. Not having secured the top joint, that and the line shot well into the river. And again I soon found the fly entangled in the line; that was got clear; then when casting again I found no fly at the end of the line! Another was put on: a peculiar kind of crack behind me when casting, and lo! this fly was gone. What was to be done? try another fly: no better result. First it hit a stone, then the line got tangled into strange knots that took half-an-hour to unravel; patience was getting exhausted—the whole lot shall go to the first boy I meet—the Art of fly-fishing was too much for me. Another cast, however, to see whether I could not be more successful. To my surprise the fly went out straight into the ripple, there was a break of the water, and the line tightened. Fortunately the Reel was free. Away went the line, the rod bent—I had hooked a fish, and after most gentle and patient working, I landed a beautiful silvery sea trout of a pound and a half. How I managed it I cannot tell, but I drew him gently out to a flat bit of sand, threw the rod down, and rushed

at my prey, and with both hands cast him far away from the water. This gave me courage. With a short line I found I could get the fly on the water, and in about an hour or so had managed to land three fish without losing another fly. I came home in triumph, and prided myself on knowing how to throw a fly, but was soon disabused of this bit of conceit. The next day dire misfortune awaited me: flies were whipped off, the line got twisted, a large fish broke me in the first rush. I was in despair, when, as fortune would have it, I met the fisherman I had seen the first day, entered into conversation with him, and related my mishaps. At once he gave me every encouragement, pointed out faults, made me fish and throw the fly whilst he gave directions, and with the utmost patience gave me some most valuable hints, and from that time I looked upon fly-fishing as a sport not to be despised, and no one could become a more enthusiastic lover of the Rod and Line.

On the west coast of Scotland every river, great and small, which has communication with a fresh-water loch at one end, and the sea at the other, abounds with sea trout, and when in ply and the fish are running up, splendid sport is the rule.

In the small rivers very much will depend on the state of the water: if there is sufficient fresh water coming down to make the fish run from the sea,

you may be sure of sport, and it will begin in the first pool from the sea; indeed, in some rivers on the west coast, capital sport may be had with this fish in the brackish waters when the tide is low, but flowing: in others nothing will induce a sea trout to rise until he is well in the fresh water, although the two rivers may only be a few miles apart.

In fly fishing for sea trout in rivers, you must manœuvre your fly very much in the same way as when salmon fishing, perhaps working it a little quieter, and these fish will generally take the salmon flies, only to have good sport they should be dressed on smaller hooks. The Blue Doctor and a dark fly with silver twist, which is mentioned in the list of salmon flies, with a Black and Red Palmer, are very killing flies on the west coast. These fish, however, are at times very capricious. In some rivers they will take nothing but large salmon flies, in others nothing but small flies; for instance, in the Ailort, a big fly on No. 5 hook must be used; some fifteen miles farther west, in the Morrar, not a fish will look at a big fly; go still further, and in the Elchaig, on the west coast of Ross-shire, a medium-sized Blue or Black Doctor will raise almost every fish in the river; again, in the Aline Water, a Black Palmer with scarlet body and gold twist, or a small Harriet, gives better sport than any other fly.

As Mr. Francis says, Sea Trout, when hooked, are

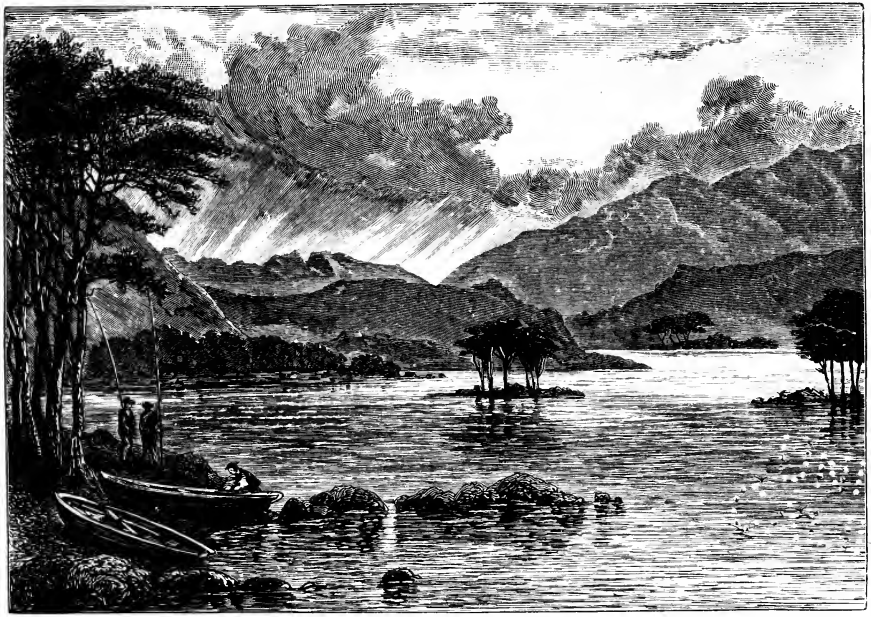
almost as much out of the water as in ; their leaps are surprising, one after the other in quick succession, and often they leap themselves off the hook. A fresh-run sea trout of from three to four pounds in a rapid river, with a double-handed trout rod, gives splendid sport, and from his gameness keeps one on the tenterhooks of excitement till he is landed ; he never gives in, and is struggling and plunging when you put the net under him. On a favourable day, with a Black and Red Palmer, or a small Silver Doctor, and the fish fresh running, you may surfeit yourself, but you cannot leave off,—the sport is too exciting. The places to fish for them are long stretches of not very deep water, with not too much stream, the tails of pools, and the pools near the sea ; they come with a rush, and one is inclined to strike them too soon, and so lose them, just touching them. They don't hook themselves as a salmon does, but come up straight at the fly, and often miss it, making a great floppy noise ; in the rivers you must give them a little time to recover themselves, and if you do this they will rise again, but if you throw over them at once, your chance is not so great. In the lochs it is quite the other way, you must cast instantly over a fish that has risen to you.

In loch fishing for sea trout a different mode must be followed to that employed in the river. And it is a curious fact that both salmon and sea

trout, when they have entered the lochs, take the fly much in the same manner as the common trout. Instead of working the fly with the jerking motion in the river, you must draw it rather rapidly along the water, just below the surface, and strike very quickly at a rise. Two flies are generally employed, and almost every loch has its peculiar flies—(I am writing of the west coast of Scotland more particularly.) For instance, in Loch Ailt, one of the best sea trout lochs on that coast, large flies are always used, and the fish will not take the smaller sea trout flies. Again, in Loch Arianus, smaller flies alone will take, either Black or Brown Palmers, or small Harriets, or a small fly with grey mallard wings and green mohair body, but the Palmers are always killing. Mr. Herbert Spencer, who is a most ardent and excellent fly fisher, has his Palmers dressed so that the hackle is reversed, and I must say they are very deadly in this loch, but I have tried them elsewhere, without success.

Here is an account of a day's sport on one of these lochs on the west coast :—

"We stroll up the river—she is very small. We take an occasional cast in the pools in hopes that an unsophisticated salmon might be induced to take our fly. The wind is south-west and breezy. The gillies have pushed on to the loch to get the boat ready, and taken our guns for the chance of a



LOCH AILT, INVERNESS-SHIRE.

duck at the head of the loch in the reeds, or a roe feeding towards evening in one of the clear places in the wood. We pass over the spider bridge spanning the river below a capital salmon pool, on through the fir clump, and what a view breaks upon us! There lies the loch in all its beauty, its waters a dark blue, a steady breeze ruffling its surface, on one side the mountains (they are more than hills) crowned with basaltic precipices, come sheer down to the water's edge; on the other, grand boulders covered with lichen and dwarf birch, a sloping wood on one of the spurs of Ben y Hatton, reaches to the shore, the birches and oaks ascending and ascending till lost in moor and rugged rocks, and far above us, among the clouds, the craggy summit of the Ben himself. We reach the boat, everything in readiness, and we push off, and slowly row to the opposite side; a nice breeze favours us as we drift across, with just enough movement of the oars to keep the boat in position. Two flies are used, and we go to work. After a cast or two, we are both fast in fish. My companion has hold of a big one; mine is soon in the boat, and in the next cast up comes a whopper, and now comes the fun: a tremendous rush—a grand leap—another and another, and he is off. We part company, but not before I had been able to guess his size, nearer four than three pounds. W. has in the meantime landed,

or rather boated, his fish, a nice fresh-run one of 2½ lbs. We have drifted too near the shore, so put back, rowing close in, and again drift over the same fishing ground. Sea trout congregate together in shoals, and whilst playing fish you may miss many a feeding fish, so it is well to go over the same beat twice. We again get four good fish, all over a pound, and then away to other water. As we row gently up, about thirty yards from the shore, I get two good trout, and W. raises either a very large one or a grilse—he is on for a few seconds, a furious rush, and he is gone. We notice three or four salmon jumping a little higher up, throw carefully over them, but with no effect (salmon seldom rise in this loch), and we then row over to the south side to the Rock and First bay. Here sport begins in earnest, and before leaving we have ten fish, not one under a pound, of which three are between two and three pounds, and one just over three pounds. I was fishing with a Black Palmer with red body and gold twist, and a small Harriet; my companion, a Brown Palmer and Green Mantle, green body, grey mallard wings, silver twist; the fish rose fast and furious, and a good many got off. We then drift across to some weeds, and here every cast brought up a fish, all large. Some are killed, others get off, all fight furiously, and we increase our bag by eight good fish. Whilst drifting,

I noticed a large fish rise much further out in the deep water, we at once row to the spot. At the first cast up he comes, and he is fast. With a swirl and a whirl, away he goes, taking out line at a rapid rate, but never showing himself till many yards had been run out,—he must be a salmon! Then comes a mighty leap, and I see by the twist of his tail that he is trout, but a big one. Leap after leap, still further he goes. Row, row, he'll take out all the line! He fights a glorious fight. But he is well hooked, and he is gradually brought alongside, and after another game struggle for his life he is brought on board; six pounds and a fresh-run fish.

"The wind has now dropped, and we row ashore to lunch under some big rocks fallen I wonder how many years ago, and where a spring of ice-cold water gushes out. After luncheon, light our pipes, watch the wild goats clambering over the rocks half-way up the mountain, headed by their hoary grey-bearded patriarch, whose horns now adorn my hall—but stop; look! what are those birds? Three cormorants—wending their way up to the island at the head of the loch. Terrible poachers are these birds; so it is decided, more especially as there is but little breeze, to have a cormorant stalk. So putting up one rod, whilst with the other I pretend to be fishing, W. lies down in the bow, and we gradually near the island, and in this

way get within forty yards or so, when all three birds slowly rise. Too late for two of them—one falls dead to the first barrel, and another, mortally wounded, flies away, and dies in the wood. We pick up the dead one, the old mother, and row gently on to the furthest point for the chance of a duck in the reeds. I am landed; creep quietly up to the edge of the rock, whilst W. in the boat rounds the point. The moment the head of the boat clears the rock up get five ducks. I get one, and W. another as he wheels round, forty yards overhead, a splendid shot. In going to pick mine up I flush and bag a snipe, and a little further on we get two flappers out of the reeds. Now the breeze has freshened, the guns are covered up, and we commence fishing. Drifting down the loch, the wind at our backs, fish are still on the rise, and we take some fine fresh fellows. Suddenly, as is often the case, the wind dies quite away, and the lake is as smooth as a mill pond. Not a fish is stirring, where a few minutes before every cast brought up a trout, so we land and weigh our fish. One six pounds, one over three pounds, eight from two to three pounds, and the rest from three-quarters to a pound and a half. As we walk down the river we have a cast in the Big Pool. The salmon are jumping in all directions—but it is no go—so we wind up, jump into the dog-cart, and return home,

well satisfied with our day's sport, and well we may be. It is one of the red-letter days in my journal.

As previously stated, one of the best sea trout lochs on the west coast of Scotland is Loch Ailt. When I first fished that loch I tried the usual sized sea trout flies. Not a rise could I get. Old Angus quietly remarked, "they are too small." I gave him my book, and he picked out two flies with which I had been killing salmon on the Lochy. I at once began to take fish, and some very large ones, and a splendid day's sport I had, taking twenty-five as fine sea trout as one could wish to see. I have fished this loch for many years, and invariably find that large flies are necessary for sport. The sea trout run very big, as heavy as ten pounds. Fish of five, six, and seven pounds are not uncommon.

In Loch Coolin and Loch Clair, in Ross-shire, large flies take well, but in Loch Marée, six miles further on, much smaller flies are more general. In Loch Morar the sea trout and salmon in the autumn rarely take the fly, but with the Blue Phantom Minnow you may get good sport. In lochs the sea trout congregate near the weeds, and sport is always the best when fishing near them. In rivers they like the eddies formed by a rapid stream, and the tails of the pools.

But our sport in Scotland with sea trout is as

nothing compared to that in our North American colonies. Frank Forester writes :—

"The sea trout fishing in the bays and harbours of Prince Edward's Island, especially in June, when the first fish rush in from the gulf, is really magnificent. They average from three to five pounds each. I found the best fishing in St. Peter's Bay, on the north side of the island, about twenty-eight miles from Charlotte's Town. I there killed in one morning sixteen trout, which weighed eighty pounds." Mr. Perley, in the River Obseache, accompanied by Captain Egerton of the 43rd Light Infantry, killed three hundred of these fine fish at the junction of the fresh and salt water, at the foot of a long glancing rapid, in a single tide! They take very greedily any of the gaudy Scotch or Irish flies.

VI.

NATURAL HISTORY OF THE SEA TROUT.[1]

Salmo Trutta:—Sea Trout, Salmon Trout, Sewin, White Trout, Salmon Peel, Blue Poll.
In the Grilse state :—Phinok, Herling, Lammasmen, Whitling.

ALTHOUGH Günther makes the Sewin a different species under the term *Salmo Cambricus*, and states that it is the same as *Salmo eriox*, or bull trout, and Couch and other writers on the Salmonidæ make distinct species of this and the Salmon peel, etc.; the distinctive characters by which these writers endeavour to separate the various species are so undefined, and vary so much in individuals, that

[1] See remarks as to species, form of teeth, &c., under "The Natural History of the Salmon."

I do not doubt, on further inquiry into the subject, all these fish will be found to be only varieties of the same species modified by climate, water, locality, light, air, and so forth. The Galway sea trout is nothing but *S. trutta* modified by special locality. The same may be said of the *Salmo nigripennis.* The distinction of the black pectoral fins is not sufficient difference to form a new species, and is probably entirely dependent on the soil of the loch and local causes. The vomerine teeth are the same as the *Salmo trutta* and not of *Salmo fario.* It is another instance of the sea trout confined in a fresh water loch, and thus altering its condition.

The *Salmo Levenensis*[1] again, although there is no record as to when they were introduced into the Loch Leven, can hardly be doubted to be a descendent of the *Salmo trutta.* A similar fish exists in the Island of Lismore, introduced some thirty years ago. Maculloch, "Journal of the Royal Society, Edinburgh," states this, and says that the sea trout was transported to this fresh water loch without the power of visiting the sea, and is perfectly reconciled to their prison, and propagate their species without difficulty. The flesh is of the

[1] Since this was written Dr. Day, I believe, has been able to prove the fact of the *Salmo trutta* being the original progenitor of the Loch Leven trout.

finest sea trout colour, and nothing can be better for the table. Indeed, it must even be a matter of doubt if the *Salmo brachyopoma* is a distinct species, or only a sea trout in disguise, or a hybrid between *Salmo trutta* and *Salmo fario.* It certainly is the only migratory species with a double set of vomerine teeth. Yarrell, in his "History of British Fishes," makes the Fordwich trout of Izaak Walton the *Salmo trutta* (which is found in the Stour), but Walton's account is so totally different to anything appertaining to this fish, that it may be a question whether it was a Salmonoid at all? Walton only writes from hearsay, and says it never rises at fly or bait, and its flesh in season is *white.* Was it not the Basse, which is vulgarly called on the Kentish and other coasts, the sea salmon?

Dr. Günther, in "The Study of Fishes," page 178, says:—"Hybridism is another source of changes and variations within the limits of species, and is by no means so scarce as has been believed hitherto; it is only apparently of exceptional occurrence, because the life of fishes is more withdrawn from our direct observation than that of terrestrial animals. It has been observed among species of Serranus, Pleuronectidæ, Cyprinidæ, Clupeidæ, and *especially Salmonidæ.*"

Now will not this hybridism account for some of the *extraordinary species* figured and described by

Couch and others? and this is borne out by the further observations of Dr. Günther. "It is characteristic of hybrids that their characters are very variable, the degrees of affinity to one or the other of the Parents being inconstant; and as these hybrids are known readily to breed with either of the parent race, the variations of form, structure, and colour, are infinite. Of internal organs, the dentition, gill rakers, and pyloric appendages are those particularly affected by such mixture of species."

The Rev. Mr. Houghton, in his "British Fresh Water Fishes," gives some excellent plates of the *Salmo trutta* and its varieties, under the designation of Sewin, Galway trout, Blackfinned trout (*S. nigripennis*), short-headed salmon (*S. brachyopoma*), silvery salmon (*S. argentus*); but his figure of the *Salmo eriox*, or bull trout, is totally unlike any bull trout I ever saw, and I have seen a good many. It may be the bull trout of the Coquet after having been in the fresh water for many weeks, and put on the spawning dress, but it is not the bull trout of other rivers. Silvery as the salmon, with a blunt, short head, and covered almost to his ventral fins with dark X spots, I have seen this fish of the weight of twenty-five pounds and upwards. Mr. Houghton says that the principal rivers in Scotland for the sea trout are the Tweed, Spey, Don, and Tay;

I conclude he has never visited the west coast of Scotland. I should think that the number which run up the rivers of the west coast and the outer Hebrides far exceed those on the east, but perhaps may not run so large.

The sea trout, for the most part, run up rivers which come from lochs, in which they delight, remaining there till spawning time, and then frequenting all the small streams and rivulets to deposit their ova. After being in the fresh water for some time they change their colour, become red spotted, and are very similar to, and often mistaken for *Salmo fario*, or the so-called *S. ferox*. It is remarkable that the sea trout of our North American colonies never ascend to the upper portions of the great rivers of that country. As to the question whether sea trout can live and propagate their species without returning to the sea, the statement made by Maculloch, and the fact related in the following letter, will appear to answer it in the affirmative.

"We had some grand fishing about six miles from San Francisco. In the fresh water lakes we found salmon (?) running from three-quarters of a pound to three and four pounds, just as if they had come up fresh from the sea, except that they have no sea lice upon them, but they are firm, silvery, and very pink in flesh. These two lakes are divided

from the Pacific Ocean by a strip of high sand hills varying in breadth, but a few years ago one lake used to have communication with the sea, which fully accounts for the salmon in them. But the foolish people who have formed themselves into a company have stopped up this gap, and consequently the salmon cannot get down to the sea. Now where we caught the most of our fish was at the foot of a high sand bank, where the sand was always sifting into the water, and as no doubt the wind is always blowing up fresh sand from the ocean, bringing with it a certain amount of salt, and as I saw millions of the small salt water shrimps—sand-hoppers (*Talitrus locusta*)—these are no doubt the reasons why these salmon are in such good condition. Not only are they in good condition, but they fight splendidly. There is only one objection about this fishing, and that is, they don't rise at the fly, and you fish with a float and hook baited with worm, cat-fish, or shrimp. The salmon never run larger than four pounds; the trout of the lake larger. I caught one $3\frac{1}{2}$ lbs., and they run up to ten or twelve pounds. These trout are quite different to any I have ever seen before; they have a pink stripe on each side of them from their mouth to their tail, and this large one I caught had a couple of things that looked like warts, or beauty spots, on each cheek, about the size of a threepenny piece."

These so-called salmon, thus designated by the fishermen of San Francisco, are in all probability the *Salmo paucidens* of Richardson, or the *Salmo quinnat*, which are more allied to the *S. trutta* than to *S. Salar*.

Dr. Day says, "It is evident that our anadromous sea trout may take on a fresh water state of existence, and breed there, irrespective of which, by imperceptible changes, we find it in every country passing from one form into another. This, of course, raises the question, of which form *Salmo Orcadensis*, *S. estuareus*, &c., most resemble, the anadromous *S. trutta*, or the fresh water *Salmo fario*.

VII.

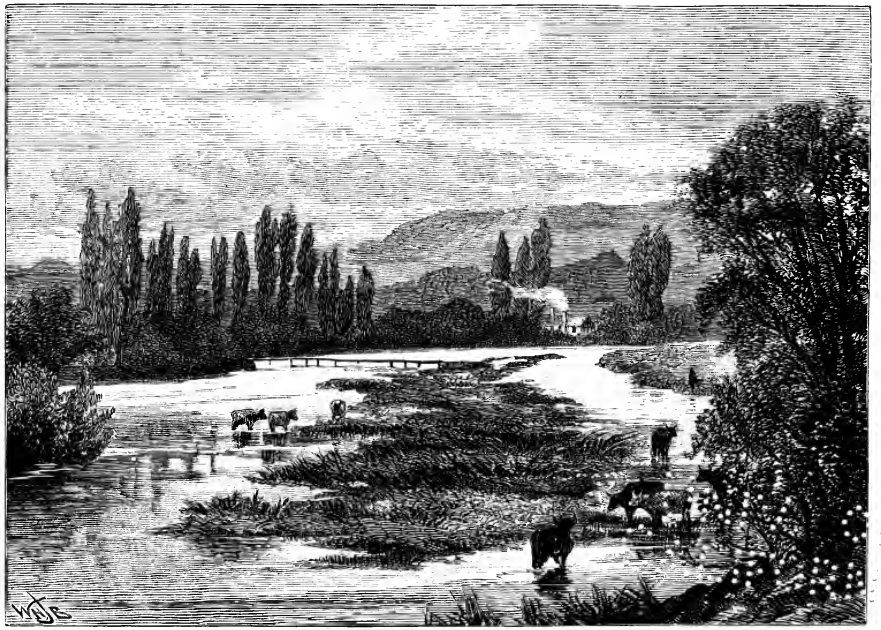
FLY FISHING FOR TROUT

(*SALMO FARIO*).

"I in these flowery meads would be,
These crystal streams should solace me,
To whose harmonious bubbling voice,
I with my angle would rejoice."

ALL who throw the fly o'er salmon, trout, or grayling, should love the gentle art as Izaak Walton loved it, and appreciate as he did the beauties of nature which so identify themselves with its true enjoyment.[1] The river-side has other charms besides the pleasures and excitement of the sport. It brings the angler in communion with those

[1] In these degenerate days there are too many whose only aim is to fill their creels, no matter how, so as to gain a prize at some piscatorial club, and who never look beyond their flies or floats.



THE TEST AT LONG PARISH.

delightful accompaniments of nature from which his art has been designated "the contemplative man's recreation."

Alive to all he sees as he wends his way through the water meadows, resplendent with calthas and kingcups, he listens with unalloyed delight to the cuckoo's cheerful note, a voice "at once far off and near," the jug-jug of the nightingale, the deep, mellow crush of the wood-pigeon's note, which

"Made music that sweetened the calm,"

the mellow song of the ousel cock, "with orange tawny bill," or the warning voice of the water-hen, that bird-ventriloquist; and while preparing his tackle his eye is suddenly attracted by that speck of azure blue,

"The timid Halcyon's vivid dyes,"

as it shoots by in rapid flight; or he casts his eye upwards to watch the fleecy clouds making their airy way from south to north, giving sunshine and shadow; a true fishing day—

"All these, and many more of *His* creation,
That made the heavens, the angler oft doth see,
Taking therein no little delectation,
To think how strange, how wonderful they be."

And then, after one of these pleasant days, as evening sets in, and all nature sinks in repose, he

returns home satisfied with his sport, and being thoroughly convinced that he has filled his creel with "lusty trout" by his skill in casting the fly, he finds no difficulty in agreeing with the venerable author of the "Compleat Angler," that "fly-fishing is an art:" "an art worth learning; the question is, whether you are capable of learning it."

Although it requires much skill and judgment to cast the minnow well, or work the red fly (*Lumbricus terrestris*) so as to lure the fish, yet, of all methods of fishing for salmon, trout, or grayling, none can compare to that with the artificial fly. One can hardly describe in words that peculiar sensation of satisfaction and pleasure when, having cast the fly to an inch over a feeding trout, an almost imperceptible turn of the wrist, as the water breaks at the rise, tells that the prey is fast. Then the coming struggle, so well described by our poet Thomson:—

"But should you lure
From his dark haunt beneath the tangled roots
Of pendent trees, the monarch of the brook,
Behoves you then to ply your finest art.
Long time he, following cautious, scans the fly,
And oft attempts to seize it, but as oft
The dimpled water speaks his jealous fear.
At length, while haply o'er the shaded sun
Passes a cloud, he, desperate, takes the death
With sullen plunge; at once he darts along,
Deep struck, and runs out all the lengthen'd line,

Then seeks the farthest ooze, the shelt'ring weed,
The cavern's bank, his old secure abode,
And flies aloft, and flounces round the pool
Indignant of the guile. With yielding hand,
That feels him still, yet to his furious cast
Gives way, you now retiring, following now,
Across the stream, exhaust his idle rage,
Till, floating broad upon his breathless side,
And to his fate abandon'd, to the shore
You gaily drag your unresisting prize."

What pleasant associations cross my mind as I recall to memory days gone by, red-letter days in the calendar of life, when, forgetting all the cares and troubles of a busy and anxious profession, and accompanied by a brother angler, I have sped away to some well-known river, revelling in the bright spring morning, rejoicing in the sun's exhilarating rays, and luring with the lightest of tackle and the smallest of flies the wily trout. We meet at midday to talk over the haps and mishaps, and under the wide-spread branches of some old oak, drink our glass of "barley wine," and smoke the fragrant weed, luxuriating in the flowers carpeting the meadows, "that beautiful earthly rainbow which springs up year by year, as much the offspring of the sun and rain as those arcs we love to gaze upon." Such hours snatched from toil, few and far between though they be, reinvigorate the whole man, dispel his vapours, and are worth "a king's ransom."

"The trout," says Walton, "is a fish highly

valued both in this and in foreign nations; he may be justly said, as the old poet said of wine, and the English say of venison, to be a generous fish." And as old Izaak calls the salmon the king, so the trout may be designated the prince of fresh water fishes.

To lure him with the artificial fly has been the aim and ambition of heroes, philosophers, statesmen, poets, artists, physicians. The names of Thomson, Coleridge, Nelson, Paley, Wollaston, Davy, Wilson, Sir Walter Scott, Chantrey, J. M. W. Turner, and a hundred others are household words amongst fly-fishers. They all—sailors as well as soldiers, statesmen as well as poets, philosophers as well as physicians—require recreation and amusement from the toils and cares of every-day work.

> "For dear and precious as the moments are
> Permitted man, they are not all for deeds
> Of active virtue; give we none to vice,
> And Heav'n will not strict reparation ask
> For many a summer's day or winter's eve
> So spent as best amuses."

And what amusement can be more beneficial to both health and spirits than a spring day passed on the banks of some charming stream, when

> "The thorn is on the bud,
> The palm is on the blossom,

The primrose in the shade
Unfolds his dewy bosom.

* * * *

" The lavrock's in the sky,
And on the heath the plover,
The bee upon the thyme,
The swallow skimming over."

Springtide so loved of fishermen—alas, that such joys should end !

" Sweet day, so cool, so calm, so bright,
The bridal of the earth and sky,
Sweet dews shall weep thy fall to-night,
For thou must die."

Armstrong, in his " Art of Preserving Health," thus writes :—

" But if the breathless chase o'er hill and dale
Exceed your strength, a sport of less fatigue,
Not less delightful, the prolific stream
Affords. The crystal rivulet that o'er
A stony channel rolls its rapid surge
Swarms with the silver fry.

* * * * *

Oft traced with patient steps thy fairy banks
With the well-imitated fly to hook
The eager trout, and with the slender line
And yielding rod solicit to the shore
The struggling panting prey—while vernal clouds
And tepid gales obscured the ruffled pool,
And from the deeps call'd forth the wanton swarms.
Form'd on the Samian school, or those of Ind

There are who think these pastimes scarce humane,
Yet in my mind (and not relentless I)
His life is pure that wears no fouler stains."

Book iii. pp. 191-2.

How happily Thomas Westwood hits off the trout-fisher's pleasures :—

"Wand'ring by the streams apart,
Glad and calm as they,
Plying still my simple art,
All the livelong day.

"Seeking out the shadiest nooks
Of the winding moorland brooks,
Where the pearly waters sleep
In their quiet pools and deep.

"Where the greedy trout doth lie
Ready for the ensnaring fly.
Who so free from weeping sorrow
And from care as I."

It requires keen observation and careful study to become thoroughly acquainted with the ways and habits of this prince of fishes. No one can become a good fly-fisher who has not a quick eye, a patient mind, and a gentle hand. The first to observe the fish and its habits ; the second to be contented with what the day will give ; and the third to throw the fly to its proper destination, and when the fish has risen to it, to hook and land him. By observation you will soon know that you must not show yourself to the

intended capture, and therefore you must not be too close to the water's edge, or, if it is necessary for casting your fly, you must make yourself as little visible as possible.

Then, again, observation must decide for you as to whether you will fish up or down the stream. No rule can be laid down, as it so depends on a variety of circumstances—the wind, the light, the condition of the banks, the set of the stream ; but all anglers will agree that if the river can be fished up stream it is preferable, as, independent of having more power over your fish when hooked, you have the stream with you, instead of against you, and thereby a better chance of landing your fish, and also you have the great advantage of not disturbing your fishing water, as you bring your capture at once, or very soon, into water already fished over. Experienced fly-fishers when fishing up, and particularly when fishing for feeding fish, never allow more line out than is absolutely necessary for the fly to go a very short distance above the fish. This judging distance is very essential. Big fish when feeding lie pretty close to the surface, and generally take up a position close to the bank of the stream and near some weeds. A novice, from the very slight circle the fish makes in just putting his nose above water when rising at the fly, would suppose him to be a small

trout. Here quickness of sight and patience come in—the first to watch the fly come over him and strike by a slight twist of the wrist at the proper time, the second not to be too anxious to change your fly or place.

In some of the well fished rivers the big trout become very wary, and I have known twenty minutes spent over a feeding fish before he would take the fly, and then if the fly is of the right colour he will all of a sudden take it. This is particularly the case in the Hampshire rivers which are so much fished. Some years ago I had many a good day on these rivers, but then there were fewer fishermen and the trout were more abundant, and perhaps not so highly educated, although it required the three rules to be implicitly followed if you wished to fill your basket.

From my experience (over forty years) I believe casting lines may be too fine, particularly when you have to deal with heavy fish. It is true you may raise more fish, but are more fish brought to bank? You cannot put sufficient strain on to keep a big fish from the weeds, you dare not try to lead him over the weeds, and when a fish is down amongst them you cannot put on sufficient pressure to draw him out of them. In this way many fish are lost, when, with slightly stronger tackle, they would be in the basket. Fishing, the other

day, in a well-known river, I took three fish rising under the further bank with a great deep bed of weeds between me and them. I was fishing with fine but strong tackle, and the moment I hooked them I put sufficient strain on to lead them over the weeds (taking them as it were by surprise) into the clear water on my side. The three fish weighed nine pounds and a quarter. I hooked another under the same bank which from the feel was larger, but he was too quick for me and got under the weeds, and though I lost him he did not break me. If I had been using the very fine tackle which some of my brother fishermen praise so much, and with which no doubt in clear streams without weeds is very killing, I believe I should have lost every one of these fish through getting entangled in the weeds.

As to the strain to be put upon a fine cast, a friend (a first-rate fisherman) writes me thus :— "As to the strain you may put upon a fish, it depends less, I think, on the relative strength of the cast than on the steadiness of the strain. The danger to a fine cast is not, in fact, in my experience, in the strain, but in the moment of striking, and, of course, in an entanglement of weeds, though I am free to confess that with very fine casts (which I prefer) my line has sometimes failed owing to the dead weight of the fish in the

act of hooking him; I am yet able to aver that I have scarcely ever been broken owing to the fineness of the line after the fish has been fairly hooked. A fine cast will, in fact, bear a very heavy strain, *quà* mere strain, and I am under the impression that owing to the lightness with which it falls on the water you frighten fewer and raise more fish." This may be so. On the other hand it is difficult, as before said, with a very fine line to pull a big fish over weeds, or to put sufficient strain when in weeds; and as regards lightness of fall and disturbing the water, how much of the cast should go near the fish? Certainly only the fly; and the difference of a *very fine* cast and a fine one, as far as my experience goes, is hardly in favour of the very fine.

In some of the rivers near London, the Cray and the Wandle, for instance—two of the clearest of streams—you require to fish far and fine at all times except in windy weather; and fishing up stream is almost an absolute necessity. In these clear streams very fine tackle is the rule and very small flies, but even in the clearest streams too fine tackle will prevent sport. In strong wind, for instance, fine gut will not keep on the water, and the fly will fall everywhere but where you want it. I recollect a day when this occurred. A brother fisherman—a lover of the finest tackle—was fishing

with me in a very clear stream. The wind blew his gut in every direction but the right one. He had nothing but the *finest* tackle with him. With a fine but coarser gut line I was taking fish very rapidly, and he was obliged to come to me for a loan of one of my casting lines, and with this he was very successful. At the end of our day's sport he had eleven brace of fine trout to my ten and a half brace, and he was obliged to own that the success was due to the coarser tackle. In using the term coarse I do so by comparison—my tackle by many, perhaps, would be considered very fine.

In the Test, owing to the clearness of the water and the fish being so constantly cast over, *very fine* casting lines are generally used, and dry fly fishing is the rule.

The Colne and the Ver, in Hertfordshire, hold, or used to hold, very fine fish. They are somewhat sluggish streams, but the fish are fat and big. The latter river was some years ago well stocked with fine trout (which cut as pink as salmon), and I have had capital sport between Redbourn and St. Albans. Now, I believe, the jack are very numerous, and, of necessity, trout more scarce. A curious circumstance occurred to me one day when fishing this river which illustrates the old adage, "Necessity is the mother of in-

vention." We had had no sport—there was not a cloud in the sky—and we sat down to sketch near an old mill. In the tail of the stream I noticed some big trout taking the minnows. I had a fly minnow on my hook. I put him on. He was taken at once, but the fish broke me. This was tantalizing. What was to be done? My eye suddenly rested upon my friend's colour box filled with bright tubes. He gave me one nearly empty. I wound this round a biggish hook of an evening fly, having first split the tube in half. I cast this into the stream. A swirl and a tug, and I had fast hold of a good fish; and I landed three, all large, one after the other, with this bright bit of tin.

There is no more pleasurable bit of excitement than fishing for a particular fish you see feeding, and getting him at last by actually teasing him. He will go on taking the natural fly one after the other as greedily as possible, and apparently not heeding your invitation, although you have thrown with the greatest accuracy over him, and mentally observed, on a very good cast being placed before him, "Now, that must fetch him." But no; he goes on, and you begin to tire, when suddenly, when you least expect it, he rushes savagely at your fly. The slightest twist of the wrist, and you have him. I will not try to express the

particular feeling of satisfaction experienced when a beautiful two-pounder is lying on the grass before you.

In allusion to this, a well-known trout-fisher friend sends me the following note :—

"However easily scared a trout may be when he is not feeding, he is bold to indifference when he is. Thus when the fish are rising you may hook, play, land, and kill a dozen fish without moving from the spot on which you stand. I have often done so, and the other day had a good opportunity of seeing what occurs under these circumstances. I was fishing the Bourne in Hampshire, and throwing at one of two fish which were busily feeding within a yard of each other. At last I hooked him and we had a battle —he to get under a bush, in the shadow of which the second one was feeding, and I to keep him out. The result was that the hubbub about and around the second fish was very great, yet he never moved, and as soon as I landed my friend and the current was restored number two went on feeding, and I believe if I could have got a fly over him (which I could not on account of the bush) I should have killed both fish."

When trout are on the feed and have risen at and not taken your fly, they will seldom come again (a grayling will, but a trout as a rule will

not); he has to all appearance made up his mind that the lure is a wrong one. But at the *right fly* he certainly will come twice, and that even after he has been hooked. Fishing in the Test at Laverstock last summer, after changing my fly several times over a large trout which was actively feeding under the opposite bank, I put on a little yellow one and hooked him, and then, after a good struggle against stream, when just pulling him in the net—he got off. "Why, sir," said the keeper, "he has gone back again and is feeding again." "So he is, and in the same spot, too. But you will see he will not look at me again;" and out went the fly, just to see what he would do. To the astonishment of both of us he took it, and to his own, no doubt, when he found himself engaged in a second struggle for his life all within the space of five minutes, and this time in vain, for he was soon in my basket. On the same stream, and only a few days previously, the keeper saw Sir Maurice Duff-Gordon (a first-rate fisherman) lose a fish by his line breaking, and on the same afternoon with a similar fly catch him—the first hook being well-embedded in his tongue. So much for the sensibility of fish, and for their not coming a second time at the fly they approve of." This is not at all an unfrequent occurrence and must happen to all fly-

fishers. Last spring I lost a fine fish in the Chess. He had taken the Red Spinner, got into the weeds, and broke me. In the afternoon I saw a fish rising at the same spot; threw the Red Spinner over him, and had him at once. He weighed over two pounds, and had my morning fly in his upper jaw.

When we go "a-fishing," we anxiously look at the barometer and at the sky, hoping for a soft south-wester or a showery day; but we Londoners cannot choose our days, and must take them as they come, fine or wet; and many a bright holiday have I spent by the river-side with little prospect of much sport, and yet I seldom came home with an empty basket. There may be plenty of fly on the water, or there may be none, but on bright days other things must be considered, and the fish must be "'ticed," not by the prevalent dun, or spinner, but by something else. A bright or a sombre coloured fly will often lure a fish when nothing else will move him. Some well known fly-fishers, past and present, say a bright fly for a dark day, a dark fly for a bright day. All my experience goes to reverse this axiom, and many a good fish have I got out of a river by the use of the brightest fly in my book on a sunny day. I will give one instance out of many in my note-book. For sixteen years I fished the Kennet, at Littlecote and Ramsbury, for

three or four days in July. One bright clear day, at the end of July, I was fishing at Chiltern Bridge. The river was like glass, the sun piping hot; not a breath stirring. The fisherman shook his head and advised us waiting till the evening. However, I donned my waders, and went into the middle of the river. On the shallows above the bridge I noticed some very fine fellows lying some yards above me, now and again showing their big tails above the water. I put on a small Soldier Palmer, with gold twist (a very favourite fly of mine), and threw over a big fellow I saw near some weeds. He took not the slightest notice of my lure the first or second cast; at the third I saw him turn his head, and I turned my wrist. Ah! We then had a struggle; he rushed across the stream to his hiding-place, but I had the advantage of being below him. I brought him down, and soon had him in my basket, nearly two pounds, and a beauty. I patiently and *broilingly* continued my plan, and by luncheon time had taken two brace of beautiful fish with this Soldier Palmer. We sketched all the afternoon (my friend would not fish, declaring it too useless and too hot), and in the evening, about seven, we put on the Coachman, and before half-past eight we each had our five brace of magnificent fish, not one under a pound and a-half. The next day the weather changed; it was dark and stormy,

with much rain, and we were fishing the Ramsbury portion of the Kennett. I tried the Major (sedge fly), with silver twist, and could not get a rise; changed it to one without any silver twist, and I immediately rose a fish. My friend followed my example, and before two o'clock we had landed with this fly twenty brace of fine fish, not one under a pound, some of them between two and three pounds, and three over three pounds each, returning to the water all but the very large ones. I was obliged to leave for town in the evening, but my brother fisherman remained and fished the next day, still dark and stormy, but not much rain. The Major would not take a fish, but with the Alder, dressed without twist, he took, in four hours, twelve fish, weighing twenty-seven pounds, returning to the water all below two pounds.

The trout of the Kennet are particularly fine, and the nearer you get to the source, the brighter are the fish. Many years ago, before railroads had cut up the country, and there was only the Great Western running through those parts, I had a day's fishing at Savernake, near Marlborough. The pleasant drive in a post chaise over from Swindon; the disappointment on first getting to the river, to find it thick; the pleasure of seeing it gradually clear. A bright breezy day, with cloud and sunshine in alternation, so that by twelve I tried a

Red Spinner, and immediately rose a fish; and with this fly and the Major I had taken, before three o'clock, twelve fish, weighing twenty-four pounds, one very nearly four pounds, and this was as fine a specimen of the *Salmo fario* as you could wish to see; his silver sides and black spots were more like a *Salmo trutta*, and he cut as red as a salmon.

After nearly twenty-five years I have had, through the kindness of Lord Ailesbury and Sir Francis Burdett, three days' fishing in my old haunts on this magnificent river. Two days at Savernake and one at Ramsbury. The first day (or rather only a few hours, as I was unable to leave town early) I found the small Alder and the Coachman, and in the late evening, the large Alder, very "'ticing." The second day a small Red Spinner and the Wickham's fancy were the best flies. The fish would not move in the morning. With the Sedge fly, or Major, I did little or nothing. In the evening a rather larger Red Spinner gave me good sport, and I landed some fine fish. As the number of fish to be taken is limited, many pound fish were returned to the water. The next day, at Ramsbury, with much thunder about and rattling showers, the sport was wonderful. With a small Alder—and as the weeds were plentiful I only fished with one fly—I rose

and hooked fish after fish; but, as again the number to be taken is limited to five brace, and quite properly, many a pounder, unless in first-rate condition, was put back. I think I must have put back between ten and four o'clock at least sixteen brace of good fish. We reserved ourselves for the evening fishing on the lower water, where the giants live; but alas! when we got there the fish had taken it into their heads not to come, and we only got a brace apiece, but they were good fish. I tried the Major, my pet fly twenty-five years ago, but the fish would hardly look at it.

VIII.

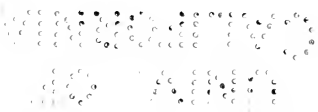
WHEN TO FISH FOR TROUT.

IZAAK WALTON, Chap. V., fourth day, says, "And if he hit to make his fly right, and have the luck to hit also where there is a store of trouts, a dark day and a right wind."

A dark day and a right wind no doubt is every fly-fisher's wish when he goes a-fishing—but which is a right wind?

> "When the wind is south
> It blows your bait into a fish's mouth."

Others are loud in the praises of a westerly wind, but to quote from the "Complete Angler" again, Walton hits the mark in the following passage: "And yet, as Solomon observes, that, 'he that considers the winds, shall never sow,' so he that



THE KENNET—RAMSBURY BRIDGE.

busies his head too much about them, if the weather be not made extreme cold by an east wind, shall be a little superstitious, for as it is observed by some, there is no good horse of a bad colour, so I have observed, that if it be a cloudy day and not extreme cold, let the wind set in what corner it will, and do its worst, I heed it not."[1] Although much stress has been laid on the wind, and, as every fly-fisher knows, a balmy, breezy, cloudy day, with the wind from the south or west will give a better chance of sport, yet that cannot always be commanded, and when one is obliged to take the day as it is, whatever the wind or weather may be, experience tells me that many a good day's sport has been had with the wind in the north or in the east; in fact, let the wind do its worst, I heed it not. I can remember having capital sport in some open water in Hertfordshire years ago, the wind from the north-east, and snowing all day.

Some people advocate early and late fishing, leaving the middle of the day to rest. Walton was an early fisherman, and gives from five a.m. to nine a.m. as the best time. Fisher, in his "Angler's Souvenir," and others, say that in clear water and bright weather it is useless to fish except before eight a.m.

[1] Jesse states that it is useless to fish if the water is below fifty-five or sixty degrees but this is not at all to be depended upon.

or after six p.m. But I go with Daniell, who, in his "Rural Sports," gives a table of when and where to angle for different fish, and under *trout* he says *all day*, and he is about right. You may fish all day, be it bright or dull, and have sport, too, provided you know how and where to throw your fly for a trout. Thomson well describes this:—

> "Just in the dubious point, where with the pool
> Is mixed the trembling stream, *or where it boils*
> *Around the stone*, or from the hollowed bank
> Reverted, plays in undulating flow,
> There throw, once judging, the delusive fly,
> And as you lead it round the artful curve,
> With eye attentive, mark the springing game,
> Straight as above the surface of the flood
> They wanton rise, or urged by hunger, leap,
> Then fix, with gentle twitch, the baited hook."

There are other places, however, well worth attention, and to the observant fly-fisher it is hardly necessary to allude to them. Most of our southern streams are generally very weedy, with open runs of clear water between the beds. When the fish are on the feed they lie in these open runs or at the tail of the weeds, and the big fish love to be under the banks as every fly-fisher knows. Fish are generally found at the tail and not at the head of an obstacle in the water, because at the tail the current round the obstacle is double and the flies therefore are brought from both sides into the single

stream or eddy which forms below it, and in which the fish is waiting for his prey.

How often fish are disturbed close to the bank on walking up or down stream. On windy days they love to lie close to the bank opposite to the wind, looking out for flies. Then is the time; when such is the case, neglect other parts and throw over as close as you can to the opposite side. Let the fly, if you are adept enough, lightly drop on the bank, and then twitch it on the water; if a fish is there, you will be pretty sure to hook him. At other times, if the banks will allow you, fish up stream, and carefully throw close to each bank where there is a stream, and at the tail of weeds, or under or near roots of alders and other bushes. You will seldom go unrewarded. You can generally reserve a good deal of muscular exertion by watching a short time before throwing, as you will perceive where the fish are they will be just making the slightest ripple on the water if on the feed, *i.e.* if they are of any size; large fish, as a rule, don't make big rises. In the broad waters of mill-heads fish generally feed near the banks, coming out of the deeps. So, again, in hatch-holes where the water runs by the planking just before it breaks a good fish is sure to have his home, and towards evening they get out in the shallower parts where the water breaks into ripples. Big

fish in the day time seldom roam far from their hiding places, so beware when you hook one, for he is certain to make for it, and it depends very much what that hiding place is whether you land him or not. I have given one or two examples of this, but here is another worth recording. I was one afternoon fishing in the Wandle above Hack Bridge. I saw a very fine trout feeding close to some boarding near a mill under which I concluded he had his hiding place. I was fishing with a small Alder, No. 12 hook, a fly I find most killing in this river. On the second cast it came well over him and he took it. To my surprise, he came down the river as hard as he could pelt. I had not time to wind up, and had to run fast to keep below him, winding up as quick as possible. After coming down some forty or fifty yards, he suddenly turned sharp round under a mass of thick weeds. Oh, oh! my friend, this is your home, and you think you have done me. I could feel, from the slight tremor of the line, that he was still on. Instead of pulling to get him up again, I quietly walked into the stream—rather deep, but that did not signify—and gradually shortening my line, held my rod up, and, guided by the line, dived my right hand into the weeds. Sure enough I felt my friend below in a great mass of them; he remained quite still. I worked my hand up to his gills and thought I

should get him in this way; but just as I was about to secure him, up he came to the top of the water, and away he went up stream again. Not for long, however; I soon brought him back, got him into clear water and landed him—a splendid 2lb. fish.

A curious circumstance occurred to me at Littlecote in one of my fishing days there. I had gone down to the end of the water for the purpose of wading up a part of the river, unfishable from its banks owing to the high fir trees and other impediments, and where I had seen some fine fish. I had got the Alder and the Major fly on, and took two or three very fine fish. As I waded I caught sight of a very big fish a short distance above me lying under the bank, very still, very black looking, but very thick. I threw carefully over him four or five times without rising or moving him. I then got closer and again threw. I then got quite close to him, when, to my astonishment, I found he was quite blind. I quietly put my landing net under and before him, and then touched his tail; he darted forward into the net. He would have been a splendid fellow, as he weighed four pounds, but was quite black and out of condition.

In wading up stream and carefully throwing under the banks on each side the big fish, which

generally lie pretty close to their haunts, will dart out from under the cover and take your fly as it floats down almost without breaking the water; but you must watch for the movement, and experience will tell you when to strike. At times these big fellows come out into the middle of the stream, and you may see them throwing their tails up out of the weeds—"tailing"—nothing is so tantalizing; rarely will these fellows come at your fly; but never mind, have patience; there are other fish about; don't fatigue your arm or sour your temper by casting over them. Sometimes towards evening big fish will come up and break the water in all directions, yet will not take any fly thrown over them—not even the good imitation of the Fisherman's curse. If you do perchance take a fish, and examine his maw, it will be found that he has been taking all kinds of flies. As a rule, one is too impatient, and inclined to change the fly too often. The best plan is to go on teasing them with a good fly; some of them will come at last, apparently provoked into taking your lure.

A word or two about weed cutting. In my opinion weed cutting is carried much too far. It encourages poaching and it impoverishes the fish. Trout are much finer and fatter in rivers where the weeds are cut with judgment. It is terrible to see the way in which the weeds are cut in some rivers, par-

ticularly in the Hampshire streams. Weeds should be cut in the same way as heather is burnt on the moors, with the utmost circumspection, so as to benefit and improve the sport—every here and there left in clumps—one year in one locality, the next year in another, and so on. No real sportsman will object to such a proceeding, for, although it makes it more difficult to kill a big fish, yet it preserves the trout; they have their natural hiding places and natural food, which is bred on and in the weeds.

IX.

TROUT FLIES.

"Around the steel no tortured worm shall twine,
No blood of living insect stain my line;
Let me, less cruel, cast the feather'd hook
With pliant rod athwart the pebbled brook,
Silent along the mazy margin stray,
And with the fur-wrought fly delude the prey."

"Mark well the various seasons of the year,
How the succeeding insect race appear;
In this revolving moon one colour reigns,
Which in the next the fickle trout disdains.
Oft have I seen a skilful angler try
The various colours of the treach'rous fly,
When he with fruitless pain hath skim'd the brook,
And the coy fish rejects the skipping hook.
He shakes the boughs that on the margin grow,
Which o'er the stream a waving forest throw;
When, if an insect fall (this certain guide)
He gently takes him from the whirling tide,
Examines well his form with curious eyes,
His gaudy vest, his wings, his horns, and size;

Then round the hook the chosen fur he winds,
And on the back a speckled feather binds.
So just the colours shine thro' every part,
That nature seems to live again in art."

GAY, "*Rural Sports.*"

 HUS wrote Gay on the art of making artificial flies in 1775, and so we continue to follow as close an imitation of nature as skilful hands can frame.

Izaak Walton was satisfied with twelve flies; but it must always be borne in mind that he was more addicted to the float than the fly. The two first he names are varieties of the March Brown; the third is the Stone fly; the fourth is the Ruddy fly, a kind of Red Spinner; the fifth the Yellow or Greenish fly for May; the sixth, the Black fly; the seventh, Sad Yellow fly for June; the eighth, Moorish fly; the ninth, the Tawny fly; the tenth, Wasp fly for July; the eleventh, Shell fly; the twelfth, Dark Blue fly; "and there you have a jury of flies likely to betray and condemn all the trout in the river." Besides these he gives the May fly and the Oak or Downhill fly. He then quotes Barker as to the Palmers:

"A brother of the angle must always be sped,
With three Black Palmers and also two Red."

Charles Cotton gives a number of flies for each month, but with all his flies he considers that the Green Drake and Stone fly are "the matadores for trout and grayling, and in their season kill more fish in our Derbyshire rivers than all the rest past, to come, or the whole year besides."[1]

In later editions of the "Complete Angler" the list of flies is greatly increased. In the seventh for instance, published by Samuel Baxter, 1803, a very long list is given of every imaginable fly under every imaginable name,—Sooty Duns, large fœtid Browns, Haggard, Yellow Miller, Pismire, Spring Black, Blue Herl, and the like—but all these early writers agree in one recommendation, never to be without the Palmers or Hackle flies, and always to try them when first fishing a strange river before any other fly.

Venables ("The Experienced Angler," 1662), gives no list of flies, but advises procuring all sorts of hair—bears', foxes', cows', hogs', dogs', mocado-ends, and dyed wools of all colours, and feathers of cocks, capons, hens, teals, mallards, widgeon, pheasant, partridges, kites, and generally of all birds, and then he gives some cautions or directions as to fly-fishing, some of which are very good, others very bad; for an instance of the latter he advises you

[1] Under Grayling Fishing we shall again refer to Cotton's list of flies.

to keep your fly in continual motion, though the day be dark, the water muddy, and the wind blow, or else the fish will discern and refuse it.

He advises, of every sort of fly to have three, one of a lighter colour, another sadder than the natural fly, and a third of the exact colour with the fly, to suit all waters and weathers.

"The Angler's Vade Mecum," 1700, gives a list of some thirty flies. Most writers give the same, or nearly the same Hackles. Palmer Hackle, Silver, Red, and Grey Hackle. The Whirling Dun is also on all lists, so is the Green Drake and Stone fly. The list is made up of Owls, Brown, Black, and Flesh flies, etc., all apportioned to different months.

Samuel Taylor, "Angling in all its Branches," begins with eight. He says: "The following eight I shall set down as standards, because the seven first will kill fish at all times of the season, and the eighth from about the middle of April.

These eight are, the Black Hackle, the Wren's Tail, the Grouse Hackle, the Smoky Dun Hackle, the Brown Rail, the Hare's Ear (two), the Red Hackle. He then gives a list of some twenty more, among which are the Dun Fox, the Ash Fox, the Light Fox, the Golden Sooty, etc.

Thomas Best, in his "Autobiography of Angling," tenth edition, 1814, gives a very long list.

For March, seven different flies.
„ April, six „
„ May, seven „
„ June, six „
„ July, six „
„ August, six „
„ September, four „

These are independent of the Palmers, which are to be used in every month.

But he makes a selection from these which, he says, will kill fish in any part of England and Wales.

Captain Williamson, "Complete Angler's Vade Mecum," 1822, gives a description, and how to make various flies, but he only names one or two out of a list of twenty, viz., the Red Spinner, (a single winged Hackle), Red Ant fly, Black Ant, Pale Blue, and the Palmer Hackles.

He divides them into four classes, and gives very careful directions how to make them.

Sir Humphry Davy's list in "Salmonia," is very short.

The May fly, or Green Drake, is the chief fly used in his pleasant description of the Denham fishing.

The Alder fly—as he calls it, a Red Alder—dressed, peacock herl for body, red hackle for legs; wings, landrail below and starling above.

The Yellow Fly, or Dun Cut. White and Brown Moth. Willow and Cow-dung, chiefly for grayling. The Grannam, or Green Tail.

Blue Dun, the July Yellow Dun. Brown Fly (March Brown), and the Red Spinner.

The other flies he mentions will be referred to under the Grayling Fishing.

Rennie, in his "Alphabet of Angling," gives two flies for February: a Palmer, and the Prime Dun.

Three for March: March Brown or Dun Drake, Cow-dung, Blue Dun.

Three for April: Stone fly, Hawthorn, and Grannam.

Six for May: The Dun Cut, Green Drake, Oak fly, Alder fly, Spider fly, Yellow Day fly.

Four for June: The Red Spinner, Barn fly, Owl fly, Flesh fly, Peacock.

July: a variety; Ant flies, Spider, etc.

August: Hazel and Fern fly.

September: Ant fly.

Palmer Hackle, in his "Hints on Angling," 1846, also gives a very small list, but it is an excellent one. He describes four hackles for foreign waters, and then adds to these, for English waters, the Chantry, March Brown, Blue Dun, Cock Tail, Pale Yellow Dun, Orange Dun, Great Red Spinner, Black Gnat, Red Ant, Sand fly, the Alder, Green

and Grey Drake, the Governor, the Coachman, and the Cow-dung.

Hofland, "Angler's Manual," 1839, gives a list of some forty-six artificial flies for grayling or trout. In my early days of fly-fishing I furnished a book with a complete set of his flies. I found about fourteen good for general use; the others might now and then kill a fish, so will any fly.

Ronald's "Fly Fisher's Entomology," 1844, gives careful descriptions and beautiful coloured impressions of no less than forty-six flies for trout and grayling fishing, and anyone, who wishes to have a thorough assortment, so as to carry out that evil propensity of constant change, cannot do better than fill his book from Ronalds. Whether he will kill more fish than a more modest brother of the angle who has not that propensity, and who thinks about a dozen flies sufficient, is a question. Too much praise cannot be given to Ronald's book, for the very beautiful illustrations, both of the natural and artificial fly.

Senior Angler (Wheatly), 1849, gives a description of eleven *fancy flies*, besides three for night flies. Some of his fancies, are, to my knowledge, excellent, both for trout and grayling, more particularly for the latter. To these I shall refer again in "Grayling Fishing."

Mr. John George Akerman, "Springtide; or, the

Angler and his Friends," 1850, is a friend to few flies. "I would fish any river with three Palmers of my own choosing."

Ephemera, "Handbook of Angling," 1847, gives a list of ninety-two flies. Ephemera is a violent opponent to everything that is not the exact imitation of the natural fly; and no wonder, when he recommends such an overwhelming list, and when anyone hints that flies quite unlike the living fly will capture trout, he cuts the argument short by such a sentence as this: "The majority of mankind are mad on one subject or another, perhaps the majority of animals are similarly so; these mad fly-fishers are successful, no doubt, because they meet with mad fish, which are more readily taken with fantastic flies than with naturally coloured and shaped ones—that is the only way I can account for the heterodoxy." Did he write this in jest or in earnest? An experienced fisherman like Ephemera ought to know that *colour* often beats exact *imitation*. He cannot answer the question as to salmon flies. "No natural flies are like the artificial;" that is true, he says, but unaccountable. Again, trout of all kinds take the big gaudy salmon fly in the rivers and lochs of Scotland. I suppose these are his mad fish. He says also, "if fish preferred nondescript artificial flies I may reasonably conclude they would prefer nondescript

natural fish more than frogs, beetles, and so forth. They do not, however, and artificial fish are as like as possible to natural minnows, bleak, etc."

How does Ephemera account for the killing powers of the spoon, the kill devil, etc. I once killed some fine trout, my artificial bait being made out of a tin colour tube from the box of an artist friend who was with me.

Mr. Francis Francis, "A Book of Angling," gives some excellent remarks about flies, and is inclined to limit the number; still he gives a careful description of some fifty, besides general flies. The March Brown, Alder, Red Spinner, two kinds of Duns, May fly, Francis, Governor, and Coachman are his favourites. He seldom or never uses the Palmer Hackles except for chub.

Mr. Stewart, "Practical Angler," gives as principal flies only six. Three spiders and three wing flies.

Mr. Stoddart, "Angler's Companion," remarks: "The fastidiousness of many anglers with respect to their trouting flies has always occasioned me astonishment." He goes on to say that these fastidious anglers who exult in the possession of five or six dozen varieties give credit to the fish for possessing a power of discrimination not less than a degree of daintiness or epicurianism altogether extraordinary. His stock of flies is very limited.

1. The Red or Brown Hackle with or without wings.
2. The Black Hackle „ „
3. The Hare Lug or water mouse body with wings.

These as noted down are essentially the groundwork of a killing fly stock. "How frequently," he remarks, "do I meet with those in my fishing excursions who, exulting in the possession of five or six dozen varieties of insect imitation, consume the primest portion of the day in testing their attractive powers, now unlooping one because it is, they opine, a shade too dark; now another on account of its want of tinsel, attaching in turn the latest urban conceit, redoubted as a killer—the 'fail-me-never' of some sporting parson or some half-pay hero."

When one comes to ponder over these various lists (and certainly of late years they have swelled immensely) recommended by the various writers, what a number may be entirely dispensed with. Many of them seem to be invented by tackle makers or crotchety anglers who observe little and know less about the fish they wish to catch.

Lately Mr. Pennell has started the idea that only three flies are necessary for trout fishing, dressed on different sized hooks. I forget what he calls them, but one is a purple, one a peculiar green and one a yellow, all dressed as hackles. Some people swear by them. I have tried them

patiently on four different rivers—the Test in July, with no effect; the Itchin in July, with no effect; the Chess in April, and only got one rise to the Yellow Hackle. But in the Gade in June, I killed five brace of good fish with the Yellow and the Purple Hackle. The fish rose greedily at them. A brother fisherman was fishing at the same time with the Alder and Governor and did not get a fish.

My own experience is in favour of a limited number, and the following list I have found sufficient during forty years' fly-fishing in the various rivers in the South of England:

The Palmer Hackles. These are special favourites.

The Black Palmer. The Red Palmer and the Soldier Palmer, dressed on two sized hooks, 14 and 11.

The March Brown.

The Red Spinner.

The Alder or Owl fly, dressed with wings, and also as a hackle.

The Chantry.

The Governor.

The Green Drake.

The Hofland.

The Coachman.

The Cock-a-Bondhu, or Marlow Bugg.

The Sedge or Major fly, for the Kennet in July and August.

The Black Gnat.
The Dark Claret Spinner.
Of the Duns:—
The Blue Dun.
The Carshalton Cocktail.
The Hare's Ear.
The Yellow Dun, three shades.
The Quill Gnats.
The Wickham's Fancy, Whitchurch Dun, and other Test flies.
The Iron Blue.

Two sizes of most of these flies are indispensable, and some of them should be dressed on No. 16 hook.

I take the following from my note book:—

"In March and April I depend upon the Black Palmer, the March Brown, and the Red Spinner, with the Hare's Ear, and Small Blue Dun."

"April 18th. The Chess. Wind N.N.W.; cold, sleety showers. Small Black Palmer, March Brown. Fish rose well to both flies. In the evening at five changed the March Brown to the Red Spinner. 11½ brace. My friend with me 11 brace, with the same flies."

"April 19th. Wind very cold and strong. The March Brown was very killing."

"The following year, on April 25th. On the

same river. In the morning the fish were rising at a small Dun, but would not take the artificial fly. About eleven it began to rain and the March Brown came on very thick, the river boiling with rises; all large fish. We put on this fly, and before four, when the rain had thickened the water, so that we had to leave off, we had both a number of heavy fish ranging from 3¼ lbs. to 1¾ lbs., all taken with the March Brown."

"In three different days in April, at Bexley, I killed capital baskets of fish with the March Brown and Red Spinner."

"April. Boxmoor. Very cold; heavy snow storm all day; wind, north-east. Black Palmer and March Brown; killed 3½ brace of good fish all with the Palmer. A Blue Dun was plentiful on the river, but the fish were not taking it."

"April. Farningham, Kent. Very cold wind. Two brace with the Black Palmer. In the evening another brace with the Red Spinner."

In the Cray at Bexley, part of which I rented for four years, the Soldier and Red Palmer and the Marlow Buzz killed a great many fish.

In May and June: the Hofland, Governor, Green Drake, Dark Spinner, Alder, or Orl fly, are all first rate. I have killed many a fish with the Hofland when the Green Drake has been strong on the water.

The Governor is a most excellent fly, both before and after the May fly. It should be dressed in two sizes. A small Governor on No. 14 or 15 hook is very deadly on a still, warm day; the Claret Red Spinner in the evening is better than the Coachman, which does well in the end of June and all July.

"One 19th May—Derby Day—at Bexley, I put on a Soldier Palmer and Cock-a-Bondhu; no rise; changed to Hofland, and Dark Red Spinner: 3 brace with the Hofland, 1½ with the Red Spinner."

"May 29th.—The Ver, near St. Albans. Began fishing about one p.m.; showery. Orl (Alder), dressed as hackle, and Hofland; killed with both; and in the evening, Dark Red Spinner. My friend with me fished with the Orl. The Orl fly good all day. Our basket: 7½ brace of trout; largest, 2 lbs.; two 1¾ lbs.; three 1½ lbs."

In June, 1850, on the River Ver, near St. Albans, I killed five fine fish with the Soldier Palmer, two with the Orl, and one with the Hofland; the eight fish weighed 10¼ lbs.

And again in 1854, I killed seven brace of fine fish on the same water, five brace with the Soldier Palmer which is a first-rate fly on that river.

"June 8th.—Bexley. Fish rose well. W.S.W., cloudy, with thunder. Took 6½ brace with Orl and Marlow Buzz. The fish rose well in a

heavy thunder-storm. I have constantly observed this.

"June 18th.—On the Frome, at Stafford, near Dorchester; May fly strong on the water. The water meadows had been flooded, and the small canals down each meadow were full of fish, taking the May fly. On the main river were two fly-fishers, fishing with the natural fly and blow line; I fished the smaller streams; drowned my May fly, an invariable custom with me, and soon had two brace of magnificent fish, not one under 2 lbs., and one nearly 3 lbs.; not one of these took the fly on the surface; but as sure as I let my fly come over them (I was fishing up stream) below the water, so surely did I see a slight swirl, and very slight movement of my wrist told me I was fast in a fish. In the afternoon I fished the main river, with equal success—always fishing up with a wet fly. The gentlemen with the natural fly had got one or two fair fish; in one hatch-hole (in some counties called Pills), with a slight flow into the water meadow, one of them had hooked a large fish, which broke him. Towards evening I knelt down and threw my wet fly into this pill, and kept my head high enough to see all that was going on. The fly had sunk about three inches, when I saw the monster come out from under the boarding and just suck in the fly. I had him

on the instant He rushed to his hiding-place under the boards. I held on, and turned him, and, after a five minutes' tremendous struggle, he was in the net; 3½ lbs., and a beauty. By eight p.m. I had basketed nine brace of splendid fish, all with the May fly, except the two last, which I took with a large Alder."

There is a charming little river running into the Thames at Pangbourne—the Pang. The lower part of this water belonged, at the time I fished it, to the famous dentist, Mr. Cartwright, who preserved it very strictly. One day in June, some twenty years or more ago, I was fortunate enough to have a good day's sport with the May fly; a very yellow, or rather yellowish green fly, is very killing in this water. We had driven over from Reading in the morning. Being very partial to fishing the hatch-holes in the water meadows, I gave up the stream at first to my friend, and fished four or five of these scattered about the meadows, sinking my fly. I got a good fish out of each, and before the day was over—we had to dine with Mr. C. at seven—I got six brace of beauties, from 1 lb. to 3 lbs.; my friend also had good sport, killing four brace, two of which were over 3 lbs.

Another day, in the same month and year, we had capital sport higher up, at Mr. Connop's, who most obligingly placed his part of the river at our

disposal. We only fished for about four hours. In the earlier part of the day the May fly was strong on the water, and we took some good fish. Later I put on a Hofland, and got two brace, the fish not looking at the artificial Green Drake. I had an amusing incident. I had seen a great big fellow rise close to the bank, and, after a cast or two, was successful in letting the fly drop just before his nose. He rose savagely, and I had him; but he was down in a moment, and I could not make out what had happened. Shortened line, and went up; found my line extending into a great rat-hole in the bank just under the surface. On *feeling* I found my friend was still on; so I took off my coat, and got into the water, enlarged the hole so as to get my hand in easy, and nearly the whole of my arm. I could just reach his tail, but he would not budge an inch. I tried to poke him out with a stick. Nothing would do, so I was obliged, after all, to break my line, and leave him to fight another fight some other day.

One more illustration of fishing with the drowned May fly. Some years ago I was fishing on the Test, at Broadlands. When I arrived, I found the two keepers hard at work with the cross-lines, with I won't say how many natural flies bobbing across the water, just in front of the house. Bad look-out for me, I thought. However, I went above

them, and began with my usual system of sinking the fly. After a very few casts I got hold of something very heavy, and this something was not long in telling me that I had better look out. Up he went at a fine pace, taking out my line; down he came again faster than ever; but I landed him after a good struggle—3½ lbs. I soon got another, and another, and another, hardly moving from the spot where I first began to fish. About one o'clock, the keeper came to me and asked if I had any sport. I was then fast in a good fish, which he landed for me. On opening my basket I shall not easily forget his look of astonishment. "Well," he said, "I could not have believed it. Here, we have been fishing all the morning with the cross-lines, and not got a fish; and his lordship has sent down express for a dish of trout for his dinner." "Take mine," and I handed over to him three brace of, as he said, "as fine fish as ever had been taken in that water."

The fish stopped rising about four, but I got one or two more in the evening with a large Alder.

In giving these instances of killing fish with the drowned fly, I am only relating my experience of what may be done in that way. Plenty of fish I have killed with the floating fly also; but the May fly is a difficult fly to imitate well, and I have a

fancy that when it is drowned the fish are easier deceived.

Next the May fly I place the Alder, or Orl fly, and the variety of this fly known in Hampshire as the Chantry. During the months of May, June and July it is most killing ; but you must be particular to have them dressed on two or three sized hooks, Nos. 14, 15, and No. 8 or 10 for evening. As a rule, I think, all flies are dressed too large; they should all be somewhat smaller than the natural fly, keeping as near the natural colour as possible. My notes give capital days with this fly, dressed also buzz, it is then called the Orl. On the Itchin, the Test, the Kennet, the Colne, the Cray, the Chess, the Lea, the Frome, the Piddle, and many others, it will take when fish are rising at the Duns, and when they are thick upon the water, provided it is dressed small enough. One example I will give when, contrary to all expectation, I had a first-rate day's sport. This was at Wotton. The river there is a succession of pools, artificially made, with deep runs between, commencing in a large pond close to Abinger Common. I do not know the name of the river or stream, but it forms a large pond or millhead at Gomshall, and forms the Wey, I believe, at Guildford. It was a very hot day, and on first arriving the river appeared perfectly covered with a Yellow Dun fly, which I

tried with the nearest imitation possible, as the fish were rising in all directions. No effect. I then put on a small Alder; soon got a rise, and in the course of the afternoon killed 7½ brace of trout, one weighing 2½ lbs.; another, 1½ lbs. A friend who was with me, at my suggestion, put on the Alder, and got 5½ brace.

In July and August the Governor is a capital fly on most of the southern rivers; that and the *Sedge*, or *Major* fly, are first-rate on the Kennet, from Savernake to Littlecote. I have fished all these waters, and have had splendid sport with these two flies in these months. At Littlecote, five brace only can be taken in one day; and enough too; for, if you are judicious and lucky, the ten fish ought to weigh 20 lbs. Many a time I have done this. I fished the Kennet at intervals for sixteen years. I know of no other river in the south where the fish are so fine and so heavy; they cut quite red, and are very silvery. In the Kennet I never used in those days other flies but these two, with the Soldier Palmer and the Alder.

In the Shropshire and Herefordshire rivers, the Ant fly, Orl, and Dark Spinner are first-rate flies, particularly in August. In the Teme, when the river is too full and dirty for grayling to rise, I have had grand sport with the trout with these flies. The Dark Spinner is a first-rate fly in the Colne.

But trout are proverbially capricious, and you never know what they will take till you get to the river. You feel certain that this or that fly must take in such and such weather, and you find all your certainties scattered to the winds. Here is an example :—

Fishing, one day in July, at Kingsworthy, on the Itchin, we had some capital sport with the Chantry—the fish not looking at anything else ; and all the trout we took were large and fat. The next morning (we had put up at that nice, clean little inn, the Cart and Horses, close to our fishing ground) after breakfast, we adjourned to the river, selecting the Chantry again after such sport as yesterday. Wind and weather being the same. My friend went to the upper part. I began fishing at the mill; fished carefully the mill tail ; not a rise ; then went above. On nearing the left bank I saw the fish rising in quick succession on the opposite side ; I threw over some of them ; not a fish would take. I then crossed over and fished up stream, threw my fly most carefully over three or four fine fellows ; they would not look at it. I then perceived a small fly—a Dun—almost a midge, coming down. This the fish were taking greedily. I happened to have some grayling flies in my book. I picked out one extremely small, dressed on the smallest hook—No. 18. It was a Dun,

certainly, and something like in colour, but not a bit like the natural midge coming down. I threw over the nearest fish; up he came, and I had him; and took in quick succession $4\frac{1}{2}$ brace of splendid fish. I sent up the fly to my friend, and to tell him of my sport, in case he was not doing much. He declined my fly; and when we met at luncheon I had nine fish, not one under $1\frac{1}{2}$ lb., and he had one—a good one, taken with the Chantry. Here size and colour had done what one without the other would not have accomplished. It also exemplifies the capriciousness of the fish. Wind, and colour of sky the same on both days, yet, one day taking greedily the Dark Chantry, and the other nothing but the smallest midge.

I lay great stress upon the size of flies. As a rule in calm weather, and the water clear, the flies can hardly be too small, provided you have got the right colour. With a good breeze blowing you may use larger flies. The fish take the lure as food coming down the water, and as a great many flies are drowned as they float down, so your fly is taken for one of them. Trout are taken both with a wet and a dry fly. If you watch a trout feeding, and get a favourable situation over him, so that you can see him well, you will see how often he moves on one side or the other,

occasionally taking something into his mouth, which is not the fly floating over him, and it is also a curious circumstance that a feeding fish will constantly take your lure if thrown between him and the bank, when he won't look at it if it passes by outside of him. When you see the fish with their tails up and heads down, and wriggling, as it were, amongst the weeds, few objects on the surface will tempt them; and when a mass of flies are coming down the water, and the fish are sucking them in in every direction, with a leaden sky, you may rest your arms for an hour or two, but as evening comes on, just try them again, with a well selected small evening fly, and your patience will be rewarded. Many would give up and go home, saying it was no use. Don't believe them; have a little patience. Smoke a pipe; look after birds' nests; go and botanize for a bit; or if there is a chalk-pit, search after some interesting pre-historic remains in the way of sharks' teeth or fish-scales; but don't be in a hurry to go home. I have experienced this very often. In the Wandle—one of the clearest and brightest of rivers—I have seen clouds of small Cocktails coming down, and the river all alive with fish rising; but my Cocktail would do nothing. I have just waited, and later put on a small Alder dressed on 12 hook, and I have filled my basket. In

this river I have used the following three flies, always with success,—a small Cocktail, a small Alder, and a small Governor, and whether at Mitcham, at Beddington, or elsewhere, these flies have proved the favourites. In the evening, late, a large Alder, dressed on 8 hook with grey hackle, is most deadly, and many a big fish have I taken with this fly, not only in the Wandle, but in every river in the South of England. It used to be dressed to perfection by Jones, of Jermyn Street, in my day. Put it on as it gets dusk, in June, July, and August, and you may be sure of some grand sport if you can only keep the fish out of the weeds. You must, with this fly, use a strong cast, so that you may fight the fish, and prevent them getting to their hiding places. The big fish of the river rarely come out till nightfall.

Amongst practical fly-fishers opinions widely differ as to whether the exact imitation of the natural fly is necessary for success, or whether colour and size are not more important. The American editor of Walton believes (what appears to be the most sensible solution) that the truth lies between the two extremes. He says: "The reader may be aware that anglers differ widely in their theories respecting the choice of flies, some contending that the nicest possible imitations should be made of the fly on the water, or rather that on which

the trout is feeding at the time; others holding directly the reverse, and asserting that no imitation deserving the name can be made, and that when the natural fly is abundant the fish will respect any resemblance of it which may be thrown to them. The French make their flies very much from fancy, and though not such skilful anglers as the English, are far from being unsuccessful with flies for which no entomologist could find a living original. . . . In fact almost every fly-fisher has a creed and system of his own, though the advocates of exact imitation speak with artistic contempt of all who differ from them, and are in their turn ridiculed as pedantic pretenders or mad with too much learning. The truth, as in most vexed questions, lies between the extremes."

One word as to fishing with one or two, or more flies. In our southern rivers, where there are many weeds and heavy fish, I believe one fly is most killing. I agree with the witty author of the "Maxims and Hints": "When you are using two flies you may sometimes catch a fish with one of them and a weed with the other. When such a *liaison* is once formed you will find it difficult, with all your attractions, to overcome the strong attachment of the fish to your worthless rival, the weed. That your chance of hooking fish is much

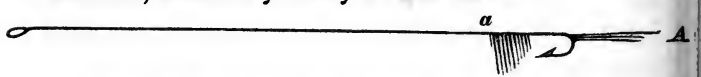
increased by your using two flies, but I think that by using one only you increase your chance of landing the fish."

The following remarks as to colour, etc., are from the observations of that excellent companion and fly-fisher I have before quoted, and in whose company many and many a pleasant day has been passed by the river side:—

"In the choice of flies I should say size and colour are of chief importance, and of size, small size, and of colour, colour which is more or less translucent. The Derbyshire fly-fishers attach great weight to a 'fiery hackle,' or hackle that is, whatever its colour, brilliant and shiny by transmitted light. I notice that Pennell's flies are always dressed with this sort of hackle, and, probably, any success they have depends upon this. The London fly-tier and the southern fly-fishers pay no attention to this matter, and therein, I think they are wrong. Two properties, in fact, belong to the natural fly, which should certainly not escape the notice of the intelligent angler: colour which is translucent, and flotation, and I know of no insuperable reasons why both these desiderata should not be attained. As to colour with translucency, perhaps by the use of brilliant hackles for wings as well as for legs; and as to flotation, possibly by the use of materials for both

wings and bodies which have not as yet been thought of;[1] for though it is quite true that trout may and are taken by the flies in common use, it is probable that more trout would be taken in proportion as the flies used were more like nature."

Size, therefore, *colour*, *translucency*, *and flotation*, being admitted desiderata, how, better than by the usual methods, can these be obtained? These are the days of diaphanous materials, and these materials are commonly waterproof and capable of being firmly attached to the hook and to each other by evaporating fluids holding india-rubber in solution. Moreover, both these diaphanous materials and the solvents in question, besides being waterproof are capable of receiving any colour or shade of colour which it may be desired to give them. Why not make flies of such materials and with hackles such as I have described? I quite believe that small flies could be so made, and that they would prove, as compared to the flies in use, irresistible. Attached is a rude suggestion for the manufacture of such a fly. Better schemes may be thought of; but, for the moment, what do you say to this one?



[1] Since these remarks were made the wonderful floating flies made by Hardy Bros., Alnwick, are perfect marvels to look at.

A is a hook ready tied on to gut with a transparent hackle and setæ attached. To the back of the hook at *a* attach (by india-rubber dissolved in naphtha or benzine) two small pieces or sheets, half-an-inch square, of some such diaphanous material as has been described,—one of a dun colour, say, the other red. Out of the first fashion the wing, and out of the last the body; and let the body be hollow and inflated, so that the whole may come out a floating Red Spinner. Why not?

X.

NATURAL HISTORY OF THE RIVER TROUT (*SALMO FARIO*).

DR. GÜNTHER divides the *Salmo fario*, River Trout, of the British Isles into two varieties, or species—

(a) *Salmo fario gaimardi.*

(b) *Salmo fario ausonii.*

He says: "Among the numerous variations of the River Trout, two forms deserve particular attention—one, with fifty-seven or fifty-eight vertebræ, is found in Central Europe and the southern parts of England; the other, with fifty-nine or sixty vertebræ, inhabits the northern parts of Europe, certain parts of Scandinavia, Scotland, and Iceland. In Cumberland, some of the rivers

(Caldew, Eden) are inhabited by the southern form, whilst the northern one is found in the River Liddel. However, the latter extends as far southwards as Shropshire, where both forms are met with. Both are subject to the same amount of variation, but the northern form appears to remain within smaller dimensions. The coincidence of the difference in the number of vertebræ with the geographical distribution appears to be remarkable enough to distinguish the two forms; but whether they be regarded as species or varieties is a matter of minor importance.

"If we keep them separate, the question arises for which the name of *Salmo fario* should be retained. Linnæus, even if he had been aware of the difference between the northern and southern forms, would scarcely have distinguished them by different names. He formed the names for Scandinavian and German River Trout, referring especially to the Salmonoid described by Artedi, who attributes to it sixty vertebræ. Thus the name of *Salmo fario* ought to be retained for the northern form, however, in a case like the present, when the boundary line between species and variety is so obscure, I think it more convenient to adopt a nomenclature indicative of the uncertainty existing."

(a) *Salmo fario gaimardi.*

"Largest specimen observed, fifteen inches;

female mature at a length of seven or eight inches.

"Head well proportioned in its shape, and rather small, when compared with the body. Body rather short and compressed. The posterior point of junction of operculum and sub-operculum is nearly midway between the upper end of the gill opening and lower anterior angle of the sub-operculum. Præoperculum nearly crescent-shaped, with or without a very indistinct lower limb; snout of moderate length, oblong, conical. Maxillary much longer than the snout, broad, and stout; in male specimens nine inches long, it extends to or nearly to the vertical from the hind margin of the orbit. Teeth of moderate size. The head of the vomer is triangular, small, broader than long. Vomerine teeth in a double series, sometimes disposed in a zigzag line, persistent throughout life. Fins well developed; the caudal fin of specimens of nine inches in length is truncate, or scarcely emarginate, the middle caudal rays being more than half as long as the outer ones. The hind part of the body is short and rather high. There are about fifteen scales in a transverse series from behind the adipose fin obliquely forwards to the lateral line; sides with numerous round or X-shaped black markings. The upper surface or sides of the head, the dorsal, adipose, and caudal fins generally with crowded

round black spots; dorsal, anal, and ventral with a black and white outer edge.

Hab. "Iceland, North Britain, Ireland, Scandinavia.—D. 13-14, A. 11-12, P. 14, V. 9, L. lat. 120, L. transver 27-30, 'Cœ. pyl.' 33-46, Vert. 59-60.

"(b) *Salmo fario ausonii.* The common River Trout.

"Attaining to a length of thirty inches; female mature at a length of eight inches.

"Head well proportioned to its shape; body rather stout. The posterior point of junction of operculum and sub-operculum is midway between the upper end of the gill opening and the lower anterior angle of the sub-operculum. Præoperculum with a not very indistinct but very oblique limb; snout rather produced in the male, the lower jaw having a hook in front in very old examples only. Maxillary much longer than the snout, very strong, and dilated; it extends to below the hinder margin of the orbit already in specimens of eight or nine inches in length. Dentition strong. The head of the vomer is triangular, much broader than long, with a transverse series of teeth across its base; body of the vomer with a double series of strong teeth, the teeth being placed either opposite each other or alternately; this series of teeth is persistent throughout life. Fins comparatively short, and rounded; the length of the pectoral is one-half

of the distance of its base from that of the ventral; in specimens under ten inches it is somewhat longer. The caudal fin is emarginate in young examples, but has become truncate in specimens of eight inches in length, in which the middle caudal rays is only two-thirds that of the outer ones. The hind part is short and rather high; there are about sixteen scales in a transverse series descending from behind the adipose fin obliquely backwards to the lateral line. Body, head, and dorsal fin generally with numerous red and black spots; a part of the latter have generally a light edge. These black spots are either round, or more irregular in shape, composed of X-shaped marks.

"Anterior margin of the dorsal and anal, and the outer one of the ventrals, generally yellowish.

"A non-migratory species, inhabiting numerous fresh waters of Central Europe, Sweden, and England—series of the Maritime Alps.

"D. 13-14, A. 10-11, P. 13, V. 9, L. lat. 120, L. transv. 26/30, 'Cœcal Pyl.' 38-47 (51), Vert. 57-58 (56, if the last rudimentary caudal vertebra be not counted)."

The two varieties, or species, or whatever they may be, appear from the above to be united in Shropshire; but I feel pretty certain that each will be found in many more rivers, both in the north and in the south, than Dr. Günther has any idea of. The only

distinctive characters worth anything to form a species are the number of the vertebræ—in the one fifty-nine to sixty; in the other, fifty-six to fifty-eight, but these are not constant. When one compares the genus, we find the vertebræ in the Salmonidæ range from sixty in the salmon to fifty-six in the river trout. It will be a source of great interest, and tend to while away many an unprofitable hour by the river-side or elsewhere, if practical anglers would study this question. My own belief is that the two varieties will be found in most of the rivers of Great Britain.

It may be difficult to believe that the little trout found in many of the hill streams in upland countries, with finger-marks on his side, is the same species, as that splendid fellow of fifteen pounds just taken out of Shepperton Weir, or those beauties of three or four pounds each, with such silver sides and black spots, So-and-so has taken in the Kennet, at Chiltern Bridge or Savernake, or at Whitchurch or Winchester; or as that lovely bronzed-coloured fellow from this or that loch in the highlands of Scotland; but so I believe it is, and that every so-called species of non-migratory trout in Great Britain may be put down as a simple variety of that prince of fishes the *Salmo fario.*

Colour of Trout: how produced.

All fly-fishers know well how trout vary in external colour, and in their flesh, and often in the same river. Some, with dark backs, silver sides, and black spots; others, splendid fellows, with yellow sides, with red spots predominating. In the Chess, for instance, the fish in the mill-head and still water above are, for the most part, of the former type. Below the mill, they are of the latter. The first have pink flesh; the second, yellow. In the Kennet—near Marlborough, in the Savernake water—the trout appear to be of the two varieties. Lower down, at Ramsbury, equally fine, but more red spotted. The same at Littlecote. Also in many other rivers the same difference is found. Sir Humphry Davy, in "Salmonia," p. 30, attributes the silvery colour to the nearer approach to perfection:—"The colour of the body becomes more uniform—pale olive above and bright silver below—and these qualities are always connected with a small head, oval body, and deep red flesh." He thinks this condition very much depends on the food. At p. 36 he says: "I think it possible when trout feed much on hard substances, such as larvæ and their cases, and the ova of other fish, they have more red spots and redder fins. This is the case with

the gillarroo and the charr, who feed on analogous substances; and the trout, that have similar habits, might be expected to resemble them. When trout feed on small fish, as minnows, and on flies, they have more tendency to become spotted, and are generally more silvery."

The latter remarks apply well to the Thames trout, which are all black spotted and red fleshed. It has been suggested that the *Salmo Levenensis* owes its colour to feeding very much on the water-snail —*Lymnea fluviatilis*—and it has been noted that in rivers where that snail is prevalent the trout have pink flesh.

It is also noted that in the swift-running streams, over gravelly beds, the fish, for the most part, have red spots and yellow flesh—perhaps owing to the greater exposure to light; in the deeper rivers and more sluggish streams trout are more black spotted.

Sir Humphry Davy, "Salmonia," p. 67, in considering the varieties of trout, says: "Fish in a clear, cool river, that feed much on larvæ, and that swallow their hard cases, become yellower, and the red spots increase so as to out-number the black ones, and these qualities become fixed in young fishes, and establish a particular variety." But such is hardly the case. A silvery, black-spotted fish, taken out of his river, or put into another part of it, where red spots predominate,

will lose his colour, and will assimilate to those around him. May not, therefore, these so-called varieties be attributed almost entirely to the effect of *light* and *food?* The different kinds of food, acting in a greater degree on the colour of the flesh, and in a less degree on the colour of the skin, whilst the effect of light acts in a greater degree on the colour of the skin, and less on the colour of the flesh.[1]

In many of the Lochs in Scotland the trout vary in colour. In three adjoining Lochs on Craig Muir Arisaig, all stocked in 1864 from Loch Morar, separated only by a few hundred yards, and at least 800 feet above the sea level, with no communication with the sea, the trout are as different in colour as it is possible to be. In one loch they are a beautiful bronze, with yellow belly and dark spots; in another, dark backs, with red spots and silver bellies; and in the third, they appear to be a combination of the other two.

Yarrell, "British Fishes," says: "The trout

[1] I pointed out this effect on the river side to a well-known and experienced fisherman. We had taken some very fine fish—three pounds, two pounds and a-half, etc., in a certain river where the water was deep, and rather sluggish, and a muddy bottom. Every fish was beautifully silvery, with black spots. On the shallows and gravelly streams in the lower part of the river, every fish was red spotted—some of these almost as large as those taken in the deep water.

varies considerably in appearance in different localities—so much so as to have induced the belief that several species exist. It is, indeed, probable that more than one species of river trout may exist in this country; but when we consider geologically the various strata traversed by rivers in their course, the effect these variations of soil may produce upon the water, and the influence which the constant operation of the water is likely to produce on the fish that inhabit it; when we reflect, also, on the great variety and quality of the food afforded by different rivers, depending also on soil and situation, and the additional effect which these combined causes in their various degrees are likely to produce, we shall not be much surprised at the variations, both in size and colour, which are found to occur. That two trout of a very different appearance and quality should be found within a limited locality, in the same lake or river, is not so easily explained; and close examination of the various parts which afford the most permanent characters should be resorted to, with a view to determine whether the subject ought to be considered only as a variety or entitled to rank as a species."[1]

In "British Fresh-water Fishes," a costly and

[1] In the upper reaches of the Test the trout are large; about Whitchurch they are smaller; below Whitchurch, larger; and in Peter Hawker's Water very large. Why is this? (S. H.)

beautiful work, published 1880, the Rev. W. Houghton says, under description of *Salmo fario*:—"Trout are inhabitants of fresh water, brackish water, and salt water." I do not think that the trout found in salt water is our river trout. The fish that is found in the estuaries of the rivers of the north most probably are hybrids between the *Salmo trutta* and *fario*. I have taken sea trout in these estuaries so like a brown trout that it is impossible to tell the difference. Mr. H. also says: "There seems no doubt that the common brown trout, though normally a non-migratory species, is frequently migratory in its habits, and descends to the sea, where the ordinary brown spots and trout coloration are exchanged for X spots and a silvery hue."

"This," he says, "leads me to notice a trout, which, I think, is merely a variety of *S. fario;* the Slob trout, or tidal trout, occurring in some localities." Mr. Houghton gives a description of their habits from a Mr. Haynes, of Cork, as he has seen them on the river there. But it would be well to ascertain their dentition and many other circumstances before coming to the conclusion that they were the common *S. fario,* living in salt and brackish water.

Mr. Seymour Haden writes:—"It is not necessary to suppose that the brown trout found in the tide-

way have *migrated* there, because in all tidal rivers the lower reaches of the stream consist of neutral water—sweet half the day, and brackish the other half. The brown trout which inhabit these reaches would of necessity acquire some of the characters of the sea trout—would they not?—and I should not *myself* consider them to be hybrid, because nature does not make, and therefore as a rule produce, unproductive fish."

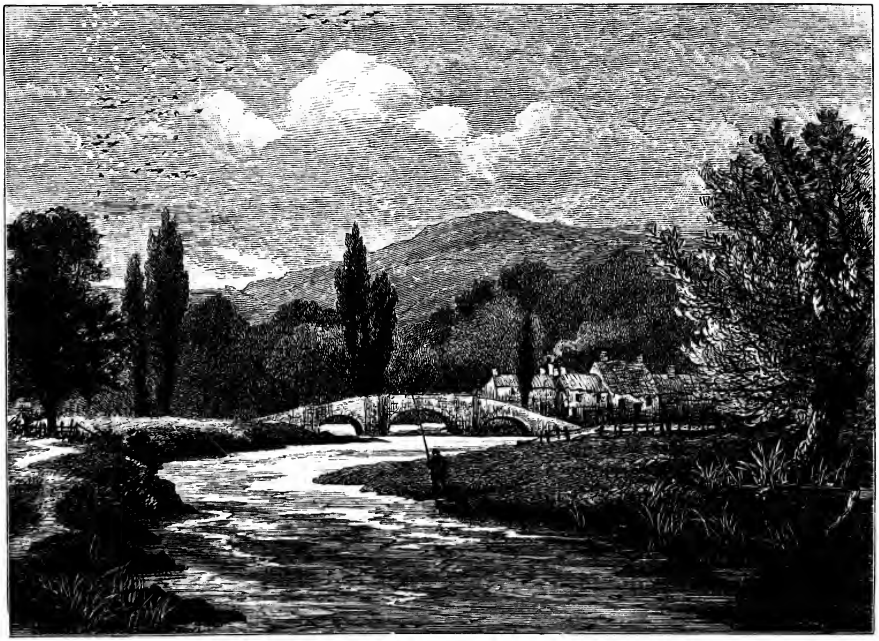
Taking all the various causes for change of colour in the common trout, I can only come to the conclusion that there is only one species of the *Salmo fario* in Great Britain, and that the so-called species of Couch and other authors are only varieties of this fish.

What becomes of the trout in winter? Do they hibernate?

Mr. Houghton (loc. cit.), in his paragraph upon "Trout Spawning," makes this remark: "Sterile examples are known to occur, and have frequently been taken. In such cases, the trout are in season in January and February, being excellent food." So Walton says: "So there be some barren trouts that are good in winter; but there are not many that are so." Trout to be excellent food in January and February must have had themselves excellent food, and where is that to be got in January and February, except in the most open

weather? A trout in January or February is a lean, lanky, black, ungainly-looking object. And, as Walton remarks, "that until the sun gets to such a height as to warm the earth and water, the trout is sick, and lean, and lousy, and unwholesome, and, in winter, with a big head." In truth, in the cold, frosty winter months he cannot get sufficient food to maintain himself, and I believe he sinks into the mud at the bottom of the river and hibernates. I am led to believe this from the following circumstance:

One fine morning, early in February, I was walking by the side of a stream noted for its big trout. The water being very low and clear at the time, I noticed four or five very big fish, but very black, lying perfectly still, below the surface of the water, and almost touching the bottom of the river, which was of mud. They appeared to be sunning themselves, as it were. After watching them for some time, I moved gently on, and brought my shadow across each of them in succession. Instead of darting away, as they would have done later on in the spring, they gradually sunk into the mud, and vanished, without disturbing the colour of the water in the least; in fact, they had quietly again sunk into their winter bed.



LEINTWARDINE BRIDGE.

XI.

FLY FISHING FOR GRAYLING.

"The smooth-scaled umbra as it passes by,
Flits as a shadow o'er the gazer's eye."

"I wind about and in and out,
With here a blossom sailing,
And here and there a lusty trout,
And here and there a grayling."

"And now farewell, Dove, where I've caught such brave dishes
Of overgrown, golden and silver-scaled fishes,
Thy trout and thy grayling may now feed securely,
I've left none behind me can take 'em so surely."

THE beautiful and romantic scenery through which grayling rivers flow, tends greatly to increase the charm and delight of fishing for them. No one can read Sir Humphry Davy's description of

this fishing on the Teme without a longing desire to try his hand and visit such valleys and such a river.

The peculiarities of the fish, also, his sudden mode of rising, and as sudden disappearance, almost startles one. Unlike the trout, who, when feeding, lies near the surface, the grayling lies almost at the bottom of the river, and ascends and descends with such rapidity that should he miss his prey he appears more like a shadow than a substance. He is also a bold and fearless riser and will come again and again.

> "Unabashed will dare,
> Baulked e'er so oft, the disappointed snare,
> Simple and bold."

The finest of tackles, the smallest of flies, the lightest of hands to cast the fly, and the tenderest of handling when you have hooked the fish, are necessary if you wish to become a successful grayling fisher.

It is also a fishing *per se*. It comes on at a time when fly-fishing for trout is going out, when the hillsides and woods and valleys are decked with all the glories of autumn. The fish are in perfection in September and October, and no fish is more beautiful than a grayling in full season, with his

dark purple-black back and head, his purple spots and steel-coloured sides, and his two golden streaks extending from his pectoral fins, and then his delicious perfume, like wild thyme. A grayling from the Teme with these streaks well marked, and cooked the day he is caught is totally unlike any other fish in flavour and in quality. He may well be called Thymallus, or any other name which brings back to one's memory the pleasure he affords both on the river and on the table.

> "My false wing's witchery shall excite
> The grayling's hunger in his season's height:
> For then a deeper sable veils his head,
> A deeper sable o'er his back is spread;
> His sound firm flesh before the knife will flake,
> And rival honours with the trout partake."

Mr. Francis Francis, in his book on Angling, says, "I have a very high opinion of this fish." Every grayling fisher who knows anything about it has the same, and it is quite a mistake to suppose he is a craven fish; on the contrary, although he has got quite a different way of working—always endeavouring to get to his hiding-place at the bottom of the river, he is game to the last, and is never your own till he is in the net; for it requires a light hand and very gentle strike, or you may lose him from his soft mouth. Indeed,

I have lost many a fine fish at the last struggle, from the small fly coming away from its hold.

Izaak Walton, who had fished for grayling when on his visit to Cotton, calls him a dainty fish, "is very gamesome at the fly, and is much simpler, and therefore bolder, than the trout," and he winds up his remarks by saying, "yet he is not so general a fish as the trout, nor to me so good to eat or to angle." And Cotton, living on the banks of the Dove, says that this fish is one of the deadest hearted fishes in the world, and the bigger he is the more easily taken. Are the grayling of the Teme or the Test different in their nature to those of the Dove?

From whatever cause it may be, probably from better food and larger water, the grayling of the Test, the Avon, and the Itchin grow larger than those of the rivers (the grayling rivers) of the midland counties. A three or four pound grayling in the Dove, the Wye, or the Teme is a rarity—a great rarity; in the rivers of Hampshire they are not at all uncommon. My chief experience in this delightful sport has been on the Teme at Leintwardine, which I fished every September and October for sixteen years, and glorious sport it was, although chequered by days of flood and drought when fly-fishing was impossible. From the great floods in winter, and from the peculiar soil, no river

alters more in its course than the Teme: banks are washed away, pools formed into runs, and deeps into shallows. The famous places of my time, may, in all probability, be things of the past. Old friends and fishermen may recall to their memory the run above the old milking bridge, the upper part o'ershadowed on both sides by alders. Ah, what lovely fellows have I inveigled from under their roots! Then the ford below the Rat Ditch; General Drummond's Pool; the Artist's Bathing-place, famous for trout; Hamilton's Bath; the Run above the New Weir; Temptation Pool; the Black Bridge, and a host of others, where any number of

> "Grayling I could kill,
> If gloomy was the day."

Beginning just below Leintwardine Bridge, throwing under the opposite bank, certain of a good fish or two, and many a rise besides, and then working on to the stream above the milking bridge, wading down between the alders and throwing well under them; and then at the tail of General Drummond's Pool, sure of sport; and so on to the Weir; the pool below was formerly always good for a fine fish or two; I have taken them out over two pounds, but it altered of late years, and no fish would rise; but there was a

deep and small pool on the opposite side where fish were perpetually rising, but would rarely take the artificial fly. We named this "Temptation Pool," and throw after throw was wasted in ineffectual efforts to get one of these black-backed devils to take the fly; but no, over and over again have we given it up, and again and again returned. There was such a fascination about it.

What fish have I taken out of the river below, opposite the keeper's cottage and on to the Old Weir! In fact either on the upper water or on the lower below the Black Bridge, with favourable weather and small flies, light tackle and patience, you may, or could, fill the biggest creel you can well carry.

For the Teme, my favourite flies were the following:—

Whirling Blue.	August Brown.
Whirling Dun.	Yellow Dun.
Blue Dun.	Iron Blue.
Silver Twist.	Claret Spinner.
Willow Fly.	Red Tag.
Orange Tag.	Pale Evening Blue.

In August and September, the Duns and August Brown, and Silver Twist and Pale Evening Blue.

End of September, and October, Willow and Wheatley's two flies—Claret Spinner and Red Tag.

These, with the Iron Blue, would always ensure some sport ; as for that Pale Evening Blue, when he came on one would be almost inclined to shut up and go home, as it is the most difficult fly to imitate, and yet it is most deadly if it could be properly done. The river boils when that fly comes on, and yet rarely will the black-backed beauties take your imitation. Grayling, however, are peculiar in their likes and dislikes. When the Pale Blue has been thick on the water, I have taken fish after fish with the Claret Spinner. When the Whirling Blue has been swarming, I have filled my basket with big fish, all taken with the Red Tag. Patience in grayling fishing always has its reward. I have seen men change and change their flies, disgusted at seeing fish rising under their feet and not taking their fly, until they would give up and go away. Don't go on whipping over these fish ; change the venue ; probably at the next stream or pool the first cast with the fly, useless a few minutes ago, will take a fish, and then another and another. Don't be in a hurry to change your flies, and if fish are capricious as in this way, fish with only one fly. I have killed many a fish in these still pools with one small fly and the finest of lines, letting the fly drop lightly on the water, and then allow it to sink. At the slightest movement in the water, strike

very gently, and lo! you are fast into a fish, and probably a good one. Grayling are easily scared for a time and sent to the bottom, and when you have taken a fish or two, particularly out of a still pool, leave it for a while, or make a sketch, or eat your lunch if the time is come, and then fish it again and you will have another or two.

The lower part of the river at Burrington Bridge affords capital sport, and in a different way to the upper part. The river runs through masses of rock with rapid runs and deep pools and high trees. Wading is obligatory, and the *under cast* a necessity. Big grayling are there, and require nice handling. Ah! what a river it is, and in what beautiful scenery. How good Sir Humphry appreciated it:

"We have had good sport; but I have been for some time reposing on the banks and admiring the scene below. How fine are these woods! How beautiful these banks! The hills in the distance approach to the character of mountains; and the precipitous cliff, which forms the summit of that distant elevation, looks like a diluvian monument, and as if it had been razed and torn by a deluge which it had stemmed."

He recommends three flies. I never fished but with two, generally, with only one, and found this conducive to success; for this, as I have

before said, four things are required on your part—very fine tackle, and small flies, a light hand to throw with, careful management when the fish is hooked—he has a most tender mouth—and patience. On the fish's part one only is requisite—that he should rise at and take your fly.

The trout in the Teme are very poor eating, although they run large. Once, in August, after a flood, I took some big fish—one 4 lbs., and a good many from 2 lbs. to $2\frac{3}{4}$ lbs.—chiefly with the Ant fly, and when the river was too full and too dirty for grayling. I had that year a curious encounter with a fish. There had been a flood, and the water was gradually settling and clearing, but not clear enough for grayling fishing. I had gone out to try for trout, which, when feeding, lie close to the surface. I had put on a large August Brown, and had taken one or two, when, in the deep river, just below General Drummond's Pool, there was a tremendous swirl. My line tightened, and I found I had got hold of something very big. Away, with such a whirl of the reel, went my line, and after a few yards had run out I began running too, and pretty rapidly; but it was of no use. The fish, whatever it was, took the whole of my line—between thirty and forty yards—off the reel, and then broke me. I had passed in hot haste a friend or two, who gave place when they saw what was up, and

who came running after me to see the fun. Well, various conjectures were at once raised. "What could it be?" "What a big trout it must have been!"

"Well," I said, "if ever there was a salmon in the river, I should say I had one on." "Oh, impossible; they can't get up the Weir at Worcester." "I can't help that; that fish never was a trout; it certainly was not a pike." However, the next morning the miller above the bridge found a salmon in his eel-trap—a nice fish of 9 lbs. Could this have been my friend?

In the Teme a 2 lbs. or 2½ lbs. grayling is a big fish. The taking fish with the fly on a good day generally run from 1 lb. to 1½ lb., though larger are occasionally caught. I have taken in one day three or four fish over 2 lbs. with a small Tag; but these fish are lazy risers, and are generally taken with the grasshopper or maggot. The first year I fished this river I stood in an open space below the weir, at the lower part of the deep pool, and landed three grayling weighing over 5 lbs., and lost another quite 2 lbs. That day I landed twenty-four fish, averaging nearly 1½ lbs. each; and put back many more.

In fishing for grayling, as Mr. Francis says, "never despair." They will often rise when least expected; but if you watch a river you will soon

find out the favourite localities of the fish—at the tail of a deep pool, in the deep water, under a bank, where the water is pretty deep and running pretty rapidly, in the swirl and eddy made by a rock, but there you are more likely to get a trout, The club water at Leintwardine is certainly the best for grayling ; below, in the Downton Castle water, although there are many excellent places, yet there are more trout. In Oakley Park, also, capital sport is to be had. The grayling appear to thrive well in the Itchin, the Test, and the Avon. I took a grayling in the Test, at Broadlands, weighing within an ounce of 4 lbs.

Maggot and grasshopper fishing for grayling, in my opinion, is worse than any worm fishing—and it is destructive beyond measure to future sport. It is no excuse to say that these big fish do not and will not rise at the fly. Of course they will not, because the greater part of them are taken by the grasshopper. What sport there can be in lugging up a big grayling with tackle that would hold a twenty-pound salmon I cannot imagine. I can recollect a certain captain, a member of the club, who never came to fish till he could do so with the grasshopper, killing in one day thirty-five grayling—all caught in this poaching fashion—averaging 1½ lbs. each, many of them 2 lbs. each, and three scaled 3 lbs. This practice not only stops all fly-fishing,

but it destroys all the spawning fish. Fortunately for the river, the captain was got rid of, and the bye-laws altered. I have never fished the Derbyshire grayling rivers; that is a pleasure to come. I know that there you must fish fine and far; be wary and patient. In Derbyshire, black flies, and black and silver, and generally *sad* coloured flies, and very small, are best. Grouse and partridge hackle are also very good. But I can wish my brother fly-fishers no better enjoyment than a week on the Leintwardine water in October. On the river all day, a cheerful fire and pleasant repast in the evening, with "Salmonia" to solace you till bed time, and then soft and pleasant dreams—of big grayling taking your fly and filling your creel.

XII.

NATURAL HISTORY OF THE GRAYLING.

Family, Salmonidæ. Genus, Thymallus.
Thymallus Vulgaris.
The Grayling. Ger: Der Asch. Fr: L'Ombre. Ital: Témelo.
Known to the Ancients as Θύμαλλος.
Thymallus. Umbra ausonius.

THREE peculiarities of this fish strike the observer at once—the triangular pupil of the eye, the large beautiful violet-coloured purple spotted dorsal fin, and the two longitudinal orange-coloured stripes, extending from each pectoral fin.

Grayling inhabit the fresh waters of Central and Northern Europe. There is a splendid species inhabiting the River Mackenzie in North America. *Thymallus signifer*, Back's Grayling, with

an enormous dorsal fin. This fish seems to combine the courage, etc., of the trout with the pluck and obstinacy of its own species. Dr. Richardson observes that it is only found in clear waters, and seems to delight in the most rapid mountain streams. He says: "In the autumn of 1820 we obtained many by angling in a rapid of the Winter River, opposite to Fort Enterprise. The sport was excellent, for this grayling generally springs entirely out of the water when first struck by the hook, and tugs strongly at the line, requiring as much dexterity to land it safely as it would to secure a trout of six times its size. This grayling grows to the weight of five or six pounds."

The grayling appears to have received its name *Thymallus* from the odour of the fish when first taken out of the water. Some people are unable to distinguish this peculiar smell (as Houghton, for instance, in his "Fresh Water Fishes") but it is unmistakable. I have caught hundreds of grayling and have never found it absent in any fish over half a pound. But it is more like the smell of cucumber than thyme, much the same as that which emanates from the smelt.

The grayling is supposed to have been imported into this country by the monks, as it is found in rivers on which the great monasteries are built.

But this is exceedingly doubtful, as it is a fish

that would not bear the carriage from foreign countries at that time, and probably the monks knew nothing of the mode of importing the ova. The probability is that they are indigenous in those streams which are particularly suited to them, in having rocky or gravelly bottoms and alternate pools and runs, but they also can live and thrive in other rivers not having these peculiarities.

In England, the Grayling is found, according to Yarrell and others, in the following rivers: In Hampshire and Wiltshire, the Test, the Itchin, and Avon.

In Herefordshire. The Lug, the Wye, the Irvon, and the Arrow.

In Shropshire. The Teme, the Clun, and the Corve.

In Staffordshire. The Trent, the Dove, and the Wye.

In Derbyshire. The Dove and Wye.

In Merionethshire. The Dee.

In Yorkshire. The Derwent, the Ouse, the Wharfe, the Wiske.

In Cumberland. The Eden and the Esk.

The Grayling is not found in Ireland or Scotland.

The name is said to be a corruption of gray lines, from the longitudinal lines along the body. It is called Oumer, in Northumberland, and the smaller

fish, prior to breeding, are known on the Teme as Shutts or Shots. Salviani says the name Umbra is derived from the fish being a very swift swimmer, disappears like a shadow.

Much has been written about the use of the large dorsal fin. Dr. Day says: "Its large back fin, aided by its well-developed air-bladder, would seem to show that its formation is that best adapted for rapidly rising or sinking in the water."

FINIS.

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