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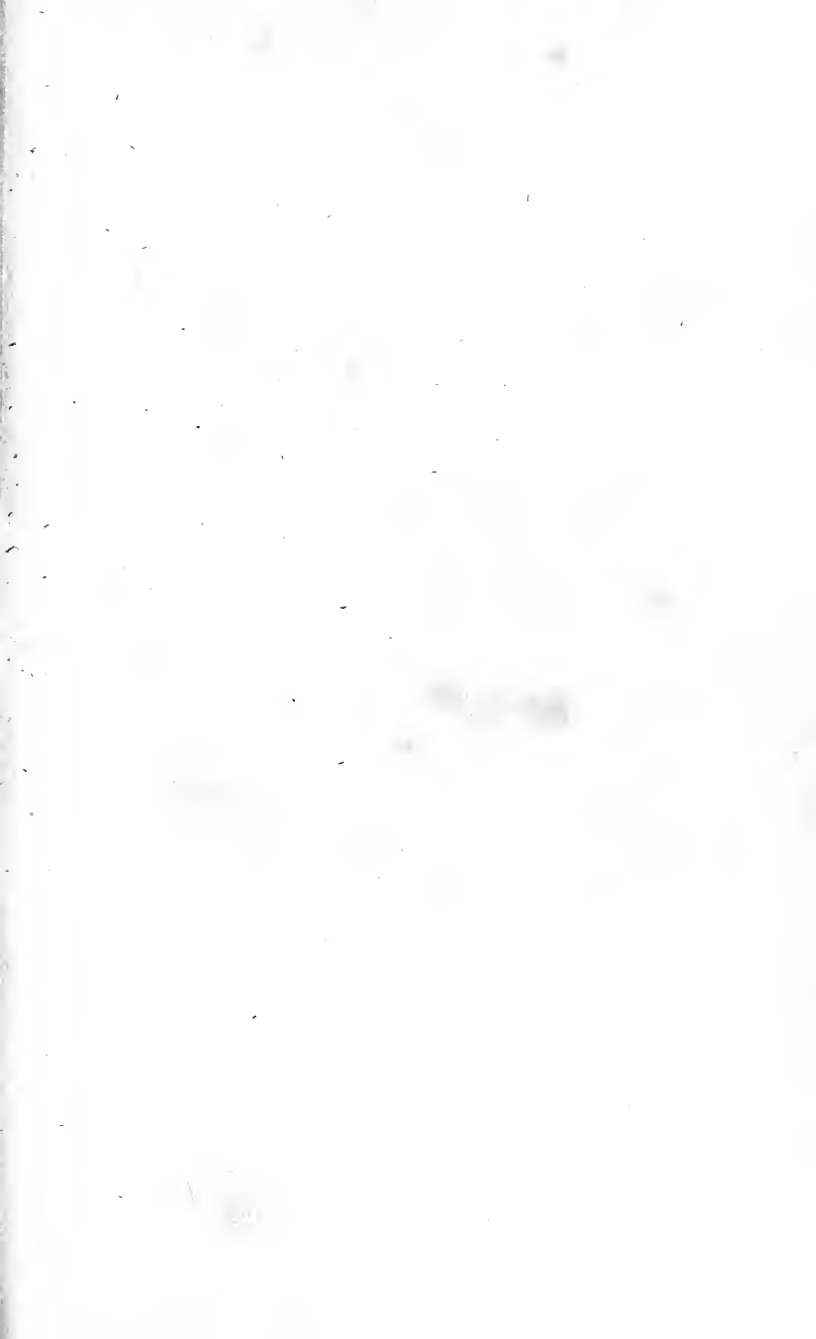
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THE
COMPLETE ANGLER'S
VADE-MECUM;

BEING
A PERFECT CODE OF INSTRUCTION
ON
THE ABOVE PLEASING SCIENCE:

WHEREIN ARE DETAILED,
A GREAT VARIETY OF ORIGINAL PRACTICES
AND INVENTIONS;

TOGETHER WITH
ALL THAT CAN CONTRIBUTE TO THE
SPORTSMAN'S AMUSEMENT AND SUCCESS.

ILLUSTRATED WITH ENGRAVINGS.

BY CAPTⁿ. T. ^{Thomas} WILLIAMSON,

AUTHOR OF THE WILD SPORTS OF INDIA.

LONDON:
THOMAS GUSDEN, SPORTING REPOSITORY,
BEDFORD STREET, COVENT GARDEN.

MDCCCXXV.

THE HISTORY OF THE

REPUBLIC OF THE UNITED STATES

OF AMERICA

FROM 1776 TO 1876

BY

JOHN P. HARRIS

OF THE

UNITED STATES

ARMY

AND

NAVY

OF THE

UNITED STATES

OF AMERICA

27437
W6
1825

TO ALL
TRUE LOVERS OF ANGLING,
THIS BOOK
IS
DEDICATED,
BY
THEIR OBEDIENT HUMBLE SERVANT,
AND BROTHER SPORTSMAN,
THE AUTHOR

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PREFACE.

THE great partiality I ever entertained for the diversion of Angling, has caused me to pass many a leisure hour in that agreeable pursuit, and to make many observations on the habits of Fishes in general.

These observations have been extremely useful to me in my search for sport, and have often enabled me to carry home a dish of Fish, while others, more acquainted with the Waters, could scarcely get a nibble; or, at the utmost, had taken only some small fry, not worth the trouble of unhooking.

I do not pretend to have gone over the *whole* kingdom; nor am I able to give "*the character and the course of every Stream*;" nor can I boast of having caught Fishes; "*until I was fairly wearied out*." I have, indeed, very frequently been "*wearied out*" by the abstinence of those Fishes I wished should fatigue me by their weight; and many a day have I had a long walk, under a very sultry atmosphere and the burthen of my apparatus, as the reward of my assiduity.

These are mortifications which the best of St. Peter's followers (excepting those ever-fortunate authors whose trumpeters have unhappily blown their last) must ever compound for; for those anglers who anticipate constant success, will be grievously disappointed. The sanguine disposition, however, which gives birth to, and nourishes, such confident eagerness, is of the utmost avail to the juvenile Angler; provided it be accompanied with sufficient patience, wherewith to counterbalance a certain hasty petulance which is very apt to peep forth after long speculation at a motionless float.

The want of *universal experience* may, in the opinion of the class above alluded to, subject me to degradation; but without justice. Several counties contain every Fish worthy the Angler's notice, and can boast of many inhabitants, whose skill and general knowledge would fully warrant their becoming authors on this topic. I have the pleasure to know, that many such characters have expressed their warm approbation of my Treatise, before it was committed to the press; and, that they concur with me in opinion regarding the gross errors, not to say wilful mis-statements, made by some who have written on Angling, especially where local circumstances have been misrepresented in the most impudent manner.

This is, perhaps, rather bold in me to express;
for,

for, unhappily, it never has fallen to my lot to “present any Hooks to any Noble Lord; nor have I ever been “pressed by strangers”—(no, nor by friends either)—“to *favour* the public with the result of my experience.” But, to make up for such deficiencies, I offer to my reader several original communications, and such a complete arrangement of the subject, as cannot fail to lead the Learner, and that too in a rational and pleasing manner, towards the goal of Piscatorial Science.

I have not servilely copied from any man; but where my experience has justified a concurrence with the practices of others, I have adopted them, and now, by insertion in my Volume, give them all due praise.

Although many versed in Ichthyology may fully comprehend what is said of various Fishes, and though the practised Angler may not stand in want of the aid of illustration, yet I trust the young Student in this Art, will not consider the several Plates annexed to my Treatise as superfluous; for even this amusement is replete with *finesse*, and will always be followed with most success by such as have a knowledge of Mathematics, or at least a turn for Mechanism.

My labours were not intended for the use of those who, regardless both of law and of decency, trespass on the rights and properties of others by nefarious practices. Nor do I wish the price of
my

my Volume to stand so low, as to render it accessible to every such miscreant. It is exempt from all practices unbecoming the liberal sportsman ; and being composed of respectable materials, I could wish it never to fall into the hands of any but respectable persons.

Such is the basis of this Work, in which I may, without presumption, assert, that many desiderata are furnished, and many intricacies, or ambiguities, laid open. To say that my Volume is complete, would be untrue ; for I feel, that much is still wanting which should enable the Angler to *command* success.

T. W.

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THE
COMPLETE ANGLER'S
VADE-MECUM.

Of the Hook.

THE first object that comes under notice is the hook. Those generally used in angling are classed under ten sizes: No. 1, being the largest, and No. 10, the smallest (See *Plate I. Fig. 1*). They should be of good steel, of an even thickness all their length, from the butt, where the line fastens on, to the chip, where the barb or beard is cut out.

The point should be perfectly upright, and not stand out, as eel hooks ought to do; the beard ought to be prominent, but not cut so very deep as to weaken it at the place where it joins under the point.

The back of the shank is sometimes grooved horizontally, for the purpose of whipping on the line more firmly. Such are to be preferred; though a careful person will fasten his line very sufficiently without such aid.

Opinions are divided as to the best form of a hook; many prefer the *Kirby*, which has its point bent a little to one side, so as not to stand in an upright line, parallel to the stem. The faults imputed to the *Kirby* are, that it often fails in the striking; and that it makes too large a

cut, so as to allow the fish to get off, in case the line is at any time slackened.

I confess myself to be of this opinion, and, from my own experience, should recommend the common, or old-fashioned hook; being thoroughly satisfied, that I have often missed of hooking fishes, which have absolutely gorged my bait, in consequence of its being on a *Kirby*; indeed, mathematical proof may be adduced in support of its condemnation. However, the majority of the *Kirby* hooks are well made in one respect, viz. in being somewhat angular at the bottom of the beard, as in *Fig. 2*; whereby they fix themselves more firmly when in the jaw, and do not shift about so much as semicircular curves are apt to do.

A good hook for *worm-fishing* ought to have rather a long, than a short shank; and the beard should be moderately deep. It ought to be rather substantial, and to be perfectly free from rust; else it will not allow the worm to glide on smoothly, but will subject it to break, and to give way.

It may be proper to observe in this place, that hooks of every description are injured by being huddled together in papers, boxes, &c.; the beards get intermixed, and they either are broken, or blunted. Those especially which are required for your pocket stock, ought to be stuck into flannel, the same as needles are kept by ladies in their *house-wives*, &c. &c.; and if a little oiled, they will be better preserved from rust.

Regarding *juck-hooks*, *eel-hooks*, and such as relate exclusively to any particular branch of angling, they will be treated of under their respective heads, where the modes of using them will be amply described.

In this part of the work I shall confine myself to what appertains to the more common practices of *bottom-fishing*; by which I mean, such matters as apply to simple angling, for whatever chance may present; reserving the more *knowing* parts of my instructions, for the illustration of those branches of the sport which require some experience and judgment, before they can be practised with success.

The learner will find the whole under their proper titles, besides a variety of information interspersed, by way of comment, in other parts of the work.

Of Gut and Weed.

These are imported to us from abroad, chiefly from China, and are invaluable to the angler. The *gut* is more transparent than the *weed*, is not so thick, nor is it, in general, so round; yet, on the whole, it is preferable, except in a few particular instances.

Gut may be had of any degree of fineness; for the same skein is formed of various sizes, as well as of different degrees of quality; some threads being long and round, while others are shorter and flatter. The latter are very exceptionable, where a choice can be made; as they are not only weaker, but streak the water, in moving through it, and frighten the fishes.

Choose such *gut* as is round and smooth, of a clear semi-pellucid appearance, and that is free from yellowish spots, very much like iron-moulds. The best proof of the strength of *gut* is hardness: bite it, and if it resist the teeth like wire, that is, does not easily give way, it is good.

This should always be done when a thread of *gut* is

taken from the skein ; for such parts at each end as are quickly bitten through, and make little resistance to the teeth, will not hold a fish in a proper manner.

Weed is much thicker, and is of a duller, though of a whiter appearance. At first it is very strong, but does not keep so well as *gut*. However, where you expect to find *jacks* and *eels*, it answers almost as well as *gimp* (which see in its proper place) : it will do for *perch* fishing, as also where *salmon* do not run to any great size.

Choose your *weed* as has been directed regarding *gut*, and take especial care to keep them both in situations free from damp ; for if once mildewed, they are never after to be trusted, though they may bite tough.

Many prefer their *gut* and *weed* of a water, or of a light brown colour, which may be given in various ways : the following are perhaps the least exceptionable.

To Colour Gut, or Weed, Brown.

1st, There is in every *cock-chaffer* (in some counties called *caterpillars*, in others, *dummadores*, &c.) a small bag containing a liquid, of a beautiful brown. This applied to your *gut*, or *weed*, and allowed to dry in the air, will give it a fine transparent colour, which may be completely fixed, by dipping afterwards into a weak solution of alum ; using about the size of a hazel-nut to half a pint of cold spring-water.

If you think the colour, in the first instance, too deep, dilute the brown liquid with about an equal quantity of alum-water, and apply it.

The great merit of this is, that it does not in the smallest degree tend to injure your line.

2d, Coffee is an excellent colour, and being always to
be

be had, is particularly convenient. In a cup of strong coffee, when about milk-warm, steep your *gut*, or *weed*, and allow it to remain until you think it sufficiently stained.

You must however make some allowance for the colour washing out a little, by the line being frequently exposed to the alternate action of the water and of the air.

3d, Rub your *gut*, or *weed*, with walnut-peels, bark, or leaves, until stained to your fancy, and fix the colour in alum-water. This should be done cautiously, as the walnut-juice is rather corrosive.

4th, Put about a large table-spoonful of white salt into a pint of ale, or strong beer, if a little sharp the better; steep your line till coloured to your fancy. This is unexceptionable, and makes a good brown.

To Stain Gut or Weed, of a Water Colour.

5th, Take about a tea-spoonful of common red ink; add to it as much soot, and about the third of a tea-cupful of water; let them simmer for about ten minutes; when cool, steep your line until it be stained to your fancy. This is a very beautiful colour for the purpose, but should be applied gradually, taking out your line, to examine the depth of the tint frequently, lest it should become too dark.

6th, For a pale water tint, boil a handful of soot in a large tea-cupful of alum-water; steep the line for a few minutes in the decoction, while milk-warm; then, if the colour do not please, rub your line with walnut-peel, bark, or leaf, until it answers to your wish.

7th, A weak solution of indigo in boiling water, gives an excellent bluish tint; but the line must be steeped

only in the cold liquid. When of the required tint, steep the line in alum-water for a few minutes.

8th, The following is an admirable recipe, but requires the greatest caution. Ten drops of aqua-fortis should be dropped on a piece of copper, and left in a cup, to corrode so long as it throws up any bubbles; to these add cold water sufficient to dilute the mixture to a fine pale bluish green: in this steep your line for about half a minute, or more, and you will have an excellent water colour, which at the same time takes off the gloss from the *gut*. If your line be steeped previously, for about five minutes, in alum-water, it will in some measure prevent the acid of the mixture from penetrating so deeply, as to endanger its being in any degree weakened.

9th, I have found common walnut catsup to give a good colour to *gut*, steeped in it for half an hour, or more; but this tint is apt to fade: however, as it is so easily renewed, and is peculiarly excellent, I should recommend its being adopted.

Observe, by a *good colour*, I mean that which, in the common run of angling, corresponds with the colour of the water; and renders the line less visible: for it should be particularly noticed, that we often find the sides of a stream of one colour, while the middle, or the current, is quite of another hue; and where several waters join, we rarely see them all of the same transparency, or of the same tint.

Some waters, owing to mineral impurities, will tinge the line of their own colour, so as never after to change; a fortunate circumstance for those who continue to angle in such streams. I have had a line so completely stained

of

of a reddish brown, owing to the water being impregnated with a ferruginous cast by the till earth, as not to be distinguishable from the stream, when immersed therein: but for other waters that line was totally useless, since it appeared perfectly distinct for a great depth. Under the head of *Various Waters*, the learner will find more on this subject.

Of Gimp.

This is nothing more than yellow or white wire, wadded round a *silk* line; the same as what are called covered, or bass strings for the violin, &c. are made of *catgut*, enveloped by wire. This is intended to preserve that part of the line which is nearest the hook, from being bit asunder by *jacks*, *eels*, &c. It is made of various thickness, according to the purpose for which it is intended, and may be had either *yellow* or *white*, according to the angler's fancy.

I prefer the *yellow gimp*, being convinced from experience, that it is least discernible in the water, especially in bright weather, when I have seen the *white gimp* glisten so much, as to be distinguishable to a considerable depth. About half a yard is enough for one line: where the *jacks* run small, less will do. It is excellent for *eel-hooks*, set as *night-lines*, as will be shewn in due time.

Of Horse-Hair.

This is not often to be had of a good quality. The best is taken from those tails that have been frequently cut; whereby the hairs become much stouter, and far more elastic. Choose that which feels stiff, free from inequalities, and is rather smooth than rough. Some hair is angular, and never works well into a line; for which purpose it cannot be too round.

The hair from the tails of *mares*, being commonly wetted by their urine, is in a measure rotten; neither do I consider it to be, naturally, and abstracted from that imperfection, so firm and so durable as *horses'* hair.

The manner of making lines of horses' hair, will be duly and amply described. They may be stained in any of the modes already pointed out; but, to free them from grease and other impurities, should be previously washed in a very weak solution of lime in water, or a strong one of whiting in stale beer.

To make a Line of Horses' Hair.

Take three or four hairs of nearly equal length and substance (for there is great choice in that respect), and tie them in a common knot, observing that half the butts and half the points be respectively together; the butts being the part where they are pulled or cut from the animal, are the thickest; the hairs taper from them to their points.

The due inversion of one-half the number of hairs, or as nearly so as odd numbers may admit, will cause the length of a link thus made, to be equally thick in every part; which would not be the case, were all the butts and all the points together; whence the line would be weaker at the joints than elsewhere.

If, indeed, an additional hair is progressively given to every link, then all the points should be together, and should join to the next lower or thinner link; but such a line would soon acquire too much thickness.

Having knotted the hairs together, take a quill, and after cutting away both the feather end, and the soft part which was in the skin of the goose, plug up one end with a piece of cork, having in its sides three or four very small nicks,

or

or grooves; so that each hair may pass through the quill, and by the side of the cork, with some little resistance.

The knot, which will thus be on the outside, beyond the cork, should be turned round between the finger and thumb; by which means the hairs, coming like so many rays from the edges of the cork, will begin to twist in the most regular even manner, and will be gradually drawn through.

The person twisting the hairs should be careful to observe when the further ends of the hairs are about to come through the grooves, which he may easily perceive, and should then grasp what he has twisted close to the cork; then drawing out the residue, tie the ends, as in the first instance: but, in order to keep the twists correct, he should, as he proceeds, pass the line round his hand, so as to coil it up in a small ring.

This being done, he should lay every length, so soon as made into a coil, in a cup of water, to let it soak; after about half an hour, some of the hairs will probably *snarl*, or appear to gather, or shrink, in the twists. The lengths in which such *snarls* appear must be untied, and be twisted a second time, after the hair has been dried.

This process will all be seen in *Plate I.* where, in *Fig. 3*, A, is the quill, B, the cork plug, c, the knot, and d, d, d, d, the several hairs which form the length, or link, passing through the quill; being pressed thereto, at equal distances, by the cork.

Any number of hairs may be thus twisted far better than in the common way, and as regularly as by any machine: though some on a good plan, are sold at the tackle-shops. As the grooves may be made so as to allow twists of two, three, or four hairs each, to pass, links may be made of

any thickness, by twisting together, either in twos, threes, or fours, any number of hairs of which they are respectively to be composed ; precisely as the best kinds of hard rope are manufactured in *strands*, formed of smaller *strands*, and each of the latter having an equal number of threads, or yarns.

The number of *links* to be made, must depend on the intended length of the line : in general, twelve feet will be found an ample stretch ; especially if the foot-length, that is, the three or four links nearest the hook, be made of gut ; which is far preferable to horses' hair, in every respect.

It will ordinarily be found, that four hairs are best for the bottom link, if *gut* be used below it ; and that the addition of one hair in the thickness of every third link, is full strong enough for any purpose.

The links are to be joined by what is called a *water-knot* ; this is very secure, and is easily made in the following manner : let the two ends that are to be joined, lap over about an inch and a half, without untying their end knots ; then, in the same way that you would make an ordinary knot, so tie these, taking care to pass the parts of both lines together, and then draw tight at each of the four ends. This forms the *water-knot*. See *Fig. 4, Plate I.*

Before you cut away the two little ends, on each of which is a knot, whip them down well, for about a quarter of an inch on each side the water-knot, finishing on each side with a *hidden tie*, that runs under the whipping for three rounds at least ; so that it never can fail but from the decay or cutting of the silk.

Having done this, pass a piece of quill between the ends
and

and the line, and with a sharp pen-knife, cut down through the ends, about the thickness of your thumb-nail distance from the whipping, so that the ends may come off clean: the piece of quill serves to prevent the knife from cutting your line.

Scissars are bad on these occasions, unless, indeed, their points be very fine; in which case they are soon spoiled; their thickness always raises the end, in some measure, whereby either the cut is uneven, or the whipping is a little strained: the latter is a great fault; for the ends of the water-knots cannot be tied down too firmly.

If you warm your cobbler's wax, and rub it round once or twice, taking care to do it with the direction of the whipping, it will give a slight coating to your work, and make it much neater; it will serve to prevent little fibres from rising out of the silk, which, by cutting the water, scare the more cautious kind of fishes.

How to Wax your Silk.

Simple as this operation may appear, there is yet some art in doing it completely and equally. The fine silk used in whipping on very small hooks, and in making flies, will not, however good of its kind, bear to be roughly used; nor will it, indeed, if taken singly, bear the operation of being passed with the requisite degree of force between the wax and the thumb.

Take, therefore, several equal lengths of your silk, observing to reject all that appear knotty or gouty, for they always make clumsy work, and pass them, *in one body*, between your thumb and the wax, which should be previously spread thinly on a piece of strong shoe-leather, as stiff as can be had.

Pass them several times, until you feel, by their resistance, that their surfaces are completely coated with the wax: separate them, and upset one-half the number, so that what was at bottom before may come to the top; then pass them again several times, until they resist strongly.

By this means, each thread will have received a good portion of wax, which will require to be levelled, so as to make the whole equally strong and durable.

Now fasten one end of each thread, separately, to a pin, nail, table-screw, cushion, or whatever may be at hand, and rub it lightly, but quickly, with a piece of white glove-leather, or any other such soft substance, until the thread may appear to be uniformly coated; if the wax does not seem to be thick enough on the thread, rub on a little more in this position, for it is by far the safest in which a single thread can be waxed; and finish again with the soft leather.

I have been more particular in the detail of this part of the process than many may think requisite; but all good anglers know, that on the niceness of whippings, knots, &c. their sport materially depends. I cannot repeat too often, that highly-finished tackle will always attract more fish than such as is clumsy, or is carelessly used.

The *loops* which ought to be at each end of every line, except such ends as, for want of *gut*, *weed* or *gimp*, are fastened to the hook, should be well whipped, so as to keep the ends close down; thereby to prevent their hitching with other parts of the tackle, and to render the motion of the line through the water less perceptible.

There is a kind of line made for catching small baits, usually called a *minnow-line*. This should consist of
about

about two feet of fine *gut*, at the bottom of which, a very small hook, about No. 9 or 10, should be very neatly affixed. At about six inches above that hook, set on one or more shot, according to the strength and depth of your waters; then at equal distances, say four or five inches, fasten the thinnest, whitest, hog-bristles you can obtain, tying them well on, at their middles, to your gut-line. At each end of every bristle, have a small hook, as at bottom.

Thus you may have three, five, seven, nine, &c. hooks on your line, none of which will interfere with the others; the bristle always retaining a certain stiffness, and never so far relaxing as to snarl or twist on your line. With such tackle you may catch *minnows*, *loaches*, *bull-heads*, *gudgeons*, *bleaks*, &c. for the supply of your dipping apparatus, and for your *night-lines*.

Of fastening the Line to the Rod.

When a reel is used, you have only to make a fastening to the loop at the top of your line, by means of the line which, coming from the reel through the rings affixed to the rod, goes through an eye made of wire, or of metal, at its top.

Pass the reel-line through the loop, and tie it with only a *single-loop draw-knot*. So that by pulling at the end of your reel-line, you disengage your hair-line with the utmost ease.

But, in case you do not use a reel, pass the loop at the top of your line through the eye at the top of your rod, so far as to allow your putting the lower end of your top-joint through the loop; then draw the line back again through the eye, and all will be secure and neat.

If

If there be no eye at the tip of your rod, the best mode is, to fasten at that part a strong piece of reel-line, so as to leave about six inches wherewith to make the draw-knot, the same as if it were the end of a reel-line.

Of Floats.

The principles on which every *float* should be made are, first, that it should sustain the weight of the shot and bait; second, that it should pass easily under water when a fish bites; third, that the part above the water should not be top-heavy.

The absence of any one of these requisites renders the float useless. For, if it cannot sustain the appended weights, it must sink, and cannot be a *float*; if it does not yield freely to the smallest effort of the fish to take the bait down, it will not only fail to indicate the time for *striking*, but it will so far oppose the fish as to cause alarm, and consequent disappointment.

If your float does not stand erect, you never can judge of the depth of water, nor can you draw your line tight enough to be in readiness to strike, at the moment when the fish may have taken the bait into his mouth.

A *float* should always be suited to the water, and to the kind of fish you are in pursuit of. Thus in a strong water, where many shots must be on your line so as to sink it to a due depth, and to keep it upright, a *cork-float* will be requisite; likewise in fishing with *live bait*, as will hereafter be shewn.

Where the water is quiet, a *quill-float*, proportioned to its depth, and to the weight of the hook, bait, and appended shot, will always prove superior.

Where the water is shallow, and the current trifling,
your

your *float* cannot be too delicate. All that is required is, that about three quarters of an inch should appear above the surface, and that half an inch should be white, so as to appear distinctly, towards the twilight especially, when coloured objects are not so conspicuous.

I have always had most success when using a short, but very thick, *swan-quill float*, with a white top and a red cap, made of about a quarter of an inch of larger quill, or of very thin horn, dyed in red ink, or in a decoction of logwood and alum.

Double-quill floats, that is, such as have no *wire plugs*, are made by joining two quills, of equal diameter, on a wooden plug, which is first smeared with tar, and passes about half an inch, or more, up each quill.

The two small ends of the quills thus form the two ends of the *float*; and, in order to prevent the admission of water, should be rammed with a piece of the stem of the same quills, which, going in at the larger ends before they are affixed to the plug, by being pushed up towards the points, will effectually prevent any water from penetrating, if the quills be in other respects sound, and free from cracks, as ought to be duly insured. See *Fig. 5, Plate I.*

All *double-quill floats* are provided with two caps, one for each end, to keep the line to them: they should be well whipped in the middle, where the quills should join very nicely, and should fit very stiffly upon the plug.

Single-quill floats are made of one swan or goose quill, in the bottom, or large end, of which, after the small end has been duly stopped, as above directed, a plug made of beech, lime, or deal, should be neatly, but tightly,

tightly, fitted; being first smeared with tar, or heated cobbler's wax.

The other end of the plug, which should be about one-third the length of the quill beyond its insertion, should taper to about the thickness of a very large knitting-needle.

The plug should be well whipped at both ends, to prevent its splitting or swelling; and, in the small end, a little brass *tail-ring* should be inserted. To make this tail-ring, turn a piece of thin brass wire once round the small end of a goose-quill; then twist the ends regularly together with a pair of small plyers, or with your finger and thumb; cut away all that may exceed about half an inch of twist, and having, with a very fine awl, or with a large pin, made a hole up the small end of the plug, insert the twisted end of the *tail-ring*, which will screw into the hole, and remain perfectly tight.

The other, or upper end of the quill, must have a cap, which will be found more firm and durable if whipped round in its middle, about five or six times, with some well-waxed silk. See *Fig. 6, Plate I.*

It is not amiss to have a *double-plug float*, when you fish in places where you are very often under the necessity of shifting the depth between your float and your hook. These are made the same at both ends as floats are in general at the bottom; so that you have no quill-loop on the top part, but instead of it, your line runs through a brass ring set in wood, whereby only the centre of the float is of quill. This answers well when fishing for gudgeons, roach, &c.; but must be put into the water gently, lest it should change its place. See *Fig. 7, Plate I.*

Cork-

Cork-floats are made, by boring a piece of perfectly sound cork, with a hot wire, through its middle. The best kind is that called *velvet-cork*, and may be known by its beautiful smoothness, and the absence of those rotten vacancies to which the common kind is subject.

Having perforated the cork, smear the inside, while hot, with tar; then pass it down a well-finished *double-quill float*, until the joint of the plug within the quill is hidden: about an inch of the quill should remain uncovered at the upper end.

After the tar has cooled, and fixed the cork to the quill, with a very sharp penknife, having rather a long blade, pare away the lower two-thirds of the cork to a conical form, so as to taper down nicely to the plug. Then pare away the superior third part of the cork up towards the quill, so as to be conical the other way.

When you have made the surface of the cork very smooth, and rounded off the edge made by the junction of the two cones, put the *float* into a bucket of water, first hanging a small weight to the *tail-ring*; and if it does not swim quite upright, trim away from the under part of the highest side until you find it answer well. After it is dry, varnish it over with a little *highly-drying linseed-oil*, or with a little *turpentine varnish*, either of which can be had at the oil warehouses in any quantity.

If you wish to paint your float, which is preferable if the cork be faulty, it is easily done, by mixing a little colour with either the *oil* or the *varnish*. Hang the *float*, when finished, by the *tail-ring* to dry in a current of air, but not in the sunshine. See *Fig. 8, Plate I.*

Observe, that a *cork-float* will be more or less buoyant, in proportion to the thickness of the cork at the junction

of

of the cones ; that is to say, at its greatest diameter. It is proper to have them of various powers, so as to answer to every occasion.

I have found excellent service from the use of a lamb's bladder as a float, especially where I had the wind in my back, and wished to keep my bait far out in the water. It is usually a good deal agitated by the breeze, and plays the bait to advantage ; but can only be used where the waters are clear from weeds, &c.

In the use of live baits, the bladder is of the greatest utility ; and even with a dead bait, especially a *pater-noster*, is far superior to a cork-float.

The inconvenience of carrying a large *jack-float* is well known to all anglers ; whereas, the bladder may be employed at pleasure, and can even be stowed away in a pocket-book.

I have frequently, when the wind has been strong, let out nearly my whole reel-line, and thus sent my bait into places I could not have reached by any other means.

Several gentlemen, eminent in the sporting world, have used the bladder to great advantage, especially on large lakes in which jacks abounded. The bait being fastened to a proper length of line, and suspended to a large ox-bladder, is set off from the windward side of the water ; whence, if no concealed impediment should obstruct its progress, in due time it reaches the opposite shore.

Sometimes, however, different currents of air, or casually variable puffs, will retard its progress, and keep it nearly central.

In this state it offers the bait to the largest fishes, some of which usually attack it in its way, and, by tugging sharply, soon hook themselves : it is amusing to

see

see the efforts of the fish thus caught; the bladder is pulled under, and appears at intervals often at remote parts, but gradually shews its powers over the self-exhausting fish, and ultimately riding triumphant; the fish being unable to draw it under water, and often coming to the surface so completely exhausted, as to be lifted out without the power to escape.

Some call this kind of float, the *fox-hound*; others, the *flying-float*: the former is, I believe, the most general designation; but the latter is certainly the most applicable.

Of Split Shot, and other Weights.

The usual sizes of shot for fixing on lines are, from *swan-shot* down to No. 4 of the patent mode of registering. They should be split about three-fifths through with a chisel, which makes them gape sufficiently to admit any line of ordinary thickness. When the line is put into the slit, pinch the lips of it together with a pair of plyers, if at hand, as you can then *see* what you do; otherwise, press them between your teeth.

It is proper that the line should pass, as nearly as may be practicable, down the middle of each shot, and that the slits be well closed; else they will rip the water, and hitch the line, as well as weeds, &c.

The depth of still water may be easily ascertained by your line, if one or two good sized shot are on it, without any other weight. As your shot are generally about nine inches from the bait; if you shift your *float* until it just reclines a little, you then may be sure that the shot touch the bottom; consequently, the intermediate space between them and the broadest part of your float, is the measure of the water at the spot where you sounded it.

It

It is very necessary to correct an error which, to my surprise, has crept into most books of instruction. They generally state, that "when your float stands upright, you are off the bottom." Now this is by no means the case; for your *float* may just have water enough under it to keep the lowest shot touching the ground, while it may be kept erect by the others above it.

While in this state, your bait, together with all the line between it and the shot, lay on the ground! Hence it is obvious, that, after having found the depth at which your *float* begins to recline, it is necessary to draw it down your line, just as far as there is distance between the uppermost shot and the bottom of your hook.

By this means your bait will just *tail* upon the ground, and be peculiarly acceptable to many fishes, especially *roach* and *gudgeons*, and eventually to *barbel*; &c.

Strong currents often require very powerful weights to sound with. Many use round balls, perforated through their centres; but they do not pack well, are apt to roll at the bottom, and, in many instances, are not sufficiently ponderous to give a true perpendicular.

The ordinary plumb, sold in the turned cases, which is only a roll of thin sheet-lead, is not amiss in weak currents, and applies aptly to the line, which it envelopes in a sufficient degree; but in some parts of rivers, where the waters run impetuously under banks, and in bends where there are deep holes formed by the rapidity of the stream, they are inadequate to the purpose. Besides, in my opinion, an angler should endeavour to divest himself of every thing superfluous, and, if possible, to make one thing do two offices.

Accord-

Accordingly, I always carry with me what in many places is called a *coffin*. This is a piece of lead weighing about two ounces, cast in the form of a coffin, and bored through lengthwise. Through this I pass a strong piece of well-waxed twine, so as to form a loop; which, being carried twice round the bend of my hook, hangs perfectly secure, and enables me to sound in any water.

Now the reader will observe, that this kind of lead is peculiarly suitable to fishing on the ground for *barbel*, &c. as will be shewn under that head. In the absence of a *coffin* lead, I have occasionally found my *clearing* an excellent substitute.

Of fixing Hooks to Lines.

Success in fishing, as has already been observed, depends greatly on the manner of preparing the necessary tackle; above all, it is most requisite, that the hook should be so attached to the line, as to keep within the smallest compass, in regard to the *whipping* or fastening that may be practicable, with due regard to firmness. I do not know any point relating to angling wherein greater neatness is needful, than in the mode of fixing the hook to the line.

The silk with which the whipping is to be made, should be of the first quality, and for small tackle should be equally fine. Black is often used, but very improperly, it being for the most part rotten: the very dye with which the colour is produced will, of itself, destroy the tenacity of silk. Indigo-blue silk is perhaps as good as any; nor are the deep brown, the deep yellow, nor the dark green, objectionable.

I shall, by way of saving trouble, and repetition of words,

words, always suppose the hook to be fixed to, or as it is termed, *mounted upon, gut*; regarding the choice of which I have before made mention.

Observe, that every thread of *gut* is rather thinner at one end than at the other; and, that such thin end should always be appropriated to being attached to the hook: by this means the line is made a little taper, especially if the finer threads of *gut* be selected for this purpose; and, that those which are thicker be made, according to their degrees of fineness, to form the second, third, and fourth links. Beyond that number it is seldom needful to have the line composed of *gut*, at least for *bottom-fishing*, if the *gut* runs to 16 or 18 inches in length.

The different lengths or links of *gut* are to be tied, as already directed in treating of *horses'-hair lines*, with *water-knots*, and the end of the knots are to be tied down in the manner therein detailed. This is of great importance, on account of the thickness of the *gut*, which cuts the water very much, especially as it is on a part of the line so much under the fish's notice.

The first thing to be done is, to whip the *gut* four or five times round, at that part which will come into contact with the butt of the hook, by which, but for this precaution, the *gut* would soon be cut through. Bring the part of the *gut* thus guarded against the inside of the butt, so that one or two laps of the whipping may remain clear above the hook: take two more turns with your silk, drawing it very tight, and taking care to keep the *gut* on the inside; for in whipping, it is apt, unless held firmly in its place, to pass round to the side, or perhaps to the very back of the hook.

Now, take about half an inch of stiff *hog's-bristle* and lay

lay it at the back of your hook, leaving about the fourth part out, pointing upwards, and a trifle higher than the top of the butt.

This done, proceed to whip on both the *gut* and the *bristle*; the former within, the other at the back of the hook, for about six or seven rounds more of the silk, and then make a *half-hitch knot*, by which your work will be kept firmly in its place, while with your knife you pare the *bristle* and the *gut* both thinner towards their lower points; so that as you *whip* on towards the bend, they may lay flatter, and render the *whipping* less heavy in appearance as you proceed.

When you come within about three rounds of the quantity of *whipping* requisite to conceal the due quantity of *gut*, which ought never to reach more than half way down the shank of the hook, or, at least, not lower than opposite to the point, make a change in your proceeding, by finishing with the *hidden* or *inverted knot*, hereafter explained; taking especial care to draw the several rounds firmly into their places, by compressing them altogether between your finger and thumb, turning the hook at the same time with your other hand in the direction of your whipping, so that all is brought smooth and close: next, draw your silk very tight, and cut it away by means of your sharp pen-knife and quill, or on the front edge of your thumb-nail.

If these directions are implicitly obeyed, the fastening will be firm and neat: a little tar, lightly and evenly applied over the whipping, and left to dry, is of great use, as it effectually keeps the fibres of the silk down, prevents corrosion, and causes the worm to slide on much easier

easier than it would do if all the whipping were left bare.

It is necessary to point out, that the *hog's-bristle* is put on solely for the purpose of supporting the worm, when it has been drawn above the shank of the hook; down which it would be apt to recede but for this precaution.

For very large, heavy, *lob worm* tackle, sometimes *two bristles* are necessary; in which case, one should be a little above the other, and the upper one may be whipped down to the gut, at about a quarter of an inch above the butt of the hook; not higher, as it would occasion the worm to *ride* too high, so that the fish would be apt to bite above the bend.

The taper manner in which the lower part of the whipping is done, tends greatly to facilitate the *threading* of the worm tip to the top of the shank; for by this means, the orifice in the worm's head is gradually distended, so that less force is required to pass it over the *bristle*. I sometimes grease the whipping.

When, from want of attention to this precaution, the whipping terminates abruptly, forming a kind of step at the bottom, it is very difficult to *thread* the worm beyond it; and, at all events, subjects it to be much disfigured, which renders the fish very shy.

Of Baiting a Hook with Worms.

The bait should always bear a certain proportion, in its size, to the hook on which it is to be affixed; and, indeed, we for the most part find, that fishes with small mouths prefer baits of a more delicate description, than the more bulky and the more voracious.

The

The *roach*, the *dace*, the *gudgeon*, and various others, all delight in small, *well-scoured*, bright-coloured worms; while the *salmon*, the *trout*, the *jack*, the *perch*, the *eel*, &c. are better enticed by a large bait, they not being so remarkable for daintiness as the lesser classes.

The *carp* is peculiarly fond of a small clean bait; and, though it grows to a good size, as does the *chub*, yet is more easily caught with a moderate-sized *blood-worm*, than with one of a larger size, or of another kind.

Perhaps the *barbel* may be an exception to this observation; for it has by no means a large mouth, yet is it extremely greedy of a large bait, which it delights to suck at.

It is not very easy to fix a rule which should govern in all instances; but it may be tolerably correct to state, that (with the exception of those large worms called *lobs*, of which mention will be made when treating of baits) the worm should rarely exceed one length and a half of the whole measurement of the hook, going round with the curve, or *bend*, from butt to point.

Very thin wiry worms do not answer well, as they shew the hook, and do not allow fishes to take the bait into their mouths, so as to compress their teeth, nor even their lips, without feeling the metal.

Short, fat, elastic worms, which at times can stretch out to a great length, and which writhe much, are by far the best.

Where fishes do not bite freely, or where, as is often the case with *carp*, *tench*, and *roach*, they take hold only of the pendant part of the worm, and seem to try how far they may proceed in safety, it is best to have only one worm, which should be little more than long enough to cover the hook.

In such cases, too, the hook should be carefully put in as near as possible at the mouth of the worm, so as to afford no means for making experiments, as fish are often apt to do when shy, or dainty, by pulling at any little hanging point they can get at.

I have sometimes seen fishes amusing themselves, in picking at the head and tail of my bait; causing my float to be incessantly in motion, though not one would take the bait fairly into its mouth!

This shews with what care a hook must be baited; for if any part of it can be seen, or felt, especially the point, no fish will approach it.

I have frequently remarked the effects of doubt and of apprehension, in fishes of various descriptions, when any part of my hook has been bare. They have come to it in a balancing manner, and either shy'd off, or retreated tail foremost, or they have appeared to be smelling to the bait, but throwing up bubbles of air to the surface.

This may be a thousand times witnessed in clear waters, where all their motions are perceptible: I have in general found it to be a very bad omen. Fishes rarely discharge air in this manner, except when in fear, or in difficulty, or when in the humour not to bite.

If the worm is properly threaded on the hook, so as completely to envelope it, and to have the tail about an inch pendant, lapping over *into* the bend, few hungry fish will reject it. In this mode of putting on the bait, less opportunity is given for tugging at any part, while it is greatly in favour of hooking any fish that may bite fairly.

As a single worm is the more certain bait, so is a double bait, consisting of two worms, more alluring, especially
to

to all the ravenous tribe; therefore, for such it is particularly eligible. It is applied thus:

Put the hook into the mouth of the largest of two worms, and thread it for about a third its length; then bring out the point of the hook, and slide the worm up, so as to be kept above the bend, and with its tail hanging down in a line with the shank.

Then thread the smaller worm, which should be particularly clear and high-coloured, until its head comes up the shank a little above the turn of the bend, and is overlapped by the tail of the first worm, so that no part of the hook can be seen: be sure to bring the second worm well on, and before you throw in (which should always be done as gently as possible, letting your line down quietly into the water up to the float), turn its tail in, so as to hang down between the point and the shank, as before directed, when speaking of a single bait. See *Fig. 9, Plate I.*

It is highly improper to let the tail project *outwards* from the point of the hook; both because it is liable, by its own weight, and by the motion inseparable from such a position, to work the point through its upper side; and because it offers the opportunity, which fish in general are cunning enough not to let slip, of ripping the bait away, so as to bare the hook down to the bottom of the bend.

Until I found this to be frequently the case, I used to protrude the tail in this objectionable manner, thinking it would tempt the fishes to bite; it certainly did so, but the few I caught were, nine in ten, hooked in the eye, or in some exterior part, and were the result of chance, not of skill!

When worms are too small for the hook, they shrink

up to nothing in appearance, and do not lure the fishes to bite; on the other hand, when they are too large, so much of them hangs down, that it is a chance if the fishes ever bite above the point of the hook; without which, we cannot reasonably expect the bait to be so far in their mouths as to ensure their being *struck*.

A very little practice, under the foregoing directions, will suffice to give the young angler a competent idea of the due proportions, and render the practice of the precautions offered to his adoption perfectly habitual.

He may then venture to promise his friends a dish of fish! provided he takes a suitable day, and proceeds to a good water.

Of the Reel.

The reel is a most important aid to the angler, enabling him to suit the length of his line to the circumstances of the moment, whether arising from the depth or breadth of the waters, and to controul the exertions of powerful fishes, by its *serving out* such an increase of range as tends to burthen them, while the angler commands a greater scope of elastic power.

This is deducible from mathematical principles, which prove, that the more remote the power is from that on which it acts, so does its force decrease in proportion as the distance is augmented.

Hence, admitting that the tackle be firm, and that the man holding the rod be, in the first instance, stronger than the fish which is hooked, the latter must be disadvantageously situated, when obliged to move a great extent of elastic line, fastened to an elastic rod, and those governed by one capable of giving to both the utmost effect: for, by relaxing a little during the moments of exerted

exerted strength on the part of the fish, he renders its efforts of little avail, and, in the end, is sure to weary it into a state of complete exhaustion !

But the line on the reel is not to be used indiscriminately ; for there may be a great variety of situations, such, for instance, as *dipping* for *jacks* with a dead bait, in narrow waters, overhung with bushes, and replete with strong spreading weeds, where the reel is more used for the purpose of *shortening* than for *lengthening* the line.

If, indeed, a person sitting in a boat not at anchor, in the midst of an extensive water, clear to the bottom, were to hook a fish requiring some management, he might, without much hazard, give out the *whole* line from his reel (though even then it would be prudent to reserve a few turns, in case of a sudden spring or jerk) ; for there would be no risk of getting entangled, or of having the line cut, by means of friction against boughs, or other incumbrances.

But, under the ordinary circumstances of locality, whereby we consider the angler as situated on the bank of a stream, and obliged to *cast in* among bushes, rushes, weeds, and dead wood, both above and in the water, the management of a short line is assuredly less difficult than that of one longer than the rod.

From the former, unless the fish be so powerful as to negative all the skill of the angler, success will generally reward his efforts. Whereas, when a fish is allowed to run among *docks*, *bay-weeds*, *piles*, *stakes*, *vessels* attached to wharfs (or even at liberty), and to entangle the line among pendant boughs, or concealed sunken branches, his being brought to land may, ninety-nine times in the hundred, be more fairly attributed to chance than to good management !

Some reels have sliding *stops*, which, if it were possible always to keep in their proper places, would be less exceptionable: such, however, is seldom the case; and, for my own part, I have always found it less inconvenient to have a reel without any *stop*, than to recur to that supposed convenience on every occasion. When I had reels with *stops*, I lost many fishes that could not have got away otherwise.

The multiplying reel is of particular advantage in some situations; for when, as often occurs, a large fish, that has ran out a great length of line, suddenly darts towards the angler, or towards some point teeming with embarrassments, it is an object to shorten the line with all possible celerity, so as to keep the fish under controul.

A slack line, exclusive of its subjecting the hook to relinquish its hold, like a slack rein in riding, rarely fails to produce inconvenience; nay, it is well known to all experienced anglers, that nothing is more dangerous than to give up that absolute command, which causes a due exertion on the part of the fish, and urges him to those struggles which terminate in his complete submission.

On ordinary occasions, a common reel is adequate to every intention: it should be of a middling size, and should carry about 30 or 35 yards of line, capable of suspending a weight of 12 or 14 pounds. When we exceed such a size of reel, and such a thickness of line, we begin to feel their weight, which then becomes more tiresome than useful.

The reel should be put on so as to be *under* the rod, with the *winch*, or handle, on the right side, as it presents itself fairly to the hand in that position.

All who carry the reel above the rod, have to bear up in perpetual opposition to the effect of its weight, it acting as a lever;

lever ; for if a rod, having a reel on it, be left to balance itself, it will invariably, and with some quickness, be carried round, so that the reel gets underneath. Hence it is obviously the easiest, as it is in many respects the most convenient mode, to fasten the reel on *below* the rod.

The multiplying reel possesses eminent superiority in respect to the quickness with which it serves out, or takes in, your reel-line. Of these there are two sorts, viz. one with the crank, or winch, in the centre of the box ; the other with it removed from the centre. The former is best, both because the multiplying powers may be considerably increased by a double action, and because the handle is much less susceptible of injury ; besides, it is far more commodiously situated.

Reels which fix on with springs and screws, made to slide on the rod, and to grasp it firmly at any part where they may be required to become stationary, are very convenient, they being so easily affixed or removed. But they are apt to scratch the butt, and should therefore be lined. I have found it best to wold the flat ring all round with half-twisted worsted ; which, being soft, both saves the butt from being defaced, and, by its great elasticity, easily fits to any part. Your ring may thus be made to answer to almost any rod.

In many places, those who fish for *salmon*, and other large fishes, for want of a reel, nail a piece of stick, about five inches long, across the rod, at about a foot above where the lower hand grips it. On this they wind the line, forming a figure of 8. It should, however, be understood, that such persons use very strong tackle, and rarely think of giving more line than happens to be out when the fish takes the fly. The extra length of line thus wound, is

more for the purpose of accommodating the length of the line to the extent of the water. See *Fig. 9, Plate VI.*

Some drive in two tenterhooks, pointing outwards, at about a foot distance, on the butt of the rod; this answers very well for *jack-fishing*; as the angler can, by this simple contrivance, always give line enough for the fish to run with the bait to his haunt. For the same reason, it answers well enough in *dipping*; but where fine tackle is used near the hook, it requires some expertness to clear the line off from the tenters fast enough to prevent danger. See *Fig. 8, Plate VI.*

The flat wheel, used in some parts of France, appears to have many advantages; but, from its size, is obviously inconvenient, when considered as part of a portable apparatus. It is merely a wheel of turned wood, neatly cut out in the middle, so as to render it as light as circumstances may admit (some are made of wicker-work on that account), fixed by a fine pivot to the butt. The wheel is deeply grooved around its circumference, like a pulley, for the reception of the line. Two tenters, pointing towards each other, are driven into the butt, just beyond the edges of the wheel, to keep it flat in its place.

The wheel may be of any moderate size, but rarely exceeds six inches in diameter, and is turned by means of a neat peg screwed into the wheel, at about two-thirds distance from the pivot to the edge.

It is obvious, that a wheel of six inches diameter will, at one turn, give or take in a foot and an half of line, which is more than any of our brass reels, even when the barrel is nearly full, can do in three turns.

The reel should be opposite to that face, or side, of the rod, which is furnished with rings from the reel up to the tip.

tip. These are intended to direct the line through the ring at the summit, so as to make it keep close to the rod all the way (whereby it is not allowed to hang about in a loose manner), and to give to every part a due bend.

The rings should be rather numerous than scanty, especially on the thinner parts; for, the closer the line is kept, the greater are the angles it makes between any two contiguous rings, and consequently, the more equable is the bend throughout every part of the arch described by a rod when in a state of exertion.

When the rings are too distant, they frequently tear out, or the rod snaps in the too long interval between them, which is thus obliged to bear more than its due proportion of the stress.

The following scale will, perhaps, be found as good as any that can be devised. Place your first ring at two inches and a half from that on the tip of the rod. Now, the inches on most rulers being divided into eight equal parts, in the above distance there will be twenty equal spaces, each equal to the eighth of an inch.

Let every succeeding space be increased by the addition of one-fifth of the measure of its preceding interval.

Thus, the uppermost interval being twenty-eighths, one-fifth of that added to itself, will give twenty-four eighths (*i. e.* three inches) for the second interval.

Then, for the third interval, take twenty-four eighths, and its fifth, which is nearly five-eighths, and its measurement will be about twenty-nine eighths, or something more than three inches and a half.

The fourth interval will be twenty-nine, added to its fifth, say six-eighths, which give a total of three inches and three-eighths.

This scale will be about equal to the due resistance in every part of the rod. Observe, that the lowest joint, or *butt*, of your rod, supposing it to consist of four parts, each about three feet and an half long (which is an excellent length), will require only one ring. If it be placed very close to your reel, you may carry your line through it from the *under* part of the reel ; but in general it is best, as your line winds *over* the barrel of the reel, to carry it *over* the bar that is on the side nearest to the first ring ; whereby it will run more freely, there being less friction.

The rings should all be moveable, so as to lay flat when not in use, except that at the tip, which should be formed of a substantial piece of brass-wire, carried twice round, and then lashed firmly down, one end of the wire going down each side of the whalebone top for about an inch and an half : the parts of the wire under the whipping should be previously flattened, either by a hammer, or by a file, so as to lay close and neat.

Observe, that if the wire were doubled only *once* upon any round form, such as a quill, or small pencil, it would be nothing more than a staple ; whereas, by carrying it *twice*, it forms a perfect circle, and on every side presents an even surface : a matter of great importance, on account of the various directions the line is subject to take after passing through the ring.

The unfitness of all barrel-reels for packing, and the total impossibility of including one in a pocket-book, caused me to turn my mind to considering, how far some expedient might be hit upon, answering in a more compendious manner, without losing sight of the main object.

The fixture of a cross stick on the butt, or of tenter-hooks into it, though obviously simple, were inadmissible

sible on several accounts. However, the principle of the former gave me the hint, and led to my first invention (*Fig. 10, Plate I.*), which consists merely of a flat plate of brass, cut into the form there described.

The line winds round the centre part between the four points a, b, c, d, where the plate may be less than a quarter of an inch in thickness; but it grows gradually thicker as it approaches the ring, which may be half an inch in breadth: the circle should be equal to the part of the rod you would apply it to, making allowance for the wolding, which is put on the ring to prevent its chafing the rod.

The length (*i. e.* breadthwise) of such a reel, may be three inches and an half at the broadest part, and about an inch and three quarters from the upper edge of the ring to the top.

The increase of thickness towards the ring will not be objectionable, when we consider that the line will give the other, or flatter part of the reel, at least an equal diameter.

I have since improved upon this reel, by causing it to move on a pivot rising from the ring, which is thus independent of the *whirl*; the pivot, or spindle, goes through the bottom and top of the frame, and is rivetted; at each upper corner of the *whirl* is a stud, cased with a moveable cylinder moving round the stud, which serves as a handle, or winch, wherewith to turn the *whirl* when winding up. See *Fig. 11, Plate I.*

It is worthy of remark in this place, that the quantity of line given or received by a *barrel-reel*, is very unequal. When the barrel is nearly full, it is at its greatest power of augmentation or of diminution; but as it gradually empties, it keeps losing in proportion, till it scarcely winds, or supplies any efficient quantity of line.

This defect is by no means so considerable in a *flat-reel*, which cannot, in any one turn, either receive or furnish less than double the length of its own width, though it certainly augments in power as the line accumulates upon it.

The multiplier without doubt remedies the inconvenience alluded to, so far as relates to bringing in a larger portion of line; but the defect *in the principle* remains the same; it being obvious, that a revolution round the bare axis, cannot draw in near so much as a revolution round the barrel, when nearly filled with line.

This evil is incurable in any barrel-reel, but may be palliated, by making such a reel as may be capable of winding the line up much faster than the multiplying-reel now in use; which, however, does something, because it gives nearly three turns of the barrel for one of the winch, the tooth-wheel turned by the latter having twenty-eight teeth, whereas the barrel-wheel which it acts upon, has but ten. See *Fig. 1, Plate II.*

The space allowed for the machinery in the case, at the end of a multiplying-reel, is capable of being put to better purpose; but even if rather more than the space ordinarily given were requisite, it would not be of any moment.

Nor is there any reasonable objection, in my mind, against the force that may be requisite to turn more complicated machinery; for the power of a man over such a trifling resistance as would thus be created, is by no means worthy of calculation, especially when, as in my plan, the winch is brought into the middle, so as to allow the crank greater depth.

The 2d *Fig. in Plate II.* exhibits my improvement on the multiplier, by which the barrel is turned a trifle MORE THAN NINE TIMES, BY ONE TURN OF THE WINCH! The leading

leading wheel A, has twenty-eight teeth, and the small counter-wheel B, has but nine ; consequently, the latter will be carried round three times by one turn of A, which is fixed to the winch : the extra, or twenty-eighth tooth, on the leading wheel, is added merely to prevent the teeth of the two wheels from always falling into the same places in their revolutions, which would in time create a false movement, as is known to all mill-wrights.

Now, the counter-wheel B, is fixed on the same square arbor with C, another wheel with twenty-eight teeth ; which, being carried round with C, turns the small wheel D, having only nine teeth, making it revolve three times for every turn taken by C.

The wheel D is fixed on the square end of the barrel, and consequently winds the line ; which, as the wheels A and D move the same way, must wind in the same direction as the winch moves, *i. e.* with the sun when taking in, and against it when running off.

The wheel A being fixed to the winch, is supported exteriorly by the end-plate ; but, at the other side, is kept in its proper situation by means of a gudgeon, moving in a round socket made in the centre of the little wheel D, or, rather, in the centre of the barrel-axis.

As both A and D move the same way, there is less friction within the socket above described, than would be the case were they to turn oppositely. This reduces the friction from ten to eight, *i. e.* one-fifth. For the sake of strength, though the large wheels may be of brass, the small ones should be of steel.

With regard to the *ratchet* and *spring* used in the ordinary multiplier, it will be unnecessary in my *compound multiplier*, because the work will steady itself
suffici-

sufficiently to prevent the winch from flying round without controul.

I trust, that all who are in any degree conversant with mathematics, or who understand the ordinary machinery of clock-work (of which this is a branch), will at once decide on the superiority of my invention, both on account of its increased action, and the motion being brought from the side into the centre.

Of the Rod, and Reel-Line.

Although we see very large fishes taken frequently, by means of such wands as do not threaten much destruction among the inhabitants of the water, yet, next to the line, the rod is an object of particular consideration. It is truly surprising to see many, who rate themselves among the first order of anglers, neglect the due appropriation of this part of their apparatus, not only to their lines, but to the mode of fishing, and to the extent of the stream, &c.

Thus we sometimes see a *fly-line* thrown from a stiff rod, perhaps a ponderous machine of 16 or 17 feet in length, adequate to the strongest *salmon*, when probably nothing but a few *dace*, or gudgeons, are to be found! Yet the line attached to such a rod, is often found to terminate in a *single hair*, which is a matter of great pride among a certain class of anglers!

The distinction between a *bottom-rod* and a *fly-rod* is, nominally, known to all; but many use them very indiscriminately. Each, however, is applicable only to that mode of angling from which it derives its designation.

The *bottom-rod* never can cast a *fly-line* well, that is, to any intended spot with ease, and with such lightness, that even the angler himself, who knows his exact inten-

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tion in point of locality, can scarcely perceive his fly alight upon the surface.

On the other hand, the *fly*-rod is so extremely elastic (being formed so, that, when lashed like a carman's whip, the tip will nearly swing round to the butt), that it can scarcely drop a line into the water steadily, and cannot possibly strike smart and true, as a good *bottom*-rod does.

I have heard much of making rods by the aid of common country carpenters, and have had several so manufactured; but, though I certainly did once possess a *fly*-rod exquisitely true, and, indeed, all that could be wished for, yet it was one of about seven or eight so obtained; all the residue were very, very bad!

My rods were neither one thing nor the other, and had a fair claim to the ludicrous title of "*Captain-lieutenant*," given by butchers to calves when they are too old for veal, and too young for beef!

None of the rods in question cost me less than five shillings in money to the carpenter, for his wood and his trouble. Then I had to purchase and to apply the rings, with their staples; to weld, and to varnish, and to pay for brass sockets, the spud, ferrols, screws, &c. &c. before my rod was complete; so that on the whole, not one rod cost me less than ten or eleven shillings.

Now, as I could purchase an excellent *fly*-rod for sixteen, with brass sockets (which never swell so as to be difficult to separate, nor wear so as to become loose), I had not much reason to boast of my management in employing a *village artist*.

A *bottom*-rod should be about fourteen feet in length, divided into four equal pieces, joined by brass ferrols, and with brass sockets, as above stated,

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This length will not debar the rod's being laid along the back of a coach-seat. But there are other rods made more compact, being in joints, each about two feet in length, thus forming a thick short bundle, which on occasion proves extremely convenient, especially for packing in a box.

The ordinary top of a *bottom-rod* should be moderately supple, and strong enough to bear a weight of nearly three pounds appended to the hook. But there should be, besides, a spare top, of about two-thirds the length of that described, which being intended for *trolling* for trout, jacks, &c. must be firm, and not very pliant; it should bear a weight of four pounds.

In *dipping* and *trolling*, you will occasionally find the wire loop at the top of your rod rather weak: many use a metal ferril, which, being made very light, fits on to a spare top-joint, very short and stiff; it is rivetted on, so as to remain firm. On its tip, a small metal plate is set on at right angles, playing round the tip as on a pivot, or, if you please, fixed hard down. This plate projects to the side about half an inch, and is perforated to the size of a small pea, serving as a fixed ring, and being very substantial.

The 3d Fig. in *Plate II.* will give a full idea of this kind of tip. I used one for several years, and found it answer every purpose; besides that, it cut and chafed my line far less than the wire tip. On the other hand, it is rather more likely to get a turn of the line round it, therefore requires some additional caution in its use.

Such a rod will seldom fail to strike true, and to bear any fish that may be hooked, provided it be kept straight, and that the rest of the tackle be appropriately strong.

It is necessary to point out in this place, that a rod should always be put into the canvas bag after use, and

and be laid horizontally on three hooks, nails, &c. or on a shelf, or be hung up.

Nothing hurts a rod more than leaving the joints all separate and loose, or setting them up in a corner. Their own weight will cause them to swag, and so change them, that when the rod is put together, it will be crooked in every joint : such will never strike true !

Some rods are kept together, when laid by, with three or four leather bands. When this is done, care should be taken, before the bands are slipped on from the small end, to turn all the line-rings inwards, else they will obstruct the bands, and perhaps be themselves torn away.

A *fly-rod* is intended solely for throwing out a fine line, with one or more artificial *flies* at its end ; while the *bottom-rod* is exclusively appropriated to fishing with a float, or for *trolling*, *roving*, &c. of which proper notice will be taken hereafter.

The peculiar delicacy required to throw out a line, so that the flies, if there be more than one upon it, should fall into the water without appearing to disturb its surface, and which can only be acquired by patient practice, evinces how accurately every part of the rod used for this purpose ought to be tapered, so that no one of its joints, or parts, should, by its disproportionate strength or weakness, affect the action of the whole, and cause it either to throw with too much violence, or so feebly as to demand additional exertion, whereby precision and delicacy are generally over-ruled !

Fly-rods are much smaller, in all respects, than *ground-rods*. As they are used with one hand, lightness is of the utmost importance. With regard to the manner of throwing the line, it is best to reserve that for its proper place,

place, viz. under the head of *fly-fishing*; a copious subject, if detailed in that ample manner some authors are partial to, but which I shall endeavour to bring into as small a compass as due explanation may admit.

The lowest joint of a rod should be sufficiently heavy to form a comfortable balance in the hand, when held at the usual length from the butt. For this it is not very easy to establish any particular rule; but there is the less occasion for so doing, when we consider that each person has, for the most part, recourse to nearly the same position, and that a very trifling remove of the hand will establish the equipoise: or, as hereafter shewn, the butt may be loaded.

The common practice of hollowing out the inside of the lowest joint, is not admissible in light brittle wood; though in the heavier kinds it may be allowed, for the convenience of carrying a very short, stiff top, applicable to jack-fishing, &c. where the waters are foul, or the fish run very large, in either of which cases, an ordinary top might be endangered.

This spare top is kept in by a brass screw, with a large projecting head, which should always be put in when the spud is not in use.

The joints of a rod should be marked in some manner, either by dots bored into the wood, or by notches filed in the ferrils, serving to shew when the whole are in a proper direction; so that the rings through which the reel-line passes may always be straight, without which precaution, the line could not run freely, and would, besides, be subjected to much friction.

The spud at the bottom of the rod is, in the absence of more proper implements, a very passable *make-shift* for digging up worms, &c.; but it should not be roughly used,

used, else the angler will lose the convenience it affords of fixing his rod in banks, &c. so as to ease his hand, or to allow his attending to other tackle.

The REEL-LINE ought to be very strong, yet not so thick as to encumber the reel, or to be clumsy and heavy, after passing the tip, when, if not very compact, it will be subject to much agitation from the wind; and, if wet, will prove extremely unpleasant, more especially when, in fly-fishing, much of it should be let off from the reel.

Silk certainly makes a good line, that is, when twilled, as in bobbins. *Raw silk* is also remarkably strong, and, in my opinion, more so than when divested, by dressing, of its natural harshness, which being occasioned by a resinous coat on every fibre of the material, seems to render it less penetrable to the water, whereby it is probable the line is better preserved.

The pleasantest line to throw, especially to any distance, is that made of hair, it being extremely light, and far more elastic than silk. It is not, however, quite so strong, even when new, and is much more liable to perish. If wound wet, without the precaution of leaving it to dry in the air, in a very few days it will get a kind of mildew, which is a sure indication of approaching rottenness.

It is far better to leave your line out, even during a heavy shower of rain, than to wind it while wet upon your reel; it will soon dry in the air, or in any moderately warm place: but be careful never to put a hair line to dry near a fire; for though it may not be scorched, it will dry unequally, and cause some of the hairs to contract, whereby the stress will be unequally borne, and, consequently, the strength diminished: further, a snarled line never runs well through the rings on the rod.

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I have always made a rule of fixing my rod upright, without the house, and of allowing as much line to hang from my rod as would float in the wind, or that could be freely exposed to the air, without the danger of being entangled by persons walking about, &c.

Whatever may be the material that composes the line, it should be woven, and taper, so as to be light in action, and of due strength. The smaller its diameter may be, the more pleasant it will prove, both to carry and to use : a smaller reel will be required, and the whole apparatus will be more compact.

The line should be fastened to the reel, by passing it through the hole in the axle, and making a drawing loop with the end, over that part which has not passed through the hole. This will sit quite close, and cannot be forced by any exertion on the part of the fish, when the whole line may be run out. A knot might slip through the hole, or give way at its neck.

Of the Endless, Hidden, or Finishing Knot.

The *hidden knot*, which is so necessary to be known to all anglers, is very easy to make, and is the only one fit for the finishing of *whippings*, *woldings*, &c. It is done thus : when you come within about three or four laps of your whipping's termination, turn back the point of your silk over what laps you have made, holding it down with your thumb ; pass the silk round as you was going on with it before ; taking care, however, always to keep the loop, or *bight* (made by the ends being turned back), perfectly free from twists. When you have gone round as far as you intended, pull the end that was turned back, and it will draw all the loops, or slack part
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of the silk, under the several laps made since it was turned back, and become a very secure finishing.

But where you whip in the middle of any long stick, &c. so that your loop cannot be kept clear, by passing round its end, as the foregoing directions suppose to be practicable, you may, instead of passing the end back, lay a large needle, or a bodkin suitable to the thickness of your silk, &c. close to the rod, &c. and lap it in, not very tightly, for three or four turns. When your whipping has reached as far as you intended, pass the silk through the eye of the needle, and draw it under the laps which you had made over the needle; you must, however, afterwards draw every lap close in its turn, before you pull the end tight. See *Fig. 5, Plate V.*

Of the Landing-Net, and of landing Fish.

This, in many situations, is next to indispensable; since it must often happen, that large fishes are caught by means of such slender tackle, as could not possibly be trusted to lift them out of the water.

But, even if the line were tolerably strong, it would be highly improper to put it to any great strain on such an occasion; for though the line itself might not snap short, nor the rod be injured, yet the hook might possibly draw off, and thus liberate the fish; add to this, that the hold might give way.

The whole of these inconveniences are obviated, by means of a moderate-sized net, fixed to a metal, or a whalebone frame, and furnished with a pole about five feet long, so as to enable the angler, while he keeps the fish in play with the rod in his right hand, to slip the frame obliquely under the fish's head, crossing the
track

track in which he is then guided on the surface of the water.

The fore part of the fish being thus entered, the net is briskly drawn forward, so as to receive the whole, or as much as it can contain, of the fish's length; when the frame being dexterously turned up to an horizontal position, and being at the same time lifted clear out of the water, the prize may be landed in security, without incurring the smallest risk to any part of the tackle.

Observe, that when once a large fish, far beyond what can be contained in the net, is so far received into it as to overweigh the part which is left out, no apprehension need be entertained of its escape; for the preponderancy of the head and shoulders, added to the check occasioned by the pliancy of the net, will completely prevent any effectual spring.

Above all things, whether a fish be landed with or without a net, be careful never to touch your line; let it always be free, and never entangled in any thing, either in or out of the water, that can possibly be avoided. When you have not a net, and that the bank may be so steep, as to prevent your reaching him in a proper manner with your hand, many methods may be adopted.

I have sometimes got a boy to aid me with his hat; but the best mode I ever practised was, that of passing a wire snare (such as is used for *jack*, and *large eels*, and which is described in treating of the former) over my line, and lowering it down until I could get it over the fish's head; when, drawing the cord tight, I have thus lifted fish of eight and ten pounds weight safely to the top of the bank, from places where no *landing-net* could have been used.

Landing-nets should never screw on to the end of a pole,

pole, for such are always getting out of order: the more they are used, the more will the screw become loose, and be the source of much inconvenience; and if the frame be not often taken off, the water will rust the screws and fix them. I always use either a fixed frame, or any occasional pole I can pick, and to which it is lashed by means of the ends being left like parallel straps for that purpose; or I use a neat little net and frame, made with a hinge in the middle, and fixing, by means of springs, into a plug about six inches long, in the same manner as bits are fitted into whimbles.

The plug is brass mounted, and is made-taper, so as to fit for about four inches into the top of my rod-butt. Hence, when a fish is completely exhausted, I slip off my lower joint, and fixing in the plug, am provided with a capital landing-net.

When the borders of the water admit of large fish being landed without the help of a net, it is proper to exhaust the fish so completely, as to occasion his laying on his side, and to allow you to draw him *gently* towards the shore; where, taking advantage of some gradually shelving part, if possible clear of weeds, or some little inlet not deep enough to float him, you may slide him along until you find he cannot flap about with his tail, in such manner as to strike at your line, which many kinds of fish will do, in a very forcible and artful manner.

Keep your rod rather tight in your right hand, and with your left finger and thumb, either take hold of the fish at the eyes very firmly, or, if not too large to grasp, you may take him up, by a firm gripe, close behind the gills.

I have occasionally taken very large fish out, by watching for their opening their gills, when, quickly inserting
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my fore finger, they were perfectly secured. Those who angle for *salmon*, and other such large fish, frequently use what is called

The Gaff,

which is a piece of good pole, properly ash or yew, about five feet long, at one end of which is a ferrol with a female screw, to receive the male screw of a strong, well-tempered, steel hook, as represented in *Fig. 4, Plate II.*

The fish, being brought under command, is drawn within reach of the pole, when the hook being passed under its belly, having the point of the bend uppermost, with a smart pull the hook penetrates on the fish's opposite side, and may thus be lifted out of the water. Some *gaff-hooks* are made plain, like the hooks in common use among butchers, and which are fixed up for the purpose of hanging meat: others are made with barbs, and are much like shark-hooks, with a screw at the butt, as above described.

Gaffs are, however, dangerous, and I have heard of accidents occasioned by them. I formerly used one, but did not find it answer so well as a net; unless with very large *jacks*, and such like, when, no doubt, they are more certain and effectual than a landing-net.

The Clearing-Ring.

This is made of brass, or occasionally of iron, and is used when your line is foul among weeds, &c. for the purpose of pulling up the impediment, if possible; or, when that cannot be done, of breaking your line as near to the hook as you can effect. The *clearing-ring* is nothing

thing more than a strong hoop, having an eye on one side to fasten a cord, by which the whole stress is borne. The side opposite to the eye should be considerably the heaviest, to make it keep as low down as the impediment may admit. The cord ought to be very hard, well-made window-line, of the smallest size; but may be of whip-cord, if your apparatus be required to lay compact. About five or six yards will prove a sufficient length.

When your hook is entangled, slip the ring over the butt of your rod, and let it go down your line, so as, if possible, to hitch upon whatever the hook is fast to; then draw tight the cord, and if you cannot lift the incumbrance out, pull till you can tear away the part that detained your hook. As before observed, when this is impracticable, your attention must be devoted to saving all you can of your line, compounding for the loss of your hook.

In managing this, however, some little skill is needful. Your line should, if possible, be kept at least at right angles with the direction of the cord, so as to give the advantage of keeping the *clearing-ring* down close to the impediment; and if the line can be so directed as to give an obtuse angle (see *Fig. 7, Plate II.*), it will afford a greater certainty of success.

Observing that very often my hook got into such a situation as rendered a *clearing-ring*, such as is generally made, of no use; or, at least, that I was, nine times in ten, compelled to resign my hook, where it could have been saved by a proper instrument, particularly in cases where fishes had run among weeds, &c. and torn the hook through their lips, I had several rings made, and found that one, according to *Fig. 5, Plate II.* was, for

such purposes, the best ; it rarely failed to extricate me from difficulty. The only objection to it is, that it ought to be at least four inches diameter within the circle, and that the claws should be of such a length as to be effectual aids. Hence this kind of *clearing-ring* (I call it a *ring-grapple*) is rather cumbrous ; but no clearing-ring should be so small as not to pass over your reel.

There is, however, another important aid on such occasions, and especially where the hook is entangled among boughs within a short distance, though not accessible to the hand, which every angler should possess, viz.

A Butt-Hook.

Every complete rod, from the hands of a regular maker, has at its butt a brass ferrol, in which is a round-headed screw that, when removed, is substituted by a spud of about six inches long, intended to fix the rod to the ground, in such direction as the angler may find convenient.

Besides this, there ought to be a *butt-hook* of the form laid down in *Fig. 6, Plate II.* ; its length need not be more than four inches, exclusive of the screw ; but it should be kept very sharp, both at its end, which is of a *chisel* form, and in the bend of the hook.

We sometimes are entangled by branches that cannot be cut away by the hook, which, on account of the weakness, or of the direction, of the impediment, slips off. When this happens, the chisel end should be applied underneath, so as to cut *from* the hand, and thus liberate the hook and the whole twig together. The experienced angler will readily understand the situations to which the *chisel* and *hook* are severally applicable.

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While this instrument is affixed, the butt joint must be taken off, and be used separately, the line being kept as tight as the situation may demand by the residue of the rod. It is also a good plan, to have one of the same form attached to a taper plug, made to fit into both the first and the second joints of your rod. This is more manageable; but, unless well fixed, there is some danger of the plug being drawn forth, and eventually lost, when the *hook* is used.

The Disgorger.

This is an extremely useful implement for liberating the hook, when your bait has been swallowed by a fish. *Jacks, perch, and eels*, and sometimes *trouts*, when hungry, are very apt to get you into this difficulty.

It is true, that by means of a good stout knife, well sharpened, you may cut down through the junction of the jaw bones, and thus lay open the whole; but such an operation is not in itself very delicate, and creates, besides, so much filth, as spoils every thing with which it comes in contact.

Disgorgers are of various shapes; the most simple, however, is that made on rather a long flat stem of steel, not unlike the shape of the handle of a spoon, and having at the end, which is pointed, and ought to be very sharp, an angle, made also very sharp, both within and without; so that when the instrument is pushed past the place where your hook is fast, it may, in drawing up again, divide that part, and consequently allow your hook liberty to come forth, without straining your line, which, during this operation, should be kept over to the opposite side of the fish's mouth.

A sketch of this disgorging, which need not be more than six inches in length, and ought to have a small sheath, or scabbard, to prevent accidents, is given in *Fig. 1, Plate III.*

The Minnow-Net.

This is made with a very fine mesh, such as a minnow cannot escape through, and is stretched by means of an iron wire, about the thickness of a large goose-quill, to either a square or circular form, about three feet in diameter. Four cords, of equal length, are attached to the rim at equal distances, and meet at about three feet perpendicular distance over the centre.

The net is lowered down into the water by means of a light tough pole, about six feet long; as the iron rim will sink it to the bottom, so soon as the minnows, &c. are perceived to be over the net, the pole is raised very quickly, and with it the net; whereby, if the matter be well managed, and the water not above a foot deep, abundance of small fish, such as *gudgeons, miller's-thumbs, sticklebacks, minnows, pinks*, will be easily taken.

The best may be selected for the table; and such as are suitable for live or dead baits may be reserved, by putting them into

The Minnow-Kettle,

which is a tin pot, with a lid and swing handle, the former pierced with many small holes, to give air to such fish as may be in the water contained in the pot, and which should be frequently changed.

I have found it best to have a strainer in my *minnow-kettle*, much the same as in *fish-toilers*; so that without putting

putting my hand into the water, I can draw the whole up to the surface, and there select such as may appear best suited to the occasion.

The strainer ought to have but little space left around it, and should almost fit the interior of the *kettle*, so that no fish may be jammed in the lifting. One handle, made of bent tin, in the middle, is better than two at the ends, as it leaves one hand at liberty.

Of Baits.

We now come to an important and an extensive subject, requiring the especial notice of the angler, since his sport must greatly depend on the excellence of the lure he holds out to the fishes. It is necessary, for the sake of perspicuity, to divide this topic into two distinct heads, viz. **BOTTOM-BAITS**, and **TROLLING-BAITS**; reserving all that relates to fly-fishing for that particular branch, which must be treated of separately.

BOTTOM-BAIT—Includes whatever is used in angling for such fish as either feed at the bottom, or that are not to be taken by any but what may be called *still-angling*, in contradistinction to *roving*, and *trolling*, both of which require the bait to be kept in perpetual motion.

The several kinds of *bottom-bait* are as follow :

SALMON'S ROE.—This should be parboiled, so as not entirely to divest the grains of their redness; one or two grains being put, as a finish, on the point of the hook, are very enticing to many fishes; and, as it attracts them to the desired part, generally, under good management, proves what is called "*a very killing bait.*"

To preserve roe for winter fishing, after parboiling, steep it in a strong brine for a day or two; then take it out, and shaking off the drippings, lay it thinly among layers of clean soft wool alternately, and tie down the mouth of the jar, or vessel, with a bladder. Keep it in a moderately cool place.

If you observe it getting mouldy, or tainted, scald it in boiling water for a minute, or less, and place it again, as before, in alternate layers with clean wool. Many fishes will take this bait well, when it covers the hook, though they will not touch any other kind.

PASTE.—This should be made to imitate salmon's roe, for which it is sometimes a tolerable substitute, when fishing for *roach* in particular. Knead your flour and water well together, then wash it in a large quantity of water, such as a pailful, working it well in a mass without dividing it, until all the fine parts of the flour are completely washed away: this may be known by its ceasing to whiten the water.

What remains will be the pure *gluten* of the wheat, and so viscous as to resemble bird-lime. Take a little vermilion in fine powder, and rub the whole well together on a slab with a muller, if such a convenience be at hand, otherwise with a spatula, or broad flat knife, on a plate, until they be thoroughly incorporated. Observe, that a very little vermilion, say about the size of a large marrow-fat pea, will give a proper colour to a tea-cupful of the *gluten*.

This paste will not be affected by the water, and may be preserved for a considerable time (many weeks), if kept immersed in cold water. If left exposed to the air,

air, it dries rapidly. When taken out for use, it should be put into a wet rag, and may be kept in your *worm-bag*. As to all other pastes made with oils, essences, &c. they are useless; and the recipes for making them are mere *catchpennies*, inserted in various mean publications to swell the volume, and to give that air of mystery and of science, which mislead, and occasion disappointment.

GREAVES—Are the refuse of the fat used by tallow-chandlers, and consist of the fibrous fleshy parts, intermixed with the suet furnished them by the butchers, &c. These, after the melted tallow has been pressed from them, become heavy masses, extensive in proportion to the sizes of the presses used, and about two inches in thickness.

Greaves are sold for feeding dogs, especially on ship-board, for which purpose they answer admirably. They acquire a strong rank smell, and considerable hardness, such, indeed, as to require a good stroke of the hatchet to break them up.

To bring these into use, soak the pieces well in cold water until perfectly pliant, and that the whiter parts be somewhat bleached; then take them out, and keep dry for use: if wrapped in green leaves, to keep out flies, &c. so much the better; else they will soon get fly-blown.

This bait is used chiefly for *barbels*, *eels*, and other ground fish, which are very fond of it; indeed, I have seen great numbers of very fine *trouts* caught therewith, in holes where *barbels* abounded, and for which the bait was intended.

Observe, not to soak more *greaves* than will answer for
D 4
about

about a week, or ten days, it being apt to become very offensive after being softened.

The best mode of putting *greaves* on is, first to cut it into small pieces, about half an inch square; let them be loosely run upon your hook, in the same manner that papers are slipt on to a wire file, until the whole is completely covered; observing to put on the worst pieces first, so that they may occupy the shank, while the prime and whitest pieces may be on the point and in the bend.

This prevents fishes from dragging your hook about, and from nibbling your bait off, and in the end will prove least troublesome. See *Fig. 5, Plate VI.*

CHICKENS' GUTS,—Or those of any poultry, used fresh, are excellent for *eels*, and sometimes prove acceptable to *barbels*: *jacks* may be taken with them, if used as directed when treating of the fish.

CADRBATES, or CADDIES.—These are very fine baits for almost every kind of fish. The angler must have seen in shallow places, chiefly on stony or slimy bottoms, short pieces of stick, or of straw, &c. which, if observed attentively, will all appear to be animated. Generally, they consist of a short piece of straw, coated over with a brown crust, and fixed to a small piece of twig. Within the tube of straw is a maggot, of a dun colour, with a dark head, which it protrudes from under its little dwelling, and, by means of four short stiff legs, fixed close under its neck, is enabled to crawl about the bottom, carrying, like the snail, its house on its back.

Where the water is too deep to reach the *caddies* with the hand, recourse should be had to a tin basting-ladle, which

which will scoop them out admirably, allowing the water to strain through the holes in its half cover.

In some places, *caddies* are prodigiously numerous, often covering the bottoms of the shallows, either in pools, or at the edges of greater waters, and clinging to growing or dead rushes, reeds, twigs, &c.

Although they may be used quite fresh, it is not, however, advisable to employ them until they may have been kept about ten days, or even a fortnight, in an old worsted stocking, or in a woollen bag, which should be dipt daily, once or twice, into water. At the expiration of such a period, the generality of the *caddies* will have quitted their tubes, and have become tough, having changed also to a rich yellow colour, in which state they are a very alluring bait. If kept too long, they all turn to various kinds of water-flies.

In applying this bait, the point of the hook should enter close under the head of the *cadbate*, and be brought out at its other end. When a very small hook is used, one *caddy* may answer; but, in general, two will be found best; it being indispensably necessary to cover every part of the hook. In the latter case, the first *caddy* should be carried round, so as to conceal all the shank, while the other fills the bend, and conceals the point.

Caddies are in season only during the summer months; they make their first appearance in the month of May, but by the end of June are in greatest abundance.

This animal, which is the *Eruca aquatica* of naturalists, afterwards goes through the regular changes of that tribe, becoming a *chrysalis*, and ultimately taking wing. I am induced to believe, that the *ova* require to be deposited during the preceding autumn, as we do not perceive any

water-flies, that is, such as are usually found on the margins of rivers, and on which fishes delight to prey, so early as the caddy may be occasionally seen, not only alive, but in full size, and provided with his house.

I have also remarked *caddies* to be most numerous where there were fewest fishes.

The MAGGOT, or GENTLE, or FLESH-WORM, or FELL-WORM—Is an excellent bait, and answers well at all times of the year, though it is difficult to procure or to breed them, except during the warm months. It is worthy of observation, that *gentles* may be obtained from almost any animal substance, by exposing it to be blown by flies.

The tallow-chandlers are, in many places, greatly annoyed by them; and at the fell-mongers they may, in the summer time, be obtained in great numbers, and of a remarkable growth, by searching into the joints of the heels, near the butts of the horns, and in those parts where maggots can burrow.

The best way is, to provide for yourself; which may be easily done thus: hang a piece of ox-liver on a hook in a shady place, cut it deeply across and across in various places, on both sides; then cover it over lightly with small boughs, cabbage-leaves, or any thing that will shelter the flies, while they visit it to feed, and to lay their eggs.

In a few days, innumerable *fly-blows* will be seen among the scarifications, when the liver should be taken down, and laid in an earthen pan, about half filled with sand and bran, in equal quantities, somewhat moistened. As the *gentles* acquire strength, they will quit the liver,
and

and bury themselves in the sand, from which they may be taken as occasion requires, when they will have scoured themselves, and be fit to handle.

The same liver will produce several stocks, or successions of gentles, if properly managed. The largest will proceed from the blue-bottle and gad-flies, which attack livers with great eagerness. I have, from a dead cat, and indeed from a rat, had such quantities of large gentles, as kept me in stock for full six weeks.

It will be seen from this, that gentles are very easy to obtain; but they speedily change to the *chrysalis* state, if subjected to much heat. I have several times found my gentles, of but two or three days' growth, changed by being only one day exposed to the warmth of the sun in my basket, to that form; in which, however, they are by no means an unwelcome bait, but they then are so brittle, as to be used with great difficulty.

When this happens, they ought to be placed only on the point of the hook, which should enter at one end, but not pass through the other, thus concealing the point.

If the latter part of autumn proves warm, gentles may be raised to a very late date, sometimes up to the middle of October, or even later; but the situation must be favourable.

They do not readily change from the *eruca* or *maggot* state, after that time, until the genial warmth of spring carries them on; and, if supplied with a sufficiently temperate situation, in a box of good mould, they will remain serviceable all the winter.

This kind of bait will be found very enticing, if two, or even three, be put upon a small-sized hook. For this purpose the wire ought to be thin, as a thick hook is apt

to burst, or to tear them. In fly-fishing, the gentle, as also the cadbate, are particularly useful, as will be shewn in due time.

The WASP-MAGGOT—Is another choice bait, at which many fish are extremely eager. To prevent them from coming too fast forward, keep the *wasp-comb* in a very cold place; or hang it down a well, near to the water's surface, whereby the maggots will make a very slow progress.

I have found smoking them with sulphur to be a good method, when the brood could not be kept down: in that way they are easily destroyed, and keep in good preservation. You may also bake them *a little*, in a half-cooled oven.

The MEAL-WORM—Is found in the crevices of flour-mills, where it is generally seen in abundance among the meal-dust laying in the windows, and other places, if not kept perfectly clean. Often among meal that has lain long undisturbed, they accumulate rapidly. As they often exceed an inch in length, one is a sufficient bait for a small hook.

If a second *meal-worm* is put on, it should be so managed as to leave a little surplus beyond the point of the hook, over which it will stand nearly erect, its coat being rather husky and stiff; or you may make one ride a little on the back of the other.

GRUBS—Are a kind of short, tough, thick maggot, commonly found among the roots of cabbages, potatoes, &c. They are of various colours; some being dun, others

others cream, others grey, brown, or pale green. They are all good baits, and may be preserved in a pot, with a little fine mould, in which some half-dried cow-dung, or horse-dung, may be mixed.

CATERPILLARS—Of all kinds are excellent ; but they are extremely tender, and difficult to preserve on the hook. They may be found on cabbage-plants, lettuces, currant-bushes, and, indeed, on almost every thing that grows.

They should be preserved in chip or tin boxes, with small holes pierced in the lid to give them air ; and they should be supplied with abundance of fresh leaves, such as they were found among. It is necessary to observe, that the **COCK-CHAFER**, is in many places called a *caterpillar* ; it is also known, in some districts, by the designation of the *dummadore*, or *dor*.

This is an admirable bait, for *chubs* in particular, as will be seen under that fish's description ; but their season is very short, rarely extending to more than five weeks in the summer time, during which they may be taken in millions : a few, indeed, may be occasionally found down to the middle of autumn.

BEETLES—Are not applicable to *bottom-fishing* any more than the *cock-chaffer* ; nor are they eligible where other baits can be had ; though many large fish, especially trouts, have been caught with them.

The mode of using both these baits will be found under the description of *dipping* for chubs. I shall now speak of that very common and excellent bait, the **WORM**.—Of this there are various sorts, each appropriate,

priate, either to some particular classes of fish, or to some mode of angling.

The LOB, or DEW-WORM, or SQUIRREL-TAIL—Grows to an immense size, often weighing six drachms, or nearly an ounce. It is remarkably thick about the head, with a long and conical termination forwards; while the hind part tapers but little, ending somewhat flat; whence the latter designation.

Lobs are of a deep brownish red, or purple, gradually becoming more transparent towards the tail, which is of a lighter and brighter colour. They are admirable baits for *salmon*, *trouts*, large *perch*, *eels*, *barbel*, and others of a greedy or ravenous nature: and where small fishes, or frogs, or mice, cannot be had, are not a bad lure for *jacks*, when managed as directed in the instructions relating thereto.

The *lob* may be seen during the night, laying in damp places, especially after evening showers in summer time; by means of a lanthorn and candle, one may often pick up a peck in a very short time.

Lobs likewise may be obtained by digging in rich mould, under shady places, and in the banks or bottoms of ditches lately containing water.

With respect to the treatment of *lobs*, it is much the same as that of other worms, namely, to be kept in moist moss, changed every three or four days, and set by in unglazed earthen pans, in a cool place, during hot weather.

That kind of moss is best which is found on commons, and which is crisp, and of a greenish white colour. It cannot

cannot be too soft and elastic; but should be carefully searched while washing, before it is put to the worms, so that all thorns and rough substances may be removed; else the worms will not thrive so well.

Those who can supply a little *cream* every day, to be mixed in, or thrown upon, the surface of the *moss-pans*, will obtain a decided superiority in the condition of their baits, which will purge from all impurity, and become beautifully bright and pellucid.

The pan should be large, or the *lobs* will not live: whereas, when they have good room, clean moss, cream, and delicate handling, they will go on from year to year.

The BRANDLING—Is, with most fish, the object of choice. These are to be found in various places, more or less, but in greatest abundance among rotten tan, or in heaps of manure composed chiefly of sweepings from cow-houses, and swine's muck.

They rarely exceed three inches in length, when at rest, and may be readily distinguished by their annular appearance, they being marked in very narrow rings of strong red and yellow, alternately, for their whole length. They, besides, seem to be of a distinct class, as they do not, when pressed, void any earthy substance; and, when wounded, exude a very strongly scented, yellowish liquor.

Nor does the circumstance of keeping them in *moss* create any change, except that of rendering them beautifully transparent, and, if any thing, more lively. They are an admirable bait, and may be used without any preparation, or scouring.

If

If kept in any quantity, they should be in a pan, with a mixture of tanners' rotten bark, and rotten cow-dung. These ought to be changed every fifteen or twenty days, taking care not to injure the worms.

The pan should not be dug into with any instrument; but should be emptied by being turned upside down, when the crumbling of the contents will allow the worms to be safely picked out.

The MARSH-WORM—So called from its being partial to low, swampy places, is a tolerably good, but a very brittle, bait; however, it generally becomes more tough after a few days' scouring among the *moss*, and may then be considered as fit for use; but if not then tough, it may be scalded in milk. It is not so much relished by any fish, especially *carp* and *perch*, as the *brandling*, which, as I have before observed, is peculiarly enticing.

These worms do not answer well to keep during the winter; they become torpid to an extreme, and often rot, without seeming to have made the smallest exertion. Their colour is a dirty, but rather pale, red about the head, changing to a greyish blue towards the tail.

The COMMON RED-WORM—Is a fine bait, when taken from good, dry, loamy soil, as it will then be sufficiently tough; but when taken from heavy clayey lands, or from low wet bottoms, is, like the *marsh-worm*, very brittle, and must be well scoured before it can be used to advantage.

It is generally from two to five inches in length, and is of a strong red colour throughout: some are more yellow towards their tails, and are in general to be preferred.

The

THE BLOOD-WORM—So called from its bright, sanguinary appearance, does not seem to be of any distinct class, but is, in all probability, the young of the *red-worms*, described under the preceding head. These are chiefly found in dunghills, more especially where rather moist, and between the lower part of the dung and the surface of the soil.

Their appearance is very tempting, and we accordingly find, that various of the more crafty and delicate fish; such as the *carp*, will take this, when they reject every other kind of bait. As this worm very rarely exceeds two inches in length, and often is much less, the hook ought to be small and delicate.

With fine tackle, it will not be the fault of the lure if the angler be not successful. *Gudgeons*, in particular, are extremely fond of the *blood-worm*, and even *perch* will sometimes eagerly take it, when they shew indifference to a larger bait.

We must not deceive ourselves into the opinion, that the *worm* is so designated on account of any quality or abundance of blood, but merely from its flesh being thus richly coloured: the blood of all worms is white.

TURNIP-WORMS—Are of a peculiar appearance, having greenish blue heads, and cream-coloured bodies. They are commonly found under large wide turnips, and under large potatoes, in both of which they make holes, and occasionally seem to nestle in the cavities occasioned by their own depredations.

When first exposed to view, they generally curl themselves up into a ring, in which state they will often remain a long time, without making any effort to get away.

away. They are about two inches and an half long, and rarely stretch themselves out like other worms.

These are not the best of baits ; but, when put into a pot with moist rotten dung, improve a little, and may answer when more shewy worms are not at hand.

The DOCK-WORM, or GRUB—Is found among coarse weeds, and especially about the roots of the aquatic *dock*, or *water flag* ; they are husky, and are to be preserved in *moss* in a woollen bag, in which they acquire a degree of toughness, and make tolerable baits.

The SAND-BOB—Is found only in moist sandy soils. These seem to be only a variety of the *turnip-worm*, for they have nearly the same appearance, excepting in colour ; they being rather redder about the head, and of a yellowish cast towards the tail.

Some boil them for a minute or two in milk, to make them tough. They are best in winter, when the water is muddy after a thaw ; but are difficult to keep in good plight. They should be preserved in some of the soil from which they were taken, having some cream, or greasy cold water, to moisten it before they are put in ; and the surface of the pot, which should be kept in a warm place, ought to be covered with a good piece of grass turf, made to fit well.

COW-DUNG BOBS—Have brownish heads, with flat clear-coloured tails ; they do not grow to any great length, but are thick and lively, and prove excellent baits after due scouring. They are found under crusted cow-dungs, but not after they have become completely dry.

The

The WATER-WORM.—This is an admirable bait, and is ready for use so soon as taken, being beautifully clear, lively, and of an excellent medium size for most kinds of fishes. It is of a clear blueish white, or, occasionally, of a very light purple, growing more red about the head. By turning up the long slimy moss which grows on weirs, &c. over which the water does not always run, especially when the mill is going, and which is rarely covered more than one or two inches deep of the passing water, this kind of worm may often be found in great numbers.

The fishes seize it with avidity; no doubt, from being more habituated to it, by the quantity which, when the rivers are much raised by rains, &c. are washed out of the moss into the falls below, where generally the largest and boldest fish are to be found.

I have often kept them for a while in some of their own moss, constantly wetted; but I had reason to think, such were very inferior to those recently taken from the weir. It is true they lived, as did such as I preserved in moss from the common; but they were less lively, and I thought, although the fish did not refuse them altogether, that they were deteriorated by confinement.

Be particularly careful to lay in a sufficient stock of worms before the frosts set in; for, although you will be able to find abundance wherewith to recruit your stock, those taken after the above period will not prove so good as what you had before. The reason is, that, as all substances are rendered brittle by severe cold (a circumstance from which even the bones in our bodies are not exempt), so does the worm become very liable to snap, and to give way.

It

It is true, that, by great attention in keeping your worms very warm, and well fed, you will be able, in a certain degree, to overcome such a defect; but it takes more time and assiduity than is supposed, or than many persons can bestow on that part of their apparatus.

It is far more difficult to collect a quantity of worms in hot weather, than when the ground is moistened by rain; but those taken under the latter circumstance are more foul, and more difficult to cleanse, than such worms as you dig for to some depth. From this, however, the *lob* is entitled to some exception; for it is the cleanliest of all its tribe, and seems to *absorb* much of its nourishment from the atmosphere; whereas, the smaller kinds rarely lay out, and expose themselves to the dew at nights, as the *lob* constantly does, whenever the opportunity offers.

SLUGS.—I have, at times, been so put to for a bait, that I was compelled to take any thing that offered. I made a trial of *slugs*, which I cannot say gave a very favourable result; though I could not pronounce my experiment to have been completely unsuccessful.

I caught a *barbel*, of about seven pounds weight, with a *white slug*; and I have put *slugs* on night-lines with, what I may call, symptoms of success, having had several taken off, though I never could find that any fish had been fairly hooked on such occasions.

I have rather a good opinion of this bait, which, as well as the preceding, viz. the *water-worm*, has not to my knowledge, been spoken of by any respectable author on this subject; and I recommend to those who find other baits scarce, or who have spare rods and lines, to lay one down occasionally with a *white slug* for the
bait.

bait, especially for *barbels* and *eels*, which seem, by their habits, most likely to reward the angler's deviation with success.

Thus much for such baits as may be applied to the common practices of *bottom-fishing*. I shall now proceed to what we may term the more *noble* parts of the amusement, viz. *trolling*, *roving*, and *dipping*, in all which the baits and tackle differ from what have been already described as appertaining to the first division of this branch.

I shall commence with instructing the learner in the mode of angling for fishes of prey, such as the *salmon*, the *trout*, the *jack*, and the *perch*, with

Live Baits.

Under this head we may comprise all those small fishes, of whatever kind, which have a glittering side; of which, from their being usually preyed on by the larger classes, are adapted to this purpose.

Thus the *minnow*, the *bull-head*, the *loach*, the *pink*, the *stickleback*, and the *gudgeon*, are all excellent as *live baits*; observing, that the *stickleback* must be divested of his prickles by means of a pair of scissars; and that the size of the bait ought to correspond with that of the fish intended to be taken therewith.

The lesser baits are best calculated for *perch*, or for *eels*, while the middle sized are proper for *trouts*, where they run to a good size, such as four or five pounds; and the *gudgeons*, or even small *dace*, *roach*, *chub*, &c. not exceeding six or seven inches in length, are appropriate

to those waters where *jacks* reach to a middling growth ; say from four to ten pounds weight.

Live baits may be used without floats ; but it requires great skill and patience in this mode. The ordinary way is, to pass the hook through the lip, or the back fin of the bait, and to have such a float, either a cork one, or a bladder, as may suffice to keep it from going beyond a certain depth, as well as to indicate when a fish has taken it.

As a large bait is very alluring, to a *jack* especially, the float for this purpose should be about eight inches in length, covered almost its whole length with cork, so as to make up a diameter of about an inch and an half : at about six inches from the bait, there should be one or two shots on your line, to keep the fish from rising.

For *perch*, *trout*, or *eels*, a good stout piece of *gut*, or of *weed*, will answer ; but for *jacks*, you must have *gimp* ; else they will bite off your hook with the utmost ease.

The *gimp* is made of a silk line, on which wire is wound very tight : this resists the bite of the *jack* effectually, and is surprisingly strong. Unless you fish expressly for *jacks*, your *gimp* should be of the smallest size, or the *perch* will not take your bait so readily.

It is very rare to find *trouts* take a live bait well ; they do in some waters, but then you cannot use *gimp*. For *eels*, you should have tolerably stout *gimp* ; for they sometimes run very large, often weighing from two to five pounds ; and, as they are extremely powerful in the water, and writhe about the line in many folds, care must

must be taken to be prepared against their exertions. For *jacks*, your *gimp* cannot well be too stout.

Frogs are excellent baits for *perch* and *jacks*; for the former they ought to be very small. The yellowest are the best, and, next to them, such as are striped, or speckled in a shewy manner. They should be hooked through the back muscle of the hind leg, tying up that limb so as to conceal the hook a little; or you may pass the hook through the skin of the back.

It will require a good weight of shot on your line to keep the *frog* down; but he should be brought up now and then, for air, or you may keep him chiefly on the surface. In many places, especially among broad dock-leaves, &c. where the *jacks* lay, with their noses often out of the water, and are ready to seize whatever offers (for in this manner they catch many moor-hens), it is best to let your *frog* be on the surface. Of this, more will be said, as also of the reason for using *bladders* as floats, when we come to treat of *jack-fishing*.

When you catch any fishes with the intention to preserve them for *live baits*, be careful to handle them as little as possible, for they cannot bear it. Put them, as soon as possible, into your *minnow-kettle*, which should be of an oblong shape, about ten inches long, five deep, and seven broad: it should have a cover, pierced with small holes to admit air, and a hasp to fasten down securely. A wire handle should be made, so large as to let the top lift up without touching it.

Your *kettle* should be filled with the same water as the fish were in, which should be often changed. Indeed, the best mode is, to immerse your *kettle* altogether in some shallow part, whereby the fish will be kept quite in spirits,

spirits, with little or no trouble. If you wish to keep fish for any time in this manner, that is, during a night, give them good room in a large tub, free from soapy, or other obnoxious matter, and by no means put any well-water to them, as it certainly will kill every fish before the morning.

To take fish out of the *minnow-kettle*, if you have not a strainer, you should use a very small net, about the size of a tea-cup; but on no account should your hand be put in for this purpose, as it sickens the fish amazingly!

Be careful to have every thing in readiness, so that, after your bait-fish is fixed on the hook, no time may be lost in putting your line into the water; else your bait will be inactive, and not allure the *perch*, &c. half so well as one that struggles much, and thus rouses their attention.

Live baits generally answer best in mid-water, that is to say, they ought to swim half-way to the bottom, whereby they will be deep enough to be seen by the great fish that are on the feed. Sometimes your baits must be sunk lower, especially in very turbulent waters, or in boisterous weather; for in the former they are subject to be occasionally thrown near the surface; and in the latter, most of the great fishes, of prey especially, get into the deeps among the smaller timid fry, which, on such occasions, go down for warmth and quiet.

Live baits are more appropriate to deep than to shallow waters; for even the more ravenous fish do not so much like to seize their prey near the surface; though when very hungry, they will take it there, and even dart out of the water at their object, as we often see *trouts*, &c. doing while in chace of small fishes.

The

The angler will find, on the long run, that he will catch infinitely more fish at a good depth, than he will near the surface ; which is to be accounted for by the disposition to privacy and concealment, natural to all fishes, especially to those which lurk in hiding places, and dart out suddenly on their unsuspecting victims ; as well as to the variety of ambushes and shelters which the weeds and banks afford in those deep holes that are formed by falls of water, by eddies, or by the natural tendency of the soil, in many places, to wash away, until a harder surface resists the stream, and forms a secure ledge, or cover, under which fishes can remain unseen.

Where weeds, or other obstructions abound, *live baits* cannot be conveniently used ; as they would, if half as active as they ought to be, infallibly entangle you, and even though you should be able to distinguish when you might have a bite, would occasion much risque as to the safety of your line.

Nevertheless, where weeds are merely superficial, I never hesitate at using *live baits* ; that is, when I use them at all ; for I am completely satisfied as to the superior advantages of *dead baits*. But *live baits* afford you the convenience of having several rods in use at the same time ; for this kind of angling is not so nicely critical as *bottom-fishing* in general, wherein, on many occasions, the least nibble should be watched and acted upon.

When a fish seizes a *live bait*, he must have time to swallow, or, as it is termed, to *gorge* it ; else you will give him his liberty, by pulling the hook through the lip of your bait, which in all probability he will reject, so soon as he finds any impediment to his free progress, and thenceforth will be afraid to bite again.

In this, however, I speak of *trouts*; for as to *perch* and *jacks*, though the angler will find his interest in treating them with delicacy, yet he must not expect to experience much in their attacks. The latter are often so very bold and voracious, as to attack the same bait four or five times, in rapid succession; although in so doing, they may each time be pulled almost out of the water, or be perhaps pricked with the hook repeatedly.

Allow the fish to take your float under water, and to keep it for a little while, until you think he may have gorged your bait, or, at least, have got it completely into his mouth. Strike moderately smart: under ordinary circumstances, you will have the pleasure of landing him.

You will invariably find, that the best *live baits* are such as you take out of very clear strong waters; for they are by far the most healthy, vigorous, active, and peculiarly irritable; a quality of the utmost consideration, since it causes them, whenever a fish of prey comes in sight, to struggle in such a manner as seldom fails to attract its notice.

The *minnows* taken in the *scours*, or rapid shallows, are of this description; while those taken from a slow weedy water, seem to be quite of a different disposition, and will often remain on the hook perfectly passive, not shewing the least disposition to escape.

Further, as your sport lies chiefly in strong and expansive waters, of which the quality is far superior to that from which the latter description of *minnows* are taken, they do not relish the change for some time, and, consequently, are not fit to undergo the operation at a moment when they ought to be all life and spirits.

It

It is a curious fact, which I believe has not been noticed by any author, that if two streams derived from the same source, and ultimately coming to the same point, be rendered of different velocities by the intervention of natural bars, such as banks, rocks, &c. or by artificial ones, especially by mills, of which the action is not constant, many fish, on being removed from one to the other, will die ! I had often heard persons speaking to this effect ; but did not think there was so much foundation for the assertion, until experience convinced me fully of the fact.

I have seen a very recent instance, of some *jacks* being taken from one branch of a stream, and put into another branch of it, forming a very fine water above a grist-mill. They all died ; but this year seventeen *jacks* were brought from a similar situation, viz. a good water above a mill, and they are all alive and thriving !

The water from which the first *jacks* were taken, is *below* a mill, but has nothing in it peculiar, nor is there, in any part of either of the waters alluded to, the smallest demonstration of peculiarity in the soil, nor of any thing which could be reasonably supposed to affect them, either arising from the exercise of any trades, or from manufactures, prejudicial to health. In fact, there are no mills, except grist-mills, nor any thing but meadows and corn-fields, near the streams first described.

Thus much I have said in support of my hypothesis, that "baits should always be taken from strong rapid waters, as such will play best."

Of Dead Baits.

By this I mean such baits as are previously killed for the occasion, or that are artificially constructed so as to resemble them. The most common kinds in use are, the *minnow* and the *gudgeon*; the former for the smaller class of fishes of prey, the latter for the larger and more ravenous. They are applied in various manners, according to the object and to the time. Those intended for strong streams, frequented by *trouts*, &c. are best small, such as a moderate-sized *minnow*, and should be baited in the following manner :

Choose a hook with a long shank, say about an inch and an half, or more, in length, made of thin wire, and of a bend equal to No. 2, or No. 3. These are to be had in all the shops, under the name of *trolling-hooks*, being so called from this mode of angling, which is called *trolling*.

Fasten your hook to a very choice piece of *gut*, the longer the better, so as not to have any tie near the bait. Take a very small hook, about No. 9, or 10, and whip it to a very thin, neat loop of *gut*, just open enough to pass over the knot at the upper end of your *foot-length of gut*. Select a very fresh *minnow*, and, inserting the point of your hook at its mouth, bend the fish so as to follow the curve of the hook, until you are able to bring the point out behind the vent; so that, if the *minnow* were placed in a swimming position, the point of the hook would be beneath it, directed forward.

Now, as the *minnow* would be apt to shrink upon the hook when played, as is required in *trolling*, you must bring its head up as far as may be practicable, without
force,

force, on the hook ; or, if the *minnow* be large, eventually a little way on the line : then take the small hook, which is called the *lip-hook*, and closing the mouth of the *minnow*, pass it through both lips ; through the under one first, so that the point may come out at the top, pointing forward over the *minnow's* nose.

Taking care that the *minnow* is perfectly stretched, you now, with a piece of very fine silk of a dull colour, that will not glare, or shew to the *trout*, &c. with two or three laps round the little eye and the butt of the *lip-hook*, fasten it down very firmly to your line, so as not to allow the *lip-hook* to recede ; as, in such case, the *minnow* would bend, and the *lip-hook* would be useless : besides, your bait would be deformed, and no fish would approach it. Cut away very close to your knot, and leave nothing that can cause the *trout*, &c. to suspect the device. Some sew up the mouth of the *minnow*, which is a very good practice. See Fig. 2, Plate III.

Your line should be remarkably good, but as fine as you can trust to ; and composed of single *gut* for at least seven or eight feet. At about two feet or a yard from the bait, you should have on your line a very small, neat, steel *swivel*, looped on to one part, and hooking on the other, by means of the spring-hook at the other end of the swivel for that purpose. See Fig. 3, Plate III.

This *swivel* answers two purposes : it prevents your line from being wrenched, by the largest fish, into twists and snarls ; and it causes your bait to play round, or, as it is called, to *spin* freely in the stream, whereby it imitates more closely the action of a live *minnow*, and prevents the hook, &c. from being distinguished.

The bait thus prepared, is called a *spinning-bait*, on

account of the great rapidity with which it revolves, when properly *played*, especially where the current is strong. It is very tempting; and when large fish, disposed to feed, are near, you may depend on success.

If you have the command of your water, and can carry your rod as you please, you should commence by casting your bait from you very gently, so as to alight in the stream without splashing more than a *minnow* would in one of its jumps. Then, draw your rod in such direction, as may cause the bait to cross the stream obliquely towards you. When near you, it should be conducted from you, in a similar manner, by an adverse tendency of the rod, carrying the bait now and then somewhat higher in the stream, and sometimes lower, so as to give ample range.

The extent of your compass, in that respect, must be entirely subject to the breadth of the water, and to the depth at the sides; whence, the length of your line being regulated, you will have fair reason to expect a bite.

It is proper to remark in this place, that the *spinning-bait* answers well, both in deep strong water, in which case, one or two shots *above your swivel* will be proper, to keep the *bait* down; or it will succeed in those very rapid shallows, called *scours*, which are to be found at the edges of all rivers in various parts, and which sometimes stretch across the beds of rivers like banks, or what, in the sea language, are termed *bars*.

A good angler will make his bait spin in still water; but there the fish do not take it readily, because the line, in such cases, cannot be concealed from their view, and the perpetual, I may indeed say the violent, action it must maintain, scares them. This is not the case in a
strong

strong current, which spins the bait better when the line is long, and when the rod is very gradually moved, merely to direct the bait across the stream.

With the *spinning-bait* you will catch *salmon* in all its varieties, *trouts*, *perch*, and *jacks*. Sometimes you will find a *chub* on your hook. This, however, is not the ordinary habit of that fish; but, when very hungry, it will snap at small fishes, and may, as I once experienced, be thus taken.

The *jack* is rather to be avoided in trolling with the *spinning-bait*, on account of the imminent danger of your line being cut by his very sharp teeth. If you should hook one of such a size as to be governable, no time should be lost in running him aground on a shelving shore, keeping the line always straight forward out of his mouth, both because he has least power in the fore teeth, and to avoid making an angle, which would be aiding his endeavours to sever your *gut* in two.

Observe, that as all fish, in seizing a *spinning-bait*, direct their attacks towards its tail, viewing it as an object of pursuit, you need not be afraid of your *trolling-hook* being too long, so as to come out rather behind the vent, where it will do most execution.

Many a very large *trout* has, however, been taken merely by the *lip-hook*: on such occasions, much skill is requisite. Every angler ought to make allowance for the possibility of such an attack, and to avoid all pulls and jerks, such as either might tear out the hook, or, by irritating the fish, cause him to make such efforts as would produce his liberation.

Indeed, it is by keeping the utmost command over your own hand, and by avoiding that childish propensity, too

prevalent in many, of getting an early sight, and of making the fish struggle and leap, that you will complete your purpose. In that quiet, temperate, and forbearing mode which distinguishes the expert angler, much finer tackle may be used; whence your basket will be more readily filled, especially with the more choice kinds of fish.

Dead baits are likewise used in *dipping* for *jacks* and *perch*; in which case, they are put on either *snap-hooks*, or *gorging-hooks*. The former are either single, double, or triple.

The single *snap-hook* is put into the mouth of the bait, and is brought out rather behind the vent, as in *trotting*, already described; or it may be brought out at the side of the bait, which is usually a *gudgeon*, or a small *dace*. In this, a *lip-hook* also is needful, and the *snap-hook* ought to be leaded, to make the bait play well. *Snap-hooks*, and all intended for *jack-fishing*, ought invariably to be mounted on *foot-lengths* of *gimp*, about 20 or 24 inches long.

The *lip-hook* should be very short, such as No. 1, or 2, with half the shank broken off: it should be prepared exactly like that used in *trotting*, but on *gimp* instead of *gut*; it is also for the same purpose. The upper end of the *gimp* should be looped, and well tied down, so as to fasten to the ring-end of a strong steel *swivel*, of which the spring-end hitches on to a loop at the end of your *reel-line*; whereby you may have ample scope to play a large fish, when the water enables you to do so, or to shorten your line to a yard only, or less, for the convenience of *dipping* in among weeds, or through foliage, &c. on the borders of the water.

Your

Your *reel-line* for *dipping* ought to be as thick as a stout knitting-needle, and all of a thickness; not taper, as for *fly-fishing*, &c.

The *double snap-hook* is often made in one piece, bent in the middle; or it is composed of two very strong hooks, as large as No. 1, but much thicker, fastened together, back to back, with good silk or thread *whipping*.

The *treble snap-hook* is made of the same; two being placed back to back, and the third at right angles to them, so that the three stems all lay close together, taking care that their butts are even. With both these kinds a *lip-hook*, such as was described for the *single snap*, should be used, the point being over the nose of the bait. See Fig. 3 and 4, *Plate III*.

A *tailing-needle* of brass or steel wire, is requisite for passing these *double* and *treble snaps* in at the vent; the *gimp* going out at the mouth. The *hooks* should be put in as far as their spread will allow them; after which, a small leaden weight, suited to the size and mouth of the bait, and having a small loop, such as is on the *lip-hook*, should be passed down the line, and put into the mouth of the bait, which is then to be sewed up. This being done, pass the *lip-hook* in a proper manner, and tie it down so as to be firm, and to keep the bait duly extended.

The *tailing-needle* should be about six or seven inches long, with a flat spear-shaped point, and at the other end a small hook, wherein the loop of your *gimp* may hitch, and be drawn through the bait (*Fig. 5, Plate III*.) It is useful to have also a very small *tailing-needle*, suited to passing *gut* or *weed* through *minnows*; especially

when they are not very fresh, as in such case they will not bear to be bent, nor to be much handled.

I should, in truth, rather recommend this mode on all occasions, knowing it to preserve the appearance of the bait better than the other way of putting it on the hook. This is a matter of no small importance; for *trouts* in particular, however ravenous, if they, on near approach, perceive any blemish, or indications of art, will either turn abruptly, as we find them to do when they discover a fly to be artificial; or, if in their hurry, or through fear of approaching competitors, they have mouthed it, many will spit out the bait so quickly, as to render the watchfulness of the most expert angler unavailing!

In many places, proper *baits* are obtained with much difficulty; it may therefore be requisite to inform the young angler, that they are best preserved in bran, which keeps them moist and pliant. The bran should be dry, and free from impurities. If bran be not immediately at hand, fresh soft moss will be found a tolerable substitute.

On no account allow your baits to be kept among other fishes, or in any place where they would be heated or pressed; for in such case, their intestines would soon break out, and disfigure your bait greatly. Whenever that happens, you must sew up the bellies, else your lead will hang out.

Having said thus much of the *snap*, it is necessary to describe what relates to *dipping*; which, however, is often practised with *snap-hooks*, on account of the impracticability of giving fish scope of line, in situations where, either from weeds, piles, boughs under water, or a variety of other impediments, it would not be easy

to

to get the fishes out. But I now consider every thing to be in the angler's favour; that he has ample room for *playing* the fish, which may therefore be allowed to *run* at pleasure.

The *gorging-hook* (see *Fig. 6, Plate III.*) is commonly double, and is well leaded at the junction of the two bends; the weight growing gradually smaller towards the butts of the hooks. The *baiting-needle*, instead of being, as heretofore, passed in at the vent, and brought out at the mouth, is, in this method, put in at the mouth, and brought out close under the tail.

This kind of hook is to be put into the mouth as far as possible; so that one point may be on each side, under the eyes, and pointing backwards towards the tail. The *gimp* being drawn tight, cut a very small nick in the back of the fish, close to the tail, for the admission of a piece of white thread, which should be passed three or four times round both the bait and the *gimp*, tolerably tight; then tied securely, and the ends cut away. This is done for the purpose of keeping the bait stretched at full length, so as to appear in a natural state; which would not be the case if it were allowed to recede, and, consequently, to bend.

I never sew up the mouth of a *dipping-bait*, especially when small fish, fit for that purpose, are not easily attainable. I feel that in this, I am perhaps attracting the censure of those who angle *by book*, and not *by brook*; as also of the more expert, who probably never tried the difference. It was from observing that I saved my baits from much injury, I adopted my present mode.

The angler must remark, that when a *jack* is hooked, that is, when he has *pouched* the bait (by which we un-

derstand, he has got it down completely into his maw), he exerts himself to eject it, thinking thereby to get clear of the hooks. The latter, however, remain immoveable; while the bait, by being only, as it were, slipped on to the tackle, is expelled by the *jack's* exertions, so as invariably to appear out of his mouth, when he is landed.

I have by this device *frequently* taken four and five *jacks* with the same *dead bait*; which, if I had sewed up its mouth, would, in all probability, have been completely disfigured by the action of the first *jack's* throat, and by the precious lot of sharp teeth with which that part is lined.

Dead baits are employed also for *trimmers*, and *night-lines*. The former are double hooks, similar to those used as *gorging-hooks*; but being invariably made on the same wire, their centre forms a loop, through which small brass wire is passed repeatedly, say three times, and then wolded round with the same. This being done to the extent of six or seven inches, makes a strong resistance to the pull of any fish, and effectually precludes all danger of biting off the hook.

These are called *armed hooks*, or *trimmers*, and are chiefly, when baited with a small fish, as already shewn, laid in the water close under steep banks, among weeds, &c. where *jacks*, *perch*, and *trouts* frequent. Those fishes frequently take the baits during the day; as do *eels* sometimes, though very rarely. This occasions the very common practice (among poachers especially, who often allure fishes by means of *ground-bait*) of laying *night-lines*, which are sometimes set with the *double trimmer*, and sometimes with a single *eel-hook*. In
this

this manner immense numbers of the finest fishes are caught.

The lines used on such occasions must be proportioned in length to the depth, and to other circumstances. They should be of the best whip-cord ; and a loop should be at the end of each, for the purpose of receiving a small, short, forked stick (see *Fig. 7, Plate III.*), which having one end forced into the bank, perpendicularly, for almost its whole length, so that the shorter leg which forms the fork, may touch, or perhaps enter, the ground also, serves to secure the line effectually, and is far more expeditiously laid and removed, than if made fast to boughs, stumps, &c.

Add to this, that such boughs and stumps are not every where to be had ; and, if they are, do not conceal the lines so effectually as those which are thus pegged to the ground.

When you have not any pegs, and that boughs are not within reach, wherewith to fasten your lines ; or, that the soil is sandy, tie them to tufts of grass, which will hold them against any pull. You may also tie the ends to stones, which being buried a few inches in the sand, however loose it may be, cannot be forced out by the largest fish in our waters.

In this manner tents are pitched on the deserts : the pins being fastened to the ends of the ropes, and then buried at right angles to them, about a foot deep in the sand, a hurricane may blow the tents to pieces, but cannot draw up the pins !

Night-lines may be baited with *worms* (or with *chickens' gut*, especially if intended for *eels*): *lob-worms* are the best. Observe always to put the hook in at the head ;

head ; for fishes in general swallow worms tail foremost. This is not the case with *dead baits*, for all fish swallow them head foremost.

It is for this reason that, in *dipping*, and in *trimmers*, the hook is passed in at the mouth ; whereby the point is not felt until too late, when, in the fruitless endeavour to cast out the bait, the fish generally urges the hook into his own throat.

Your hooks for *night-lines* ought to be good ; that is, they should be of a proper substance, well tempered, with good barbs, and with their points rather standing outwards from the perpendicular. By this form they are sure to fix, whenever the attempt is made to throw the bait out.

Try the temper of your hooks with your finger and thumb ; if, when smartly pulled therewith, they resist, and are elastic, they will do : if they do not spring, they are bad. But they may be improved by being heated to nearly a white heat, and instantly put into a small quantity of flowers of sulphur, which they will kindle, and by that means receive a quality that may, perhaps, be too much inclined to render the hooks brittle. This you must try, and correct, by heating the hooks again, only until they change colour, when they should be immediately plunged into soap, or tallow.

By this means you will get good *eel-hooks*, which are really very scarce ; so much so, that I have had whole grosses, not one of which could be trusted until I tempered them myself. I can safely say, that I have had at least 100 *eel-hooks* drawn straight by the exertions of the fishes, which, no doubt, were very large and powerful, but could not have got away had the hooks been good.

Of

Of the Bait-Box.

This term applies both to your live, and to your dead baits. In regard to the former, which does not relate to worms, but to *gentles*, *natural flies*, *caterpillars*, *grubs*, &c. nothing is better than a small, round, flattish tin box, japanned both within and without. Many of the sixpenny snuff-boxes suit this purpose admirably; but their lids should be pierced with very small holes, for the admission of air; else the baits will inevitably die.

You should have three or four of these little boxes, marking them on the outside; so as to know their contents: for *gentles* should never be kept with *flies*, nor *flies* with *grubs*, &c. *Cadbrates* should also be kept separately in a box with a little moist cotton, wool, &c. picked light: keep *gentles* in moist bran.

Your box for *dead baits* should be a very large flat tobacco-box, japanned within and without; the lid should not be perforated, but should fit very close. In this lay a little fresh, clean bran, put your dead fishes in so as not to come in contact, then fill up, as full as you can make the box hold, with bran, and keep the lid tight down.

In this mode your *dead baits* will keep well sometimes even to the third day: but such should only be done from real necessity, as the freshest bait is always the most inviting.

Never allow your fishes intended for baits, to lay about, nor put them into grass. Lose no time in suffocating them in fine bran, in which they will retain their lustre, nor will their scales stiffen, nor fall off; as is usually the case, when the fishes are handled in a careless manner, or are left exposed to the air. In packing, put the longest in the middle

middle of the box, it being the broadest part; but reject all that are in any degree lacerated, as they will soon taint the others. See Fig. 11, Plate VI.

LEDGER (or rather LEGERE) LINES— Are such as are left stationary, being baited with *greaves*, *worms*, or *dead-bait*, according to the intention in regard to the kinds of fishes in the waters. *Legeres-lines* are, generally, fixed to a coarse kind of iron reel, with a good extent of range, from thirty to fifty yards; and the reels are fixed either to long iron spikes which go into the ground, or may be driven into a tree; or they are riveted to short staves, of which the tops are grooved, and the bottoms are armed with iron, for the purpose of being fixed in the ground.

The groove or slit at the top of the staff should be small, so as to require some little exertion in the fish to draw it through; whereby it commonly happens, that he forces the hook into his jaw. These lines being intended to reach the middles of ponds, and the beds of rivers, which are not accessible to a rod and line, require to be well leaded. Some call them *casting-lines*, because they must be thrown out to the places where the baits are to lay on the ground.

These lines answer very well to be thrown out near the place where you are angling, so as to be under your observation; but can only be used where the bottom is clear of weeds, &c. They are excellent on long, sandy borders of those rivers, which are shallow near their sides, but are deep in their middles.

The **PATER-NOSTER**, so called from the appearance it makes when the baits are on, is a kind of apparatus much

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in use among the country people, in places where *jacks* abound. It consists of a stout pole of ash, hazle, &c. from five to seven feet long, to which a very strong line of *laid-cord* is affixed, about as long as the pole. To this line are a number of hooks attached, perhaps ten, or a dozen, by means of short pieces of whip-cord. On each hook a *minnow*, or some such small fish, is put, as in *trolling*; that is, by bending it round, so that the hook may pass from the mouth to the vent.

The *pater-noster*, as may be seen from the foregoing description, is calculated for steep banks under which the water is deep. The angler keeps moving his rod up and down, nearly perpendicularly, so as to make the baits play in the water; and, as they are at various distances on the line, occupying its whole length, it is ten to one, if a *jack* be near but he attacks that bait which is on his own level. Some use a float.

The country angler uses no ceremony with the *jack*, but, so soon as he feels him bite, gives one hearty pull, and thus, if the fish's jaw does not give way, cants him clear out of the water. I have sometimes been much amused with this rough mode of inviting the *jacks* to dinner, which is attended with considerable success.

The sight of so many baits as are displayed on a *pater-noster*, must assuredly be extremely enticing, and tempt many a fish that, perhaps, would not be roused into action by the sight of a single *minnow*.

ROVING is generally performed with a *dead bait*, either a *minnow* or *worms*. In the former case, your hook must be the same as in *trolling*; but there must not be any *lip-hook*. A very small weight, like a wedge, or cone-shaped,
is

is put point foremost into the mouth of your bait, which is then sewed up, and the little loop which is fastened to the thick end of your weight, and by which it is secured to your line, is whipped down very tight, just on the outside of the bait's mouth, so as to be concealed; cut away one of the vent-fins, and one of the gill-fins, on different sides; this will cause your bait to have an uneven motion, whereby it will bear a stronger resemblance to that of a live fish, and be far more killing.

When you rove with a worm, or rather with *two* or *three* worms properly arranged on your hook, as I shall now fully explain, take especial care that the point of your hook be not only carefully concealed, but brought so near up within the worm appropriated to that part, as to be close to the end of its tail.

By this means you will find, that the bait may be thrown with more safety, than when a long pendent tail is left beyond the point; which, in such cases, always works its way through, and shews so conspicuously as to deter all fishes from approaching. By the mode directed, they have no opportunity of dragging away the tail of that worm; for if they touch on it, when placed as above shewn, they must infallibly be hooked.

A large bait is the most tempting, but by far the least certain; whence the angler is subjected to perpetual disappointment, and, in the end, will certainly kill fewest fishes. I think *three* short, thick, high-coloured worms, are the best for *roving*; letting the longest be first threaded, for about three quarters of an inch, then slipped up above the upper bristle; next thread the second worm for about the same length, and pass it above the *lower* bristle: both these consequently

quently are pendent, and, if they be lively, will by their motion attract the fishes, and cause excellent sport.

The third worm should be short, thick, and remarkably well coloured : it should run up nearly to the middle of your shank, and be long enough, when threaded, to overhang the tip of the hook. If this be properly done, you cannot fail both to have bites, and to have the best chance of striking with effect : See *Fig. 8. Plâte III.*

Roving may be practised in almost all waters, but is more applicable to such as are just broad enough to be reached completely across, when your line is let out to a length rather shorter than your rod ; whereby you will have it under complete command.

The current being middling strong, is in your favour ; more so than very rough, troubled water : though eddies are very excellent aids, as they occasion returns of your bait, giving far less trouble, and throwing it into situations to which the fish chiefly resort. Still waters are not amiss for *roving* with the worm, though they are not so good for *roving* with a *minnow*. Indeed when the whole operation of *roving* depends entirely on the angler, it requires a very nice hand, and much judgment, to practise it with good effect.

Throw your line, in an easy, swinging manner, across the water ; taking care to go as near as possible to the opposite bank ; that your worm may appear to have dropped out of the soil ; the largest fish, when *on the feed*, are frequently found in such situations : let your bait sink a little at first ; then, with an easy, gentle motion of your rod, derived entirely from your wrist, and not by lifting your arms (which is execrable as well as fatiguing),
give

give your bait an alternate rising and falling, as you draw it across the water, by gradually raising and lowering the point of your rod.

The bait is never to be very near the surface, generally from one to six feet, or eventually more under it, according to the depth of the part you *rove* in. Sometimes, indeed, you must go close to the bottom; especially when you find that no fish strike at you in mid-water. Observe, as the bait approaches your own side, to let it be so played, *with the utmost delicacy*, as to be full in sight of such fishes as may be under that bank.

It should be so managed in *roving*, that you get the wind at your back, whereby your line will be sent across with little exertion; especially if the wind be anywise strong, such as is most favourable for this practice: for all fishes that will take your baits in this manner, are more eager when the surface is ruffled by a breeze; which, besides, affords the advantage of making yourself and your rod less discernible to them.

Indeed, I do not think that *roving* succeeds well either in calm weather or in shallow waters: if they be clear, the device will, in general, be seen; and if they be muddy, the fish cannot so well see your bait. A little colour in the water is not amiss, when produced by freshes, or by a flow of the tide; for, then the fishes are usually very eager, and take, not only worms, &c. with keenness, but may be seen to snap at every thing which falls into their element.

It is almost impossible to give a *minnow* that appearance of life in still waters, which should impose on such fishes as do not *readily* seize a *dead-bait*, such as *trouts* and

and salmon : as to *perch*, *jacks*, and *eels*, they are not very nice, and demand not so much perfection of imitation.

A great deal depends on situation, the weather, and a variety of circumstances which may be either local or temporary. Thus we find, that when the young fry of *dace*, &c. are abundant, being about the length of an inch or two, the fishes of prey neglect all the artificial lures offered to them ; being gluttoned with the immense quantity of food thus at their command.

We see it the same in *fly-fishing*, when at particular seasons, during warm, still evenings, the large fish are leaping at the natural flies that come upon the waters in millions. At such times, although a fish may take your fly, it will be found a very difficult job to command a good dish, such as may be had when a greater scarcity of subsistence is prevalent. It seems also as if the fishes were in a certain time gluttoned even with natural flies ; for we see them neglect many that fall into the water close by them, and which in cooler weather, or when flies were less numerous, would have been taken down instantly.

Under such circumstances, the best *roving* certainly is with worms, if those on your hook be well scoured, and, that you take the opportunity when a smart shower has washed some mud into the by-corners of the stream, you may, by *roving* near such spots, catch many fishes which are attracted thither ; having, no doubt, experienced that such little floodings are accompanied by much animal or vegetable matter, such as they delight in. Thus, if your worms play well, and your line be very fine, and well coloured, in such waters the fish do not
hesitate

hesitate to take your baits ; they being similar to what they have usually had washed down to them by the impetuosity of the currents, in those small channels whereby they are chiefly supplied with food.

I have often found it attended with great success, when I have let my worms down into such a channel, at about a yard or two above where it discharged into a deep hole : frequently several fine fishes have competed in the attack upon my bait ; and this too with such greediness as to swallow it without the least delay, and requiring my *disgorger* to get back my hook.

The great secret in most branches of fishing, but especially in *roving* and *dipping*, is to keep out of sight : your shadow will often scare away the fish to a great distance ; nay, even the slightest motion of your rod, when the water is clear, will have the same effect, as may be frequently seen on a bright day, when the very waving of a bow frightens the fishes, large and small, into holes under steep banks, and into other occult situations.

For this, and indeed for many other good reasons, when you commence angling, always fish the water next to you first ; keeping completely out of sight, carrying your rod very gently over such boughs, grass, &c. as may best answer your purpose in regard to concealment ; and taking particular care to put your bait into the water in the most quiet manner. Under such precautions you may do wonders ; but observe, that a fish once alarmed is not easily soothed, and will rarely approach a bait.

As in *roving* and *dipping* no float is used, it is obvious that no ostensible indication of a bite may appear to a bystander, though the person holding the rod will feel, and that too very sensibly, when he has a bite ; for although

now and then a fish may approach very cautiously, and take the bait very tenderly into his mouth, yet, on the long run, it will be found that the rod is made to vibrate forcibly by the impetuosity of the seizure, which is most usually made as the bait is on the rise. In many instances, however, when a very large fish takes the bait, the water is considerably agitated by his violence ; so much so, as to be an index to the angler even at the distance of many feet of line then under water.

But, as the hand alone should guide regarding a bite, the angler must be extremely on his guard ; for he will occasionally, especially if a *barbel* be in question, feel his line tremble, or perhaps tug a little (very tenderly), when the fish is *sucking* at the bait. The truth is, that we often hear the terms *nibble* and *bite* grossly misapplied : for what is to all appearance a *slight nibble*, is the mode in which some kinds of fishes, especially the *carp* (and at some seasons the *roach*), *bite* ; and what, on many occasions, we should consider a *bite*, proves to be only a *nibble*.

Thus, if we are intent on a float sustaining a *live bait*, and we should see it occasionally dip a little, that is, something more than the bait could carry it down, and that the float return to the surface, such an indication, on any other occasion, would warrant our *striking* ; but here it would be wrong, because the natural conclusion should be, that it were a small *perch*, &c. which, being incapable of swallowing such a bait, was endeavouring to get it into a favourable position, or to draw it away to its haunt, there to be gulped at leisure.

In such a conclusion we seldom err ; but if we do, still the case remains the same, that is, we ought not to strike :

strike: if it be a large fish, he is either not disposed to swallow the bait, or there is some impediment, such as a hook in his gills, &c. that debars his doing so. This we may be sure of, that none but a fish of prey will touch a *live bait*, nor a *dead fish* played as in dipping, &c.

Such reflections should ever be present in the mind of the angler; they, in a certain measure, approach to, or, indeed, constitute, *science*. Whether from nature, or by habit, or by study, it is, I know not, but, in general, I can form a tolerable guess as to what kind of fish I have to deal with.

This, however, is not certain; for in some waters, fishes will be found to act very differently from what the same kinds do in other places. Nay, I know waters which seem to have no sort of difference, that form a little island, where the fishes, to be seen in numbers, will not bite on one side of it, though they are ravenous on the other. The whole island is not equal to an acre of land, and the two branches are in no place twenty yards asunder. How to account for this I know not; but it is strictly a fact, known to every angler about the place, and prevails equally at all seasons: the waters are nearly equal on both sides.

Hence it is seen how necessary it is for an angler to frequent all kinds of water, to perfect himself in his pursuit; for we cannot expect him who angles only in one river, &c. to become perfect in this pleasing, but by no means very easy art.

Of Various Waters.

The foregoing digression has led me to this part of our subject; a part abounding with variety, and requiring both

Both observation and experience. The youthful angler, unaccustomed to explore, and to remark upon every stream that may fall in his way, must necessarily often be at a loss where to cast his line. In general, he selects those parts where he sees many fishes leaping : in some instances his doing so will lead him to excellent diversion; but that can only be at such hours, and in such seasons, as fishes are apt to sport in; and he may be egregiously mistaken as to the kinds of fish thus rising.

The angler who comes to a strange water, cannot do better than inquire of any townspeople, or labourers he may see, as to the sorts of fish it contains, and the several places where the gentry of the neighbourhood resort with their tackle. These will sometimes save much trouble, and lead to immediate success; for I have remarked, that even those persons who do not angle themselves, rarely fail to notice the spots where they perceive others, fond of this recreation, take their stands.

Nevertheless, in this particular we are subject to the errors arising both from the ignorance of our informers, and from the mischievous pranks and misleadings of those who, either from caprice, or from thinking themselves interested in debarring us from a knowledge of the select situations, take great pains to guide us to places where not a fish of consequence is to be had !

The millers, and the bargemen; are generally best informed as to the deep holes, and other haunts, where the fish lay in greatest numbers, and are of a good size; but both those classes of people belong (with so few exceptions as, virtually, to be no exception) to that gang of poachers, who rob the waters of whatever their nets can grasp. These, almost to a man, will set you on a wild-

wild-geese chase, and be highly entertained at the result of their insolence.

Yet sometimes a few shillings, dispensed judiciously, will gain your point among even this kind of impostors, as I have experienced; for it has happened, that a lingering miller, &c. has *bit at my bait*, and *privately* given me hints as to the best holes, so as to enable my getting a good basket-full of whatever the waters contained.

Wherever there are navigable canals, &c. unless the waters be too extensive for ordinary depredations in the poaching way to have much effect, every place is searched by the bargemen; who, in poling along, become completely acquainted with every hole, and cast their nets accordingly.

It is wonderful what a quantity of fishes these people carry off, from such parts of the canals as pass through the estates of gentlemen, who are sometimes very capacious in protecting their waters, often not allowing their neighbours and friends to cast a line; while, by night, their best fishes are netted by hundreds, to the great amusement, not only of the robbers, but of all who know the circumstances: a liberal indulgence to our neighbours often prevents our suffering by such depredations.

One circumstance should ever be carried in memory, viz. whenever you can ascertain that a stream, however small, is connected with a spacious well-stocked pond in a gentleman's park, &c. you may be certain that, in the holes, no doubt to be found in some parts of such a stream, there will often be good fishes, which have been carried by floods out of the pond. Besides, the young fry, and, at all events, the spawn, cannot be confined, if
there

there be the smallest outlet, whether by means of a flood-drain with a grate, or of a sluice, penstock, &c.

By following the course of such a brook, and occasionally trying the depth where you cannot see the bottom, more especially where large trees overhang, and where the sides appear steep, you will rarely fail of discovering many a fine hole, such as cannot be poached by any kind of net, and in which you will at least find enormous *eels* during their season.

I never yet knew of a stream that had once contained *eels*, or *trout*, that was completely deficient in them afterwards. The former, by getting into the crevices of masonry, or of wood-work, under stumps, and into the mud, or sand, never fail to escape from the netter : they breed so fast as to produce great numbers, to the great destruction of all other kinds of fishes, not excepting the *jack*, which, when very young, is as subject as any other to the *eel's* attack. Hence when we find that but very few small fishes are to be seen, we may fairly suspect that either *eels*, *jacks*, or *perch*, are in the water.

The angler must not expect to find much diversion where the water is shallow and clear ; -but in those parts where there are little falls, or under *scours*, which tumble into holes, however contemptible they may appear, frequently very fine fishes are taken ; especially if the bottom be rocky, and the water run swiftly, forming eddies, with the banks firm and steep : in such places *trouts* delight.

When the water is deep, gloomy, and almost inaccessible on account of the woods or weeds, &c. on its margin, there will probably be *jacks*, *perch*, and sometimes

tench. The few *white fish*, whereby we generally understand all the smaller kinds with glittering sides, such as the *roach*, *dace*, *gudgeon*, &c. in such places generally run large, on account of the small ones being for the most part either devoured, or driven away by the more ravenous kinds. What few there may be, owe their safety to their bulk and strength; but if the *jacks* be very numerous, they will not only destroy all the white fish, but attack each other, until at last none but the largest of that species will be seen.

Consequently, in such situations, the angler may generally expect to have the soundness and sufficiency of his tackle put to the test; if that be good, he will, under ordinary circumstances, go home well laden.

We occasionally see large extents of marshy ground, intersected by ditches, or having parts much deeper than others: if such remain tolerably supplied with water, whether from springs, or small inlets, or that, the soil being retentive, the fluid does not escape, but presents nearly the same appearance during the whole summer, we may there reasonably search for large fishes.

It generally happens, that such places are subject to heavy inundations; not merely from land-drains, &c. but from their connexion with other waters, either rivers or lakes, whence they receive many good sorts of fish in abundance. For all fishes have a very great disposition to migrate, especially those of prey; these no sooner find a small inlet or creek, than they run up it as far as they can be floated; nay, they may be occasionally seen struggling to obtain a passage forcibly, especially where there is a current, however trifling.

The copious autumnal showers often swell the waters,

so as to carry off immense quantities of young fry; and the winter floods in many parts are so abundant, as to lay whole tracts under water, which, in the dry season, present a most cheerful and profitable expanse of vegetation, interspersed with various pieces of water, all of which, under such circumstances, become either gainers or losers by the inundation.

The flats bordering the Thames, from Hampton upwards, are in the summer beautiful meads, that, owing to the winter floods, bear prodigious crops of grass. I know several ponds, and long slips of water, which are annually stocked with fine fish from the river, and are netted or poached in various ways every summer, until scarce a *minnow* is left.

The angler must not despise those little brooks which, perhaps, here and there, are kept up for a head of water to supply cattle, or to turn a mill, &c.; in these he will, by patient research, commonly find parts yielding excellent sport. Near to towns, such streams are pillaged shamefully; but in the midst of open fields, where the *delicate* angler cannot be sheltered from the weather, and to which even the *idle* are *too idle* to roam, it is not uncommon to fall in with great varieties, attaining to a considerable growth.

Wherever improvements are made, the fishes suffer for a time, but afterwards recover, and become very numerous. Thus, when a watercourse is made through what were before ditches and puddles, in which, however, some good fish, particularly *eels*, were found, the whole are often thrown out, and are taken away either by the proprietors, the workmen, or the townspeople. But when the water is allowed to flow in again, a new

stock is created, which soon becomes valuable to the angler.

Where old rivers supply canals, which in some places follow the course of their beds, and in others break off into branches containing *locks*, requiring at the same time that *weirs* should be thrown across the old channels, to keep the water up; in such instances, the track followed by the vessels navigating the canals will invariably be poached to the utmost. The fishes will be found in the old river, and especially under the *weirs*, where the continual supply, and the rapidity of the current, which usually digs large holes in those parts, induce *trouts* in particular to lay.

In good smart streams, the angler must not pass by those parts which, being clear, and apparently shallow, seem to be devoid of fishes. He will, on the contrary, not unfrequently find, that such limpid waters contain a number of excellent *trouts*, &c. which lay at the bottom, and can only be perceived by long and stedfast search; or which keep behind weeds, stones, &c. and under shady parts of the banks, so as not to be distinguishable.

In some rivers the gentry, though not proprietors of the waters, take some pains to protect the fishes from poachers; who, if uncontrolled, or not prevented by some effectual devices, would speedily drag out all sorts and sizes.

The law has laid many restraints on angling, but has left open a wide door for the admission of a thousandfold of mischiefs in the netting way. It is inconceivable what damage one sweep of a net does among very young fry, and especially among the spawn. Yet the many low-lived fellows who net the larger rivers, &c. and who deal in
this

this wholesale ruin, are never so happy as when they can catch some innocent or ignorant gentleman trespassing the letter of the law, by *bottom-fishing* one day before the statute allows him to do so. They speedily send a water-bailiff after him; and not uncommonly, where the poor angler is a stranger, assume that character themselves, rather than lose the opportunity of levying either the fine, or a *bribe*!

The gentlemen of Sunbury on Thames, where there has been excellent angling in every branch, proved themselves a match for the professional fishermen (with which all the banks of the Thames swarm, and who are perhaps as dissolute a tribe as any in the united kingdoms), and took very effectual means to prevent the total destruction of the fishes.

They purchased a few old, rotten hulls of boats, barges, &c. which were to be had for a mere song, and having put plenty of tenter-hooks into their bottoms, and knocked out some holes, so as to give access to the fishes, carried them out into the principal holes and haunts, and there sunk them bottoms uppermost.

The fishes, in consequence, soon multiplied; for no fisherman liked to cast his net over such traps; where, besides the inevitable damage his tackle must sustain, there appeared no chance of catching fishes, which had so ready and so effectual an asylum at hand.

The angler will do well always to inquire, if any such means have been adopted in respect to the waters he may be at; if they have, he may depend on finding fishes near those spots where such barriers to poaching have been placed. It is true, that he may here and there

hook a log instead of a fish ; but for such trifles the keen angler will readily compound.

I deem it a duty particularly incumbent on me, to give the young angler some cautions in regard to his proceedings, both in his excursions, if he resides at any distance from his sport, and in following his diversion, when he inhabits a villa, or other tenement near the site of amusement.

He will find my hints on this subject of considerable utility in promoting his views, and in preventing his suffering from that well-known combination, which virtually exists among the evil-minded and low-bred everywhere in some degree, but especially on the borders of all navigable waters.

When such folks perceive that a new comer is fond of sporting, they watch him very closely, in order, if possible, to detect him in some little breach of the law ; so that an information may be laid, and they obtain the informer's reward.

I have been attacked by the insidious good offices of several belonging to this *charitable* tribe ; but, having been forewarned as to what I had to expect, and judging, that the overstrained adulation and civility I experienced were to be paid for in some shape, I never gave the smallest encouragement for their continuance : thus, by a prudent reserve, added to a cautious conduct, I soon let my *kind* neighbours know, that I was "*not to be had*," in that way at least.

In every situation there will be found some persons better disposed than others ; but you must not suppose such are to be known by their countenances, or by their
tongues.

tengues. You must look around you, and inquire as to the fishermen, &c. in your quarter : you may, now and then, hit upon an open-hearted obliging sort of a man, who will not only direct you to the best holes, but will provide you with baits, lend you his boat, put you across, help you to put down, and to take up, your night-lines, with a whole train of *et cæteras*, which will all come, without further trouble than merely now and then putting your hand into your pocket ; without which, nothing must be expected.

Beware of bargemen, and of all who, when they are not *doing* mischief, are *contriving* it over a pot. Never attempt, when you suspect such to be watching your motions, to set a night-line, or to leave any thing they can walk off with ; for you may be assured they will not fail to rid you of all concern for such moveables.

You will find it very convenient to hire a punt, which may generally be had for about two shillings weekly ; so that you may pole yourself about to all parts of the water. In this, however, some practice is requisite ; for there is a certain knack in it, which enables very infirm and tender persons to accomplish, what the unaccustomed Hercules would toil at to little purpose.

This consideration should lead you to encourage some little boy, son of a fisherman, or what not, to aid you in the early part of your nautical career. Such are every where to be had, and are very eager to go after such pastime, especially when a good bellyful follows.

But be careful how you trust them, in regard to your night-lines and *trimmers* ; for though they will occasionally bring you the full produce, yet sometimes they cannot resist the orders or influence of their parents and

and friends, who will expect to share with you in an underhand way.

In a short time, however, you will feel yourself independent, and have no further occasion for any aid; you will be acquainted with the waters, and with their contents; and, being able to manage the punt yourself, may, if you please, *graciously permit* that youth on board, whose services you were at first happy to accept as a favour.

You will find it well worth your while to subscribe to some of the liberties in the angling way, that are to be found in various parts, especially within two stages from London. For a guinea yearly, you may obtain permission to throw your line into some tolerably good streams, or ponds: you may be sure of a bed, and will receive civility, &c. in proportion to what you may call for.

With respect to the unprotected open waters, such as the Thames within a certain distance from the metropolis, you may occasionally find good sport; but do not suffer yourself to be bamboozled by the alluring portraits of *trouts*, &c. stuck up in frames at the various *Red Lions, Bells, Griffins, Castles*, &c. where you may take a little refreshment; nor should you lend too willing an ear to the descriptions given, in regard to the *quantity* of such fine fishes. Keep in mind where you are, to whom you are talking, and that thousands go to the same place, on the same errand; then you will not feel the smallest uneasiness regarding the serious difficulty which might otherwise agitate your mind, as to how you should get such "*monstrous fine fishes*," not only out of the water, but to your home!

We are apt to smile, and that too with some mixture
of

of contempt, when we see or hear of Londoners going from town on Saturday night, with rods and bags innumerable, to fish on Sunday, from Battersea upwards, even as far as Staines, Windsor, &c. ; and those who do not know better, join in a hearty laugh at the *Cocknies*, as they embark to occupy their favourite stations.

But the joke does not hold good; for after having thrown my line into many waters, from the South to nearly the Ultimate Thule of Britain, I can aver with safety, that, on the whole, the Londoners were by far the most skillful, as well as the most patient, and least addicted to vanity. Indeed, I have been very much surprised to see very bad anglers inhabiting the borders of the finest rivers. Their methods, their selection of baits, their haunts, and their tackle, were all bad alike.

On the contrary, the *Cockney*, as he is facetiously termed, is better acquainted with the waters he frequents, has excellent baits, which are procured in the highest order at the several shops where his tackle is obtained ; which is also of the very first quality. I once resided on the banks of the Thames, near *Walton*, and have frequently had occasion to observe, that *all* the weekly visitors were men well acquainted with *trout-fishing* in particular : they used to catch a good number, which, in my humble opinion, was not a *bad* sign.

It must not be unnoticed, that the same stream, or other water, will assume various appearances, according to the season of the year, and to the general state of weather during such seasons.

The waters which from January to April may appear full and rapid, often dwindle to insignificant brooks when the thaws are over. But (as already stated under this

head) such will often be found replete with sport. Some streams increase but little, comparatively, at any time ; unless we take into account those partial torrents of rain which at times deluge particular spots, and, consequently, do infinite damage.

The same cause equally affects the *colour* of such waters, where the soil is composed of *till*, or any other coloured earth. For the most part, the fishes in such streams do not bite readily while the impregnation continues ; but when the element begins to clear, either by the colouring matter being passed away, or by its being precipitated to the bottom, they then become ravenous, and with good tackle, the angler may have excellent diversion.

Where there are many corn, or, as they are generally called, *grist mills*, we usually find abundance of fishes ; though, as already remarked, the millers will have their share, let who will own the water ! This is owing to two causes, namely, the perpetual supply of fresh water, and the great abundance of subsistence the fishes receive by means of the particles of flour, &c. either conveyed by the wind, or swept out of such mills.

The fishes, however, in all such streams, have peculiar propensities ; in some, they will only bite while the mills are going ; in others, they will not come near a bait until the water comes to a stand ; but the former is by far the most prevalent.

Under the aprons of mills, that is, where the water comes from under the wheel over a flat piece of masonry, or plank-work, the largest fishes generally resort ; keeping on the watch, and darting furiously amid the impetuous foaming rush of water, at whatever attracts ; or, perhaps,

perhaps, deliberately waiting at the edge of the rapids, and in the still ; or the turning water forming those large, placid eddies to be found in such places.

In such cases the angler may rove to advantage, having one, two, or perhaps three, stout shots on his line to sink his bait a little ; which would else be perpetually kept near the surface, by the velocity of the current. He should lose no time in getting such fishes as he may hook into a stiller water, as the strong parts are peculiarly unfavourable to his efforts ; besides that the turbid involutions render his precautions less certain and less effectual.

To be convinced of this, let him put a dead fish on his hook, and suspend it from the mill-back in the water, where its action is sharpest ; he will there find his rod far more oppressed, and his own management of it far more difficult, than in the calmer and quieter parts ; where he can lead the fish about according to his own fancy, while it feels quite light to his hand.

Wherever any manufactory appears, or any business is carried on, such as impregnates the air with unwholesome, or offensive smells, there will also be a taint of a similar description communicated to the waters. Thus copper works, sulphur works, hatters works, dyers in general, and all such trades, affect the waters greatly.

In the vicinity of, and especially below, founderies, &c. the fishes are scarce ; and such as do exist there, are flabby : they indicate the insalubrity of the stream, both to themselves and to all animals. Hence an excellent criterion may be adduced, in regard to the fitness of water for culinary purposes, and as a component in various beverage. I am inclined to believe, that no fishes survive
such

uch a state very long ; and, that the few caught in such places are accidental visitors ; none being, in my opinion, spawned in such deleterious situations.

The season of the year must be considered by the angler ; for he will find, with very few exceptions, that, such fishes as are to be taken on *scours* and other shallows, during the summer season, are not to be found there in the winter, nor even on cold days in the autumn.

It is next to impossible to guide exactly on this subject, but favourable winds (such as prevail from the south-east to full west, equal to three-eighths of the horizon), and a sky suited to the temperature of the air, will for the most part prove auspicious.

In using the latter term, its application should be completely understood ; thus a hot summer's day, a clear sky, and little wind, are highly unfavourable ; they, in fact, augment the indolent disposition of the fishes at that season, and tend to deprive them of their appetites ; which generally, in such instances, are keen towards the mornings and evenings, when the angler may expect good sport.

On the other hand, even when the sun is in its fullest power, a brisk wind, and a fleeting cloudy sky, will so far temper the heat, and moderate the glare, as to prove attractive to the fishes, and induce a portion of them to be on the move. Their intention probably is not the search after food, but when a bait presents itself under such circumstances, it will frequently be taken.

In very sultry weather, when abundance of fishes may perhaps be seen on or near the surface, the angler must not indulge in the hope of enjoying much sport ; on the contrary, scarce a fish will bite. They are then generally preparing

preparing to spawn, and are more intent on enjoyment than on the search for subsistence.

It is true, this is not the case with all kinds, but being very prevalent, should induce the angler to relinquish his attempts to get a bite in that quarter, devoting his attention to those deeps whereto the larger and more voracious fishes will partially retire. There, being less overcome by the heat, and less under the eye of observation, they will be more likely to come to his lure.

I cannot pass over the absurd language of a gentleman who, a few years back, published what he terms, a *rational* treatise on angling, wherein he would inculcate, that particular kinds of fishes come out to feed "at the even hours of the day"—or, "half an hour before and after the even hours," &c.

This is giving them credit for a progress in chronology, which the enlightened mind cannot but ridicule: in fact, the very attempt to pass such rubbish on the public, deserves its most pointed censure: it indicates a total deficiency of knowledge, and an immense share of presumption, in treating the subject so very particularly; it looks like an attempt to lead weak minds to an opinion of the author being deeply versed in piscatorial practice; or, indeed, of having served as M. D. among the inhabitants of the waters.

According to the assertion of the author alluded to, it would seem, that such fishes had a fresh appetite at the expiration of every two hours: if this be true, the angler must be particularly careful to have his watch duly regulated before he throws in his line.

Nevertheless, the work in question, is perhaps one of the best that has hitherto appeared; being generally exempt
from

from poaching, and something to the point ; though it certainly presents “ only a neat *rivulet* of type, running through a *meadow* of margin” ; on the whole, it is cheaper at five shillings, than the various catchpenny duodecimos, &c. sold at very low prices, to the great disgrace of their authors, and no small discredit of the venders.

Such puerile purchasers as know not how to discriminate, and who are led to possess them under the idea of becoming acquainted, not only with the whole of the fair part of the art, but with many unfair practices also, had better consult some able angler, or at least some person of discretion, before they disperse their few shillings ; else they will not only be totally disappointed of sport, but perhaps receive notions which, in the end, may lead to conspicuous disgrace.

In great lakes, the fishes follow a course very similar to that which seems to be ordinary, among those in rivers and brooks ; they lurk during the winter, or in tempestuous times, among the heavy masses of rushes, and other weeds ; but in the summer season, or even during the winter months, after a few days of open weather, they may be seen on the long shelving banks appearing to enjoy the favourable opportunity. But at these times they will rarely take a bait ; whence we may conclude, that they find at the bottom some nourishment suited to the season.

Fishes of prey, no doubt, retain their natural propensities at all times ; but I believe they are more subject to torpor and lethargy than those which feed only on weeds, worms, or other such matters. I am led to this opinion by the observations I have made regarding *jacks*, *eels*, and *trouts* especially. These are extremely averse
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to move much during the winter; but in the spring, so soon as they feel the genial warmth of the sun, may be seen basking either on, or near the surface. *Jacks* in particular, appear so completely entranced by the sun's rays, that in April and May they are very often snared, as will be shewn while treating of that fish. *Eels* are sometimes taken in the same way, and *trouts* at that season, indeed often during the whole of the summer, if the water be not very warm, will approach any heated substance whose influence reaches them.

Thus many put their hands under water, near the stumps of trees, &c. where *trouts* frequent, and often both feel and see them come to warm themselves; in this way a very slight motion of the fingers seems to give them peculiar pleasure, so that they gradually fall asleep, when, by a little dexterity, they may be grasped just behind their gills, and thus be caught.

Perch get into very deep holes, among weeds that have been flattened down by decay, or by strong winds; remaining in such shelters during the cold weather, and only coming out when there are few clouds, with a temperate warm breeze. They do not frequent *scours*, or appear so much at the surface, as most other fishes of prey, except when after *minnows*, &c.

It may generally be considered as a rule, that such fishes as remain chiefly at the bottom during the summer, are more alert, and take the baits during the winter better than *baskers*, or such as in the spring lay in a semi-torpid state on the surface.

The fact is, that such fishes as expose themselves least to the sun, are the least sensible of its absence. I have before specified, that all fishes while in spawn, and at the

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the time of spawning, visit the surface occasionally, but particularly in hot weather; thus we see shoals of *roach* and *dace*, especially the latter, at such times; *perch* then frequent the shallows; *minnows*, *gudgeons*, &c. are on the *scours*; *salmon*, *trouts*, &c. run up the rivers towards the more rapid waters, laying at the skirts of eddies, or under banks where the sun has full power.

Thus also we find, that about February and March, the *jacks*, which for some months were buried in the greatest deeps, appear on the surface, in deep, secluded ditches, &c. where they spawn, and gradually come out more into the open waters; to which, however, their young fry do not so readily venture; nature giving them to understand, no doubt, that their own parents are not to be trusted; for a *jack* will attack his own kind when nothing else falls in his way; nay, he will contrive to *pouch* one nearly a third of his own size! I have heard, indeed, such extraordinary stories, as would perhaps warrant my saying more on this topic; but I rather follow my general rule, of being strictly within bounds on all occasions.

It may be proper to remark, that the various kinds of water fowl frequenting us during the winter season, are dire enemies to all kinds of fishes; which we may reasonably conclude, do not venture much near the surface, while so many of their enemies are to be seen there. Storks, cranes, herons, bitterns, geese, ducks, teal, and widgeons, all prey on fish; not only on the smaller kinds, but occasionally devouring many of a good size.

Providence seems to have taken ample care of these visitors; for we find them direct their course to our large fens, where they meet with abundance of subsistence.

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In such places the *prickle-back*, already noticed as an excellent *live-bait*, abounds to such a degree, as to be taken in whole shoals; they are sold *by the bushel*, as manure, both in Lincolnshire and in Cambridgeshire.

The angler will find, that wherever *minnows* abound, in suitable waters, there will be plenty of fishes of prey; provided they are not thinned by the net, or by any unfair means. On the other hand, he will experience some disappointment, from that very abundance which attracts and maintains the fishes of which he is in pursuit; for when the *minnows* have good shelter in shallows full of weeds, and in a million of little corners into which their enemies cannot at all times follow them, they become so extremely numerous, that the *jacks*, *trouts*, *perch*, *eels*, &c. are glutted, and are not to be enticed by the bait, however lively and tempting.

Here much judgment and skill are requisite; yet, after all, a complete bungler may perchance light on a lucky spot, and fill his basket, while the most expert angler may scarcely have one bite!

Hence we sometimes see the former obtain a credit for ability he does not possess; while the qualifications of the latter are not known; and this is perfectly natural; for the contents of the basket should decide the point. I never yet heard any person talk much of the number of birds he winged, or otherwise wounded, that could generally put a brace on the table.

In many large streams, which have periodical rises, or are subject to floods at such periods, and are liable to be worn by the force of the current, piles are driven in, and lined with boards, &c. these are known in various places by different names, but almost universally, I believe, by the

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the designation of *camshots*. They are, for the most part, done in consequence of the bank having been excavated, or of some considerable encroachment either made or apprehended ; consequently the water is very deep in such places, and the current after heavy rains, and during the spring especially, very rapid.

Such places harbour the finest fishes of all descriptions ; but the angler must take care, to explore, else he will, almost infallibly, if the *camshot* be old, and often repaired, or perhaps be rebuilt more and more within, at different periods, find himself entangled amongst concealed timber work, from which no clearing ring can relieve his hook.

The fishes which frequent such places, instinctively betake themselves, the moment they feel the hook, to the piles, &c. and rarely fail, unless the tackle be uncommonly strong, to chafe, or to snap the line. At all events, they dog in and out in such a manner as effectually prevents every kind of controul, and ultimately confines them to a very short portion of the line. Under such circumstances, the fate of the fish is rarely known to the angler ; but that of his line is obvious ; for he must lose every inch beyond the first impediment, and if he is not very careful, may injure his rod very seriously,

The most prudent way, on such occasions, is to compound for some loss, and to cut away the line, by any means that may offer, as low down as may be practicable. This is certainly, in many instances, a vexatious relinquishment ; but the experienced angler will confirm the propriety of these hints.

If, however, the trial is to be made of *forcibly* pulling up the impediment, it should be done by taking the line
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in hand, laying aside the rod, which will always be found to suffer more or less, in such hazardous, and indeed, such absurd contests.

Where there is a bend in a stream, it will generally be found, that the water is deepest on the outside of the bend, and that the inner part of the bend, that is, the point round which the water runs, is shallow; (see the 1st Figure, 4th Plate). Where a stream lies between straight banks, although its depth will vary occasionally, and the current pass and repass from one side to the other, yet, generally speaking, the middle of the stream will be the deepest water, and be most noticed by bargemen, &c.

Old bridges, ledges of rock, heavy masses of roots, large irregular stones, sunken vessels, and all such obvious matters, by affording shelter and protection, become the resort of almost every kind of fishes. If there should be alternate deeps and shallows, with occasional falls, breaks, and eddies, the angler may expect to find *trouts*, and various kinds of white fishes; while the more deep and still waters will chiefly present him with *jacks*, *perch*, and *eels*. If the water has communication, however indirectly, with the sea, he may be assured that *salmon* may at the proper season be found, in some of, if not in all, its varieties. Nor will such generally be exempt from the visits of *barbels*.

But almost every water in the kingdom has, in some part of its course, whether under one or other name, such various depths, breadths, and velocities, as to occasion it to contain in some places one kind, and in other parts different classes of fish.

Besides, though some sorts are, in a certain measure, more appropriate to particular waters, they will nevertheless

theless be found in such as, if we were to judge by the ordinary characteristics, they ought not to inhabit. Hence, when we are trolling for *trouts* in a rapid stream, we are sometimes rather surprised to find a *jack* on the hook ; in other places where we expect to find *barbels*, we are attacked by *perch* or *trouts*, or eventually *eels*.

The truth is, that the differences as to breadth, depth, and rapidity, which every where prevail within very short distances, give to the same water a variety of characters, accordant with such changes severally. Add to this, that the junction of two streams, the one rapid, and the other slow, or the one clear and shallow, and the other deep and weedy, or *vice versa*, will give to both a partial supply of such fishes as would not be expected under other circumstances.

The intelligent angler does not let such points pass unnoticed ; he explores in every direction ; and by observing the several circumstances peculiar to the locality, arranges his plan, and is prepared for every attack. It cannot be supposed that his tackle will be appropriate equally to every class of fishes, but with common attention to those general rules he will either have bought, or have learnt from experience, his proceedings will be so well grounded, and so guarded, as to obviate those mischiefs which would infallibly annoy the novice.

I trust sufficient has been said on this subject, to serve as an ample guide to those who are unacquainted with the various anomalies to which waters are subject at various seasons, or from the vicinity of other streams, &c. ; so as at least to lead such persons into the proper track, both for sport, and for the acquirement of such principles, in this part of our subject, as may qualify them to
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form a ready and a correct judgment ; whereby many an hour of fatigue, and of vexatious disappointment, may be avoided.

It is true, I have been somewhat prolix, and perhaps occasionally a little digressive, in treating of *various waters* ; but it is a branch of the art which has been too much neglected by authors, and is not sufficiently attended to even by many old anglers : much less by those who snap at the liberty of a day, or of a few hours only, to indulge in this recreation. I feel a confidence in the necessity of what I have detailed : I have reduced the laborious researches of years, comparatively to a nutshell, and thus have tendered to the young angler the means of distinguishing, with a proper degree of readiness, and with certainty, when and where he will be most likely to find abundance of fishes.

Nevertheless, in spite of all the instruction that can be given, there will be found in almost every county some peculiarities, which are easily learnt ; it requiring only that certain kind of ready, compliant accommodation, which every good angler carries with him, to adopt such variations with success.

When we have once been thoroughly grounded in the rudiments of a science, the application of each matter relating thereto appears simple, and is familiarly treated. I flatter myself my readers will admit, that in this compendium that object is fully attained.

Of Ground-Baits.

These are employed for the purpose of attracting fishes to any particular spot, where the angler intends to try for sport ; or they are occasionally used during floods, &c. by game-

game-keepers, and others, to retain the fishes within a certain part of the waters, and thus to prevent their emigrating.

Ground-baits should be chiefly used some hours previous to the intended time of angling; generally, they should be thrown in the evening before; but if the waters do not abound with fish, it may be necessary to keep the favourite spots baited for many days previous to throwing a line. By such means, the deeps and holes wherein the *ground-bait* is cast will be the general resort of every kind of fishes, and of the larger ones especially; they rarely failing to dart towards those parts where they observe the smaller ones collected.

If there should be *jacks* in the water, you may rest assured of their presence at, or near, the baited spots, when you perceive that no fishes approach your bait. For the accumulation of the smaller, or more familiar fishes, especially at stated times, or frequently, never fails to be noticed by these bold depredators, which watch their opportunity, and either overtly, or from behind some weedy, or sheltered spot, attack those which come to partake of the *ground-bait*.

When this happens, you cannot do better than *troll* for the *jacks*, which rarely miss your bait: in the course of a few hours the smaller fish will resort, as before, to the spot, and afford excellent amusement.

But occasionally, large *perch*, *trouts*, or even *eels*, will be found to cause the same shyness: however, as these will all take the worm, the angler need neither grieve at the circumstance, nor change his mode of procedure.

I think that large *eels* cause more terror among small fry,

fry, than either *trouts* or *perch*; their eyes are remarkably vivid; rather indeed, like those of the serpent; further, their motion through the water is so peculiar, as to cause wonderful apprehension.

When your *ground-bait* consists of any animal substance, the predatory fishes will resort to the spots for the purpose of partaking of it, therefore that lure is, assuredly, the most generally proper. For this purpose, broken or stale *worms*, of all kinds, *greaves*, the *fleshings* scraped proper from the insides of raw hides, carrion, especially the guts of all kinds of poultry, and clotted blood, are excellent.

These should in the first instance, that is, for a day or two, be abundantly supplied, so as to invite the fishes from all parts of the water; which will soon be obviously effected. Afterwards a much less quantity will suffice; observing, however, to throw in at such hours as are most favourable for angling, whereby the fishes will soon be accustomed to repair to the spot with perfect regularity.

Ale-grains, *crumbs of bread*, *mill-sweepings*, nay, even *saw-dust*, will sometimes keep the fishes together; but you should ever be mindful to throw in your *ground-baits* with some delicacy, so as not to scare the fishes; which are easily intimidated, and at some periods are not very quickly reconciled to the spot whence they have retired in consequence of violent, or unguarded action.

The person who throws in the *ground-baits* should do it very gradually, thereby to keep up some expectation among the fishes, and to accustom them to wait for a successive supply of provision. But he must keep as carefully out of sight as though he were angling; else he

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will not find the fishes repair to the spot until some time after he has quitted it; and then, with much caution and diffidence.

I am aware, that this will be considered by many as fine-drawing the matter beyond what is requisite; but to such I must answer, that it is with fishes exactly as with wild birds, which require infinite art and cunning to ensnare them; and that although many instances may be quoted, of persons neglecting even the most ordinary precautions, having been successful, yet it would be absurd to deny, that an expert careful angler could, in the same time and situation, have caught far more.

When we begin to doubt the superior effects of superior skill, we betray our ignorance; a few may blindly follow such an absurd hypothesis; but we shall find from experience, that such opinions will neither ensure success, nor meet the support of those possessing common sense.

The angler who is at all informed of the nature of fishes in general, and who knows how crafty and shy they become in waters much frequented, especially by poachers, will not, nay cannot, hesitate in affirming the validity of what I have said in regard to secrecy and concealment. They are the soul of fresh-water angling, and I would at all times wager on the success of that man, who to such qualifications adds the necessary attention to sound baits, and fine tackle! I have often laughed heartily at being asked by persons fishing for *dace*, *gudgeons*, &c. whether their lines (about as thick as a good-sized knitting-needle) *were strong enough!!!*

Some judgment is necessary in laying *ground-baits*. It should be the study of the person doing so, to select
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rather a central spot, free from heavy weeds, and accessible to all kinds and sizes of fish ; yet so situated, that *jacks*, if there be any in the waters, cannot make abrupt attacks from lurking places. Besides, the supply should be conspicuously situated ; and, at the moment of angling, the bait should be equally so. There may exist a few exceptions, but this will, as a general rule, be found highly worthy of attention.

Ground-baits are sometimes used at the time of angling. High-dried malt, steeped for a few minutes in water enough to cover the grains, is an excellent thing for keeping the fishes together ; or even stale *grains*, such as are had at the distillers', or at the brewers', are better than nothing, though they possess little flavour, and less substance. Balls made of stiff clay, in which holes being made, the tails of *lob-worms*, or shreds of *greaves*, are fastened, are useful ; especially the worms, which should be large and active, but not cleansed or scoured in moss ; it being an object, that your *baits*, which have been well treated, should be far superior to your *ground-baits*.

Thus, when you have thrown in a *clay-ball* with unprepared *lobs*, although their writhings will attract the fishes, and perhaps induce them to feed, yet, when they see a rich transparent *brandling*, or other good worm, descend gently among them, in an instant they will quit the *lobs*, and attack the latter with all the eagerness of competition.

When *ground-baits* are used previous to angling, you should give plenty of time for the fishes to have completely eaten all you threw in, and to have acquired a disposition to feed again. Hence it will be obvious,

that a necessity exists for duly proportioning the quantity of *ground bait* to the supposed quantity of mouths to be fed ; and it is far better to err on the side of scarcity, so as to leave no surplus, when you intend to angle within a day after the *ground-bait* has been thrown in.

For, if any be left, it is a great chance but the fishes have glutted, and will decline your worm, however highly it may be prepared. On the other hand, provided you have abundance of *ground bait*, and wish to attract the fishes to any particular spot for several days before you angle, it is best to afford them all you think they can destroy in the first instance ; and gradually to abate the quantity, leaving the place quite *unbaited* at the time you go to angle,—or, at furthest, only using *malt-grains*, or *clay-balls*.

The angler will find his trouble amply rewarded, if, **whenever** he is about to put up his tackle at the side of a baited hole, he would look over his worms, and throw in all such as appear to be flabby, or wanting in vigour : such will never make him good baits, and they tend in some measure to induce the fishes to bite at the same kinds of worms when on the hooks ; but this should be done rather sparingly, and such worms ought previously to be broken into pieces, so as not to appear equally tempting with those of the same kind which you reserve for your hook.

And if a small quantity of *ground-baits* can be conveniently taken out with the angler, for the purpose of being thrown in when he may have done fishing, it will save some trouble, and probably secure him some sport during the ensuing day ; but this must depend entirely on circumstances appertaining to locality, weather, &c.

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I shall conclude this part of our subject with remarking, that *ground-baits*, of all descriptions, are intended only as lures to fishes, causing them to resort to, or to remain at, any particular part of the waters; and as it is necessarily an important object that they should take your baits when offered, so the *ground-baits* should be of the most refuse materials, and given only at such intervals as will not interfere with their appetites at the time of your angling.

These are, indeed, the fundamental principles of the practice, and, if followed correctly, cannot fail of success. I have read, though I have never seen it, that some use the best materials as *ground-baits*; in which they certainly err very grossly: I think it requires only to be shewn as plainly as, I flatter myself, has been done in this instance, to lead such persons out of a method which every experienced angler must join in reprobating.

Of striking; and of playing a Fish when struck.

By *striking*, we mean the act of drawing tight the line when a fish is at the bait, in such manner as may cause the hook to penetrate into some part of its mouth, and prevent its escape. To judge accurately as to the moment when you should strike, is not the labour of a day, but requires much experience, and a knowledge of the several fishes you expect to catch. Nor is the operation so *very* simple as a looker-on would suppose: there is, indeed, a certain knack in striking, which some never can acquire, and which others appear to possess naturally.

I shall endeavour to lay down a few general rules,

whereby the learner may be at least cautioned against error, if he should not acquire a complete mastership in this very important branch of the art.

Violence is always to be avoided. When we consider the elasticity of the rod, and of the line, and that the smallest change of position at the butt of the former, will cause an immense difference in the situation of its point, or tip; and if we call to mind, that not more than half an inch of hook is in the fish's mouth, generally speaking; and that if that half inch pierces its mouth, our object is effected: we shall then see the impropriety of those strong uplifted pulls which many, even of those who think themselves good anglers, exhibit, when they have a bite: we shall then acknowledge, that it ought to be our study to cause so little change of position at the butt as may be next to imperceptible, and to make but a few inches difference at the tip.

Delicacy in this particular is peculiarly necessary; for if the fish be struck, and be of any size, the line is not endangered, nor is the hook torn through the hold; and if the fish be not struck, he will be less intimidated, and may return to the bait, which probably he never would do, if it had been *forcibly* pulled out of his mouth.

Add to this, the many weeds, twigs, &c. which are concealed under the surface, offer additional dangers to the line; for where they should happen to intercept the hook in its abrupt motion, if they do not cause its immediate loss, they occasion a tedious search, and such measures as effectually drive the fishes away.

The fencer and the cudgel-player are both sensible, that a very slight turn of the wrist gives quite a new direction to the weapon: it is exactly the same in striking a fish.

a fish. Circumstances of locality must, however, govern in respect to the practice; but, under the supposition that there be no impediment in the way of the rod's action; that the line can be drawn and kept nearly straight from the tip to the float, without causing the latter to vibrate or be displaced; then, a very slight turn of the wrist will cause sufficient removal of the tip, and consequently, of the whole line, to make the hook take effect.

The elasticity of the line will cause a kind of secondary motion, such as tends to fix the hook, and to make the fish instantly attempt an escape.

In the foregoing instance I have supposed every matter to be favourable; that the bite is obvious; and that there can be no hesitation as to the moment when to *strike*. But we very often see the float suddenly change from an erect to an horizontal position.

This is caused by the fish having not only taken the bait into his mouth, but having ascended with it so high above the level at which it stood in the water, as absolutely to bear up the shots, and to liberate the float from their weight.

From this we see the necessity of a previous operation ere we *strike*; for it becomes expedient, by an instantaneous motion, to draw the line tight, and *then to strike* sufficiently strong to cause the hook to bury its barb.

The bad effect of *striking* with a part of the line slack, is so obvious, as to preclude the want of further instruction on that head. I shall therefore present a case precisely the reverse.

Let us suppose, that a *perch* should seize your *live bait* suspended to a cork float, and carry it down : as, in such case, time must be given for the fish to gorge, or swallow the bait, it follows, that your line must be slackened, or be eventually let out from the reel, so judiciously, as not to allow the *perch* to feel any check while in the act of swallowing. Here little more than a sudden stop to your compliance with the *perch's* motion, is needful to arrest his progress ; and indeed, on most occasions of this kind, it is best to *feel*, as it were, first, whether the bait were *gorged* (which is done by the above means), and if you find it to be so, which the heavy bearing of the *perch* will sufficiently indicate, then a *very slight turn*, in such direction as may be the reverse to that in which he is proceeding, will have the desired effect.

The learner must not suppose that any time is lost in such operations : they follow as quick as thought ; and their appropriate adaptation to the moment, not only decides the fate of the fish, but the ability of the angler !

Many fishes must be struck at the least nibble, while others must have some seconds allowed them. One will take the float scarcely half an inch under water before he has the bait fairly in his mouth ; while another will merely take a slight hold of some pendent part, and carry the float one or two feet, or more, under water ; in such case, they are sometimes hooked on the *outside* of their mouths.

It is not easy to lay down a fixed rule on this point ; for the same sorts of fish during the same day, and in the same waters, will so vary in their modes of biting, as absolutely to bewilder the most experienced angler. The manner

manner in which each fish generally bites, *when on the feed*, will be understood from the description of them severally.

When your bait is on the bottom, and a fish runs with it, drawing your float along the surface, sinking very little, or perhaps not at all, the line should be drawn straight from the tip of the rod to the float; and when you *strike*, observe the rule already laid down, of *striking* counter to the fish's course.

The learner will see the necessity of being always on the alert; and he will find, that by keeping the point of his rod nearly over his float, he will be more ready to adopt the necessary measures, without being obliged to make extensive movements, which cause delay, and scare the fish.

It is necessary always after a bite, to examine your bait, which seldom fails to be deranged, more or less, by every attack it sustains. I have seen anglers too lazy to do this, they being in the habit of leaving all to chance; when, after sitting for half an hour, or more, without a bite, in drawing up to remove to another spot, they have been greatly surprised to see their baits half eaten away, and the hook two-thirds bared. Yet they expected to catch fish!

We do not give to animals in general half the credit for sense, or instinct, which is really their due. We see crows and other birds fly round out of the ordinary reach of small shot; why then should we deny to fishes the power of distinguishing between a worm perfectly at liberty, and one suspended by any device?

Those who do not consider this in a proper point of view, need only to try their luck with the point of their

hook exposed ; they will soon be satisfied of the impropriety of a want of perfect caution in that particular. No fish will approach a bait, if the point of the hook can be seen or felt !

It is really so easy to attend to this precaution, that it is wonderful how those who call themselves anglers, and who think they have acquired a reputation in the art, can allow indolence to delay that which, after a lapse of ineffectual procrastination, must be done at last !

But to return to the main point : so soon as a fish is struck, that is, when you find it to be fairly hooked, if its size should be such as not to warrant your drawing instantly out of the water, your first object should be, to give line in proportion to the pressure you feel from the fish's weight and resistance.

But this must be done with great caution ; for it is often more prudent to run the risk attendant on a short line, and little scope of *play*, than to allow such a range as would enable the fish to dash among weeds, boughs, piles, or any thing likely to create difficulty. Giving line is not always practicable, especially in foul waters, overhung with wood ; and in such situations, the largest fishes are usually found.

Whatever may be your extent of line, remember never to urge the fish to his utmost exertion in point of velocity ; nor to provoke him to such struggles as, probably, he never would resort to, unless roughly treated. Endeavour, if possible, to withdraw him gently from the baited hole, so as not to excite alarm among his companions ; and lead him tenderly into such part of the waters as may be favourable to your manœuvres.

Always carry in mind, that what with fear, rage, and
pain,

pain, the fish is sufficiently disposed to remain in a constant state of action, by which his powers must speedily be subdued. Keep him under command, but with temper: when you lose *that*, you will probably lose your *prize* also!

As the elasticity of your rod and of your line afford you considerable advantages, your study should be, always to keep the former in such a position, as may effectually combine the powers of both. This is done simply by keeping the point of your rod raised, so that it may bend, and by its spring gently yield to the efforts of the fish, and draw him back to his proper degree of pressure on the line, when his effort has ceased. *Plate IV. Fig. 2*, will give the learner an adequate idea of what is intended: it shews the greatest angle that should be allowed.

It must be self-evident, that when the rod and line are both in one direction, the whole of the strain lays on the latter; the former being deprived of all its elastic powers, and proving far worse than the same length of line would be, if substituted in its place. Every approach to such a direction towards the fish is bad; for the rod is always at its greatest and safest point of resistance, when the line forms an acute angle with the stiff part held by the angler, as shewn by *Fig. 3, Plate IV*.

There may certainly be situations in which the rod cannot be held to the best advantage; in such, the angler must use his discretion, adopting the best action the spot may afford, and never despairing of success, however unfavourable circumstances may appear. If he is cool, he will be considerate, and often will get a fish from a hole, where the ordinary angler would not venture to cast his

line. But if his tackle be not sound, all that can be said on the subject will be of no avail.

Many young anglers are in a hurry to see what is on the hook ; they cannot refrain from bringing the fish up to the surface. This always has a bad effect ; for it convinces the poor deluded animal of what it before probably only suspected, namely, that it is ensnared, and is to be taken from its element. Hence it becomes unruly and headstrong, and tries every effort ; not omitting to lash at the line with its tail, and running in suddenly towards the angler, so as to slacken the line, and to shake out the hook ; or to rush into a hole in the bank, &c. ; all of which are common practices with several kinds of fish, especially the *chub* and *barbel*. But when the angler allows the fish rather to ramble at his own pleasure, within the circle described by his line, every purpose is gradually effected ; for the fish is so exhausted before he is brought near the surface, as to be incapable of further resistance, and may be landed with perfect ease and safety.

Whatever may be the exertions of a fish, be careful to keep your line sufficiently tight to give you a feeling of all his motions. And even when (as is sometimes the case under the most delicate management) he may spring out of the water, do not slacken your line altogether ; but be careful, so soon as you see him fall upon the surface, to be prepared, and to give him the lead such way as you may find most suited to your purpose. Be assured, that a slack line is always bad, and gives the fish the opportunity, either of shaking the hook out, if it be not very fast in, or of making a sudden exertion, such as may be too rapid and too powerful for the strength of
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your tackle, under such bad management. Further when your line is not tight, you cannot judge exactly as to the spot where the fish then is, whereby you become subject to much error and incertitude.

It should be equally your care, always to keep your rod out of the water; for, exclusive of the injury it sustains by being wetted in the joints, it never fails to frighten away other fish, and to cause that on the hook to be particularly agitated.

Though I have already spoken very pointedly regarding the impropriety of handling the line when taking a fish out of the water, yet it may not be improper to repeat my injunctions on that head, and to recommend to the juvenile angler, when the fish is exhausted, to draw him very gently along the surface to a convenient spot, within reach of one hand, while the other is to retain and direct the rod; the butt of which may be advantageously rested against the side, or upon the knee, according to the length of his line. He will find the fish to float freely on the surface, and that there will be very little pressure on his tackle.

If there should be occasion to draw his prize over, or through weeds, he should be careful to lay the fish on that side which may leave his hook pointing upwards; thus, if the hook be in the right corner of the mouth, the fish should be drawn on his left side, and *vice versa*.

This is done to prevent the hook from getting entangled in the weeds, of which there will be little danger, if the foregoing precaution be attended to, and that the fish's head be a little raised, so as to prevent its nose from getting under any weeds. A very little practice, with
common

common observation, will render this part of my instructions perfectly familiar, and exemplify its utility.

Before I proceed to the next chapter, it may be proper to observe, that when the wind is very strong, it is not in the power of the angler to keep the upper part of his line nearly tight; for in such case, especially if the line be strong, and somewhat substantial, the wind may cause such a motion as would at least keep the float constantly dancing about on the surface, if it did not often lift it completely out of the water.

To remedy this, the angler must lower the point of his rod, carrying it a little to windward of his float, and permitting a few inches of his line, near the float, to lay in the water. By this precaution, he will find his float ride at ease, especially if there be the opportunity of resting such slack part of the line on weeds that lay on the surface. But when about to strike, he must not forget previously to draw his line nearly tight; else, as before stated, he will run a risk of snapping it, or, to say the least, he will strike false.

Of Pond-Fishing.

Hitherto I have considered the angler as being among large rivers, navigable streams, and the million of brooks which every where intersect the country; for in such will the most pleasant sport ever be found. The fishes generally run larger, are more vigorous, and, with not one exception that occurs to my memory, far more wholesome and better flavoured.

It will invariably, I believe, be found, that wherever a pond is supplied with water from some copious inlet,
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and that the redundancy is allowed to pass over by any small channel, made or left for that purpose, the fishes will more resemble such as are taken from a running water, than those which have been bred in a pond, however extensive, supplied entirely either by rains, or by bottom-springs.

When there is such a draught into a pond, or sheet of water, the large fishes will remain near to the inlet, awaiting the arrival of such eatable rubbish as may accidentally be brought down by the current, and ready to seize such *minnows*, *gudgeons*, and other small fishes, as may venture into the expanse.

The many local circumstances which may characterize a pond in respect to its situation, the nature of its borders, the depth and colour of its waters, the kinds and quantity of fishes it may contain, and a number of matters which immediately strike the eye habituated to such objects, must decide as to the best stations for throwing the line. The season of the year must not be forgotten; and even the state of the weather, and the hour, must not pass unnoticed.

It is, in truth, beyond the power of any person to lay down even general rules for this branch of the diversion, that are not subject to refutation from the anomalies which experience will daily present. I shall therefore content myself with observing, that where there are many weeds, especially the *broad dock*, the *water-làurel*, the *flag*, and the long, floating, fibrous *conferva*, or *bottom-weed*, there will usually be a good stock of fishes; unless the proprietor thins them by the net.

For, as all ponds are subject to be frozen during the winter, it is not very easy to poach them at that season;
especially

especially as the fishes retire into the greatest deeps, and lay under whatever shelters may present themselves. During the spring, and as the days get longer, the poachers are more afraid of being detected; not but they will, if possible, have a hearty drag. As the summer advances, the weeds become so strong and plentiful, as to defy all nets; unless a previous clearance be made, such as poachers could not generally attempt; though instances have been known of their carrying boats to the waters in gentlemen's parks, &c. and of their having cleared away the weeds, so as to be able to work their nets.

The fishes in ponds are in their habits pretty similar to those in running waters; but I think them, for the most part, far more silly, yet not so ravenous, unless their numbers, in proportion to the quantity of water, and to the supply of food, render them so. Their want of cunning, comparatively, no doubt, is owing to their being in a state of protection, and less subject than the river fishes to all sorts of devices.

Their being more easily taken, I impute to their subsisting chiefly on vegetable productions, and, consequently, more prompt to take a worm than such as feed principally on animal matter; as is the case in running waters, into which chance and design combine to launch a great variety of worms, slugs, snails, and refuse of a thousand kinds. These run the gauntlet down the current, and, though unnoticed by one kind, are snapt up by others. Reason would tell us, and experience confirms it, that as the fowls of the air feed on various fruits, seeds, &c. so some kinds partake exclusively of certain productions: thus, the carrion crow, &c. like the *jack*, refuses nothing that comes in his way.

When

When leave has been obtained to angle in any gentleman's ponds, it is very easy to ascertain, by inquiry among his dependents or labourers, which is the part most favourable to your intentions. There you would do well to sound the waters, and to cast in a little *ground-bait* the day previous to throwing your line.

I have already said, that near small inlets you will probably find good sport ; therefore, fail not to try the depth in such parts, and do not despair, even though you should find it shallow ; owing, perhaps, to the soil washed down by heavy rains : at the edge of such a bank you may expect the water to fall, rather suddenly, to a considerable depth, in which the great fishes will often lie, especially after any fresh, awaiting the supplies usually brought down by the current.

Near sluices, penstocks, and flood-gates, the water is usually pretty deep, and clear of weeds for a few yards at least ; they being sometimes cleared away for the purpose of having a free draught, and for placing a net to catch such fishes as may be attracted to the spot when the sluice is opened a little on many occasions, but especially for the supply of a stew, or nursery-pond, dependent on the larger water.

The time of the day will often occasion a change in your proceedings, as will a change in the wind ; especially if it comes down a *vista*, or any other opening between plantations, hills, buildings, &c.

The fishes themselves will often prove excellent guides, and by their rising, at least, will shew you where they chiefly lay ; though this is by no means so certain an indication in a pond as it is in a river ; for, in the former, fishes are more apt to change their places, than they are
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in streams ; in the latter, they often adhere closely to such spots as they select for haunts, and may be seen to rise always in the same part. We should be apt to conclude, from sometimes seeing many risings in a few minutes, that a hole were full of fishes ; but it often turns out, that when one or two have been caught therein, either by line or net, the risings discontinue.

Although some ponds, which have a free current of water through them, occasionally abound with *trouts* of an inferior description, yet such are somewhat rare, and the angler must be contented if he gets good *perch*, *tench*, *carp*, *roach*, *dace*, and *eels*. In some he will find *jacks* ; but as they increase very fast, and grow rapidly, when their numbers are not very frequently well thinned by the net, or by constantly angling for them, the quantity of other fishes will be reduced considerably ; excepting, however, the *tench*, which the *jacks* will not touch.

Such ponds as are covered with *duck-weed* rarely contain good fish ; it is too compact, and covers the surface too closely ; besides, it rots very fast, and invariably gives the water a bad colour, attendant with a very nauseous flavour. If, however, a pond, partially covered with *duck-weed*, has its surface on nearly the same level as the surrounding lands, and is exposed to the wind from any one quarter, so as to admit that ventilation which not only purifies water, but blows scum, &c. to the opposite shore, we may then hope to find some fishes, though not in such abundance, nor of such a growth, as in clearer waters : I never tasted a well-flavoured fish from such waters.

The best mode of angling in a pond of any extent, is in a boat, which should be poled or rowed, very gently,
to

to the most favourable situation, and then be secured, either by an anchor, or by a pole and tie, if the depth permits. But the vessel must be kept very quiet, as any agitation therein would infallibly alarm the fishes, and cause them to retire.

The generality of fishes in ponds take the bait best near the bottom ; they will, however, take at the very surface, provided you can contrive to make your bait appear to fall gently off a *dock-leaf*, or place it so that only a small portion of it hangs down from one. I have often been highly successful in this way, especially among *carp*, which are remarkably shy when they can see the line, though of the finest gut ; yet they will lay hold of a fine worm thus dangling, and slip it down before they are aware of the deception.

In some situations, pond-fishes will take the fly readily ; but, in my opinion, not with that very marked alertness which fishes in rapid streams evince. This is, no doubt, owing to the stagnation of the water, which does not aid the deception so much as a brisk current. In windy weather, however, when the surface is ruffled, the case alters materially, and pond-fishes then, at intervals, dart with great keenness at the lure.

This I conjecture to be attributable to their being very numerous, and to the variety of competitors, urging each other on to destruction. The moralist may, perhaps, in this find a comparison not very favourable to mankind ; or, at least, applicable in the strictest sense to the too numerous tribe of speculators !

Of Bubbles in the Water.

Nothing is more common than to see *bubbles* rise from the bottom, to the surface of the water : these very often will be found to have intervals nearly regular ; in which case, we may perhaps safely attribute them to the air discharged by various fishes, that lie in the mud or sand. *Eels* and *muscles* may sometimes be seen to throw up such bubbles ; the former having only their heads out, and the latter being nearly buried.

Air will also be thrown up in this manner by the dissolution of lumps of clay, chalk, &c. ; which being gradually penetrated by the water, discharge the air they contain. This will be easily proved, by throwing in a few pieces, which will speedily produce the effect described.

Many consider these bubbles as arising from the respiration of fishes : in which they will sometimes be right ; but the foregoing elucidation will evince, that such is not always the case. I have repeatedly been out with young anglers, who on seeing the *bubbles* rise, have immediately expressed their exultation, and proceeded to *throw in* at the seemingly favoured spot, under the pleasing expectation of a bite. Sometimes success has attended the proceeding, and confirmed my companions in error : for, in my belief, the fishes taken on such occasions, did not eject the air that caused the *bubbles* to rise.

My opinion is, that when fishes *bubble* in this way, it is during the time of digesting what they have been eating. I have repeatedly, in clear waters, observed fishes on such occasions, and invariably remarked, that the *bubblers* appeared quite indifferent to any bait.

Further

Further I am certain, from the very pointed attention I have paid thereto, that *bubbling* is very generally a symptom of fear, or of doubt : having had innumerable opportunities of watching the actions of fishes, while near my baits, my observations fully satisfy me, that, when fishes which approach a bait, throw out air as described, they never bite.

Wounded fishes, especially *jacks*, evince their pain in this manner ; as they do also their inquietude, when unable to swallow their prey. Whenever I have missed a *jack* in striking at the *snap*, and that he has thrown up an immense number of small bubbles, I have found great difficulty in getting him to attack my bait a second time.

More than once I have lost my hook, owing to a *jack's* having taken my worm, which was intended for other fishes ; when, on casting in a dead bait at the place where I have known him to lie, by observing how abundantly the small bubbles arose, I have taken the *jack*, with my former bait and hook fast in his mouth.

When I have been obliged, from the want of *minnows*, *gudgeons*, &c. to put on a small *roach*, or *dace*, as a *dead-bait*, and have been taken by a *jack*, which threw up bubbles, I invariably found, either that my bait was too large for it to gorge ; or that the *jack* was wounded in the mouth ; or that, however greedy he might seem in seizing my bait, yet that he was too full to admit of swallowing it without difficulty.

These I assert to be the general circumstances attendant on fishes throwing out air ; and I strongly recommend to the young sportsman to be guided by any other indication in preference to this ; which seems to be rather an adverse than a favourable omen !

Of Night-Fishing.

Fishes in general do not seek food during the night, though in the very hot season of the year, when the sky happens to have been remarkably clear during the whole day, and especially towards sun-set, they will come on the feed at very late hours. Such must be considered as adventitious; for we may set it down as a rule, from which few exceptions will be found, that animals of every kind retire to rest as the day closes in; becoming more disposed to sleep than to eat.

From this, however, we are to exempt such as are of a predatory nature; as the wolf, fox, &c. among quadrupeds, the bat and owl, in the winged tribe, and the *eel* among the inhabitants of fresh waters. These all prey by night, and are by no means to be classed with the many other fishes, birds, and beasts, which, though they will occasionally feed at night, are generally impelled thereto by certain circumstances, abstracted from their ordinary habits.

We find, that where the tide flows, especially where it is brisk, the larger portions of fishes will come out to feed, so soon as they feel its influence: but we are to consider this as depending entirely on the regular supply of food brought by the influx of the waters; which causes all fishes contained within the reach thereof, to acquire a habit of awaiting the tide's arrival.

This will be admitted by every *practical* angler, though the *theorist* may think otherwise: the former well knows, that the same sorts of fishes, which, a few miles higher up the stream, will only bite during the day, will, when the tide is strongly felt, bite freely, without regard to the hour, either of the day or of the night.

I have had some sport by hanging a lantern over the
side

side of a boat, in a dark night, and dipping with a *natural moth* on the surface, where the light shone fully on the water. In this way you may attract great numbers of fishes, of all sizes.

But much cannot be said of *bottom-fishing* during the night; though I have *heard* of great success in this way. For *eels*, especially the large ones, it is without doubt the best time. *Fly-fishing* is rather superior, in this instance, with what are called *moth-flies*; for such is the sagacity of fishes in general, that few will rise at a *day-fly* after the night has fairly set in.

However, at this moment we must refrain from that part of our subject, and, contenting ourselves with remarking, that *night-fishing* is best practised on moonlight nights, after very close evenings, proceed to explain the manner in which various kinds of fishes are to be taken, by means of

Night-Lines, or Trimmers.

These are variously made in the several parts of England, but are rarely to be found of a good construction. For the most part, they consist either of double or single hooks, fastened on to brass wires, called *guards*.

These are intended to prevent the escape of fishes caught on the hooks, which being chiefly of the *predatory* classes, and consequently well furnished with teeth, would know any common line asunder.

The fishes usually caught by *night-lines*, are *eels*, *jacks*, *trouts*, and *perch*, all of which take a worm, or a *dead-bait*; but when the former are used, other game will at times be found on the hooks; and not unfrequently the worm will be nibbled off by *minnows*, &c. &c.

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The *day-trimmer* is made-by cutting two deep grooves in the opposite edges of a bung, or large piece of cork. The end of a long line being fastened to the bung, the line is wound on it, until only a few inches are pendant ; so that the bait may float at any desired depth. The bung, &c. being thrown into a clear part of a pond, when a fish takes the bait, he will not be impeded ; as the line will run off the revolving bung, which remains as a guide to the fish's locality. *Trimmers* of this kind are more particularly applicable to *jacks* and *perch*.

I should observe, that, properly speaking, *trimmers*, so called from their very rarely allowing any fish that gorges the bait to escape, apply more particularly to the double-hooks made on one wire ; so that the brass *guard* may pass through, and form a kind of hinge ; the *guards* should also have joints in their middles ; forming by this means two links ; so as to render the tackle more pliant than if all in one length, stiffly fastened on by whipping to the hook.

Such are more advantageous in some respects, but they are not so good for *eels* as the plain, straight, guarded *trimmer* ; which those fish cannot so easily manage to break as they do such as have hinges.

Persons unacquainted with the vigor and pliancy of the *eel*, would be apt to think such substantial *trimmers*, as are sometimes offered for sale, fully adequate to every purpose : but it should be recollected, that *eels* very often are found to weigh from two to four pounds ; and that their power to curl themselves round and round the line, gives such a hold as enables them to draw back their heads from the point of resistance, with great effect ; and eventually to tear the hooks out of their very maws.

The instances I have seen of their thus twisting the
guards,

guards, so as to wrench them at the hinges, and allowing of escape with the hook, would astonish those who are not conversant on the subject.

The strength of the line, though not to be overlooked, is nevertheless quite a secondary consideration, when speaking of *trimmers*. The first attention is due to the hook, which ought to be very well tempered, and strong; as has been already shewn when treating of hooks; for, if it be at all faulty, it is totally unfit for this purpose.

Experience has fully convinced me, that *wire-guards* are very exceptionable; and that the expence of *gimp*, as a substitute, is soon repaid by the superior success attendant on its use. I have for some years used nothing else; and I have also found that two *eel-hooks* with eyes, are better than either a single hook or a double fixed *trimmer*. My manner of preparing this kind of tackle is this:

Place the two hooks pointing different ways, so that their two eyes should cover, or stand over, each other; pass your *gimp* through them, and bring it back so as to form a lap of about one inch.

Whip the *gimp* well down with three threads of good silk, well waxed and slightly twisted together, in such manner that the hooks may have very little play on the *gimp*; as you whip on towards the upper end of the *gimp*, carry the small end, or lap, round the longest part; so that the greatest exertion could never draw the lap out; as might perhaps be done, if the lap were merely parallel to the line.

When you come to its tip, make all fast, and finish with the concealed knot; that every part may be neat and substantial.

This being done, at the other end of your *gimp*, which ought in the whole to be about a foot in length, make a

loop thus : double down the end for about two inches, and pass the tip through the double thus made, so as to form what is called a *half-hitch* ; bring it down again so as to be parallel with your line, and commencing a little below the tip, whip upwards with your silk, until you come to the place where it doubled in ; there finish off with a concealed knot, but without cutting away your silk ; whip also a little above the crossing, to keep your loop more compact, and to give greater security to this part of the work. See *Fig. 4, Plate IV.*

The whole of the whipping at both ends of your *gimp*, should be well rubbed with your wax (*i. e.* shoe-maker's), and the *gimp* itself will not be worse, either as to colour or duration, if it be smartly, but lightly, rubbed also ; observe, that quick motion causes the wax to melt in rubbing, and disposes it to cover the surface more freely and evenly ; while the lightness of action prevents its being laid on too thick, and saves the *gimp* from injury.

The line itself should be sufficiently substantial, such as very thick *whip-cord*, or moderately thin *laid-cord* ; the length must be entirely governed by the depth of water, or other local circumstances ; but in general for a single line, set independently, about six feet will suffice.

At each end of your line should be a loop, sufficiently large to pass a pullet's egg through ; that at the top is for receiving a forked stake of hazel, &c. by which it is fixed to the bank.

The other loop at the bottom, is to pass through the loop at the top of your *gimp*, when the former being extended, the hook previously baited, by means of a *baiting needle*, is to pass through it ; then drawing both the *gimp* and

and the line tight, the two loops will be mutually interlap'd.

Where worms are used as baits, they should be threaded on the double hook, by allotting one for the head and the other for the tail of the *lob*: the centre part should be fastened up to the top of the shanks, by means of a piece of worsted. Chicken's guts answer for this kind of baiting admirably, and take many fine *eels*.

Where the banks of a river are much frequented, and you are subject to having your lines taken up by the petty pilferers that every where abound, and who delight in every kind of depredation by which one of their betters may suffer, you must be careful, and lay your lines so as not to be seen; therefore in such places tie the cord to the root of a tree, under water, or to bunches of grass, or to the stalks of large weeds, &c. though nothing is more secret or more substantial than the forked peg, if properly managed: it were best, however, to get up early, lest some trespasser, or passer by, should see the fish struggling, and save you the trouble of taking it home. See *Fig. 7, Plate III.*

In narrow waters, where you can jump across, or where you can easily get to either bank, many short lines being tied to one strong cord, of which the ends are affixed to pegs in the banks respectively, answer very well. The lines should be lowered gently into the water, and the cord should be so far slackened as to allow the baits to lay fairly on the bottom.

This serves to entice fishes, which cannot pass up and down without noticing some of your baits.

Where streams are broad and shallow, but the bottom firm, no mode is better than that of driving two stakes in, so as to be concealed even when the water is at its

lowest level. These should be placed obliquely across the stream, that when the cord with your lines may be stretched from one stake to the other, the main channel may be intercepted, and the fishes be compelled to notice the baits. In this way twenty or thirty hooks may be set; or more, if the space admits.

If the water is of unequal depths, and that the fishes take such a course in general, as not to admit of the preceding modes, a boat will be necessary; not only for laying your cord properly, but it to get it up in the morning.

Going on this plan, your boat should be poled up to the higher part of the stream, where you mean your highest line to lay: then having tied bricks, or other weights, to the ends of your cord (and if it be long, at intermediate parts also), drop one of the end bricks into the water, and lower out your cord with the bait lines affixed thereto at proper distances, say two feet asunder; taking care they are not entangled, and that they go clear of each other.

If the current is not very strong, your first brick will serve you in some measure as an anchor, and enable you to keep your cord sufficiently tight, as the boat goes down the stream. In this way, if you do not stint yourself for space, any number of hooks may be set.

In setting your line, after it has all the baited hooks attached, throw each hook over the boat's edge, in regular succession, so as to hang a few inches out; the cord will thus be slack, in the manner of a festoon, all along the inside of the boat's edge; and unless some mismanagement should take place, will run off freely, taking the hooks in a regular manner.

Note down the spot where your uppermost brick was
dropped,

dropped, and in the morning, by day-break, proceed in the boat to take your hooks up. For this purpose you should go to the marked spot, and with your boat-hook, feel for your cord; if you have a garden rake at hand it is preferable; generally getting your cord with far less trouble.

You must not be surprised if you do not find your hooks where you set them; for large fishes, especially *eels*, will drag them, bricks and all, to some distance, and twist them into such a confused mass, as will call forth all your patience to unravel.

For this reason stakes are far preferable to bricks; but they cannot be so well concealed; and, as all who lay *night-lines* are, to a certainty, watched by various classes of idlers, and especially by the professional fishermen, who cannot bear to see a fish but in their own nets, it is an object of some moment, to adopt such measures as may counteract the wiles of the vulgar.

I have often found my cord one or two hundred yards down the stream, with several *eels* and other fishes fast on my hooks; and sometimes I have had the mortification to find my whole apparatus laying on the shore; no doubt robbed by the fishermen, who watched my motions, and got up-time enough to be before me.

Once indeed, I was eased altogether of my cord and lines, but had the satisfaction to learn, that the thief, who often gave cautious hints of his trick, was sent to display his dexterity to better purpose at Botany Bay.

All things considered, I look upon the laying of *night-lines*, except in protected waters, as being a very hazardous affair; and should recommend single lines in preference to many on a cord. If good tackle be used, it

proves a double incitement to robbery ; for, when stolen, the lines are easily laid in places not frequented by the owner ; and even if discovered, it is neither easy to prove the property, nor worth while to consider it as entitled to litigation.

Therefore, single hooks, made fast at the eyes to good whip-cord, and guarded by laying neat'd brass, or copper, wire into the hollows between the strands, for seven or eight inches from the eye, are on such occasions to be preferred ; though they will not prove so *killing* as those affixed to *gimp*.

The reader should not forget to solicit permission from the proprietor of the waters, to set *night-lines* ; else he may subject himself to some disagreeable matters, ordained by the law as punishments for this offence.

Those who angle during the day, must, like persons shooting on manors, be *warned off* ; but those who *snare fishes during the night*, are considered as poachers, and come under the statute.

Of the Fish-Basket.

This is an indispensable article ; for it is not only unsightly, but injures the fish, when they are suffered to dab together, as they cannot fail to do when strung together by the gills.

In my opinion, the baskets in common use are calculated only for the reception of small fishes ; since none that I ever saw, would allow a *jack* of four pounds, no, nor of three pounds weight, to lay straight. I have indeed, seen gentlemen puzzled how to carry their sport home, though they had good sized baskets.

It is not easy to give any general rule for the form or
measure-

measurement of a basket ; but if ever I have a new one, it shall certainly be rather longer and flatter than those now made.

Some fishes, such as *carp*, *tench*, *perch*, &c. cannot be doubled ; and indeed none of any kind *should*, except *eels*, which are not so much disfigured by it.

Whenever I get a fish that will not go straight in my basket, I put it into my net : not that I am partial to doing so ; for it sometimes has occurred, that I have been compelled to empty it for the purpose of getting a good fish out of the water.

Put plenty of fresh rushes or flags at the bottom of your basket, and among your fishes, so as to keep them asunder. Flags are the best for this purpose, as they are not so easily pressed together as grass ; which is besides apt to cling to the fishes, and spoils their appearance.

Always wash your fishes after you have taken them off the hook, as they will then keep better, and not dirt the inside of your basket ; which should be occasionally dipt in clear water, immersing it, and drawing it out with a brisk motion frequently, thereby to wash out all the filth that will else inevitably accumulate, and give it an offensive smell.

Be careful, however, to dry it well whenever it has been wetted ; for if it be put into a close situation, or that the fish be left in it, rottenness will speedily follow.

Of the Pocket-Book.

However trivial the arrangement of this article may appear at its first mention, yet I know not of any thing in this amusement more comfortable, or more necessary.

both in regard to stowage, and to expence, than a well-regulated *pocket-book*.

The quickness and satisfaction arising from a methodical attention to this point, are in themselves sufficient claims to the adoption of systematic regularity : but when we consider, that the incumbrances attendant on the various requisites which should ever be at the angler's command, are thus included in a smaller space, and that they are preserved both in order and in good condition, it seems wonderful, that so many should forego such advantages, merely from the want of resolution to look over their stock at a leisure hour.

It need hardly be insisted on, that what is done during the hour of leisure, is generally far better executed than what proceeds under all the circumstances of vexation, hurry, and their several consequences. In fact, in a well-ordered compendium, every thing comes so immediately to the hand, that little difficulty would be presented, were any part of the tackle to require change, or to be replaced in the dark ; while the possessor of a mass of unsorted, unarranged apparatus, can scarcely, at any time, contrive to bungle together that of which he is in immediate want.

Speaking of the *pocket-book*, I should rather be understood as recommending *two* : for in my opinion, the whole of what relates to *fly-fishing*, should be kept separate, in a very neat case, capable of containing a few *fly-lines*, some spare *gut* to repair *foot-lengths*, and from one to two hundred flies of sorts, properly classed in separate envelopes of vellum, and superscribed in large characters.

Also a *flat-reel*, a few *feathers*, of sorts, ready trimmed, some different *coloured silks* on a card, a little *cobler's-wax*,

wax, a pair of small pointed *scissars*, some small shots ready split, a pair of *tweezers*, a few *needles* on a bit of flannel, some flatted *gold* and *silver plating*, such as is sold by embroiderers, and a little *mohair* of various colours.

This division will appear the more reasonable, when we consider that persons who go out to *whip*, that is, to throw the fly, necessarily take a *fly-rod*, and rarely equip themselves with apparatus for *bottom fishing*: hence the tackle suitable to the latter mode may be safely left at home.

I am aware, that many gentlemen possess rods, which, like amphibious animals, answer both purposes; but as I was once of that opinion, and am convinced of its fallacy, they will excuse me when I observe, that the two branches of *fly*, and *bottom, fishing* are perfectly distinct, and cannot be so very easily blended. *Necessity*, it is true, has no law, but should never be quoted as *choice*! Rather than lose a day's diversion altogether, I would not refuse what I could be furnished with; but I would not for that reason, say that my tackle were appropriate to one, when it were made *ex. lusively* for the other sport!

The *book* for ground tackle should contain a separate division, made firmly, to fit a wooden rack for four lines: two of the lines should be stout, the two others rather finer, but all of the best quality. The hooks should never be affixed to the lines except when in use; but the floats should; for which reason, one side of the racks should be grooved deeper than the other; so that the floats might lay within them.

The opposite side of the *book* should contain a similar firm case, which ought to open at the bottom, instead of at the top; so that when turned on its edge to be closed, the back should serve as a cover to it.

In this should be a small *clearing-ring* ; a *flat-reel* ; a small *coffin-lead* ; a few *split-shot*, *swivels*, and *quill-loops*, also some *rings* and *splents*, all in a folding vellum. A few *hooks* sorted, a card with several colours of fine but strong *sewing silk* wound on it, a little *cobler's-wax* in a piece of *shoe-leather*, a pair of neat *scissars*, very short in the points, and a *disgorger*.

Your *trolling* and *dipping* tackle ought to be in folded vellum, and may lay between two or three strong pleats of tanned leather, which should form a kind of inner pocket-book with a flap and strap ; this should be fastened into the middle of the back, and lay between the two stiff cases.

Your spare *gut*, and your mounted *foot-lengths* of various descriptions, with and without shot, should be also in parcels of thin vellum, duly superscribed ; so that you may know the contents of each without opening.

Of course your *trolling* and *dipping* tackles will include all that relates to *live* and to *dead* baits, such as *baiting-needles*, *sewing-needles* stuck on a flannel flap, spare *gimp*, some *leads*, *swivels*, and every thing of that class.

As to a *jack-float*, such as is used for live-bait, you must let that accompany your *rod-spud*, *butt-hook*, *landing-net*, &c. &c. in your pocket, they not suiting the inside of the book.

This *pocket-book* will exteriorly bear some resemblance to a small cartouch box : for it ought to have a substantial flap, which should fasten by means of a leather thong, secured at its middle to the centre of the flap ; so as to present two points, going different ways ; each point to be equal to about a circumference and a half of the closed book.

book. By this measurement, the thongs will go twice round, and have enough surplus to afford a good tie.

Of Fishes in general.

I shall divide this part of my subject under two heads; viz. fishes that, from their habits of devouring their own species, may be termed **PREDATORY**; and those which, from their innocent manner of subsisting on worms, flies, weeds, &c. may be designated **FAMILIAR**. These terms will be found the more applicable, when we consider that the former class are at war with the latter, and indeed with the smaller of their own kinds; while the latter intermingle without apprehension of being attacked by any of their own class.

Under the **PREDATORY** division we find,

The <i>Salmon</i> in most of its varieties.	The <i>Jack</i> .
	The <i>Perch</i> .
The <i>Trout</i> in most of its varieties.	The <i>Eel</i> .
	The <i>Gravling</i> .

And under the **FAMILIAR** division we class,

The <i>Chub</i> , though I consider this as rather doubtful.	The <i>Ruff</i> or Pope.
	The <i>Rüdd</i> or Finscale.
The <i>Tench</i> .	The <i>Char</i> .
The <i>Carp</i> .	The <i>Gudgeon</i> .
The <i>Grayling</i> .	The <i>Flounder</i> .
The <i>Bream</i> .	The <i>Smelt</i> .
The <i>Bartel</i> .	The <i>Lamprey</i> .
The <i>Roach</i> .	The <i>Mullet</i> .
The <i>Dace</i> .	The <i>Bleak</i> .

The fishes which are caught in the bays, and at the mouths of rivers, when the tide runs up, will form a

third class, under the designation of MARINE ANGLING, and be separately treated of.

The following are to be found only in rivers, or in lakes, or other waters that are fed by ample streams; viz. the *salmon*, the *grayling*, the *trout*, the *chub*, the *barbel*, the *char*, the *flounder*, and the *smelt*.

Again, some are considered as being properly salt water fishes, since they retire, if accessible, to the sea during certain months. Such are the *salmon*, the *eel*, the *barbel*, the *flounder*, the *mullet*, and the *smelt*.

Few of the other fishes can live in brackish water; though the *jack* is occasionally found among those large morasses near *Tilbury*, and other low situations, to which the tide has access, where its waters are far from being fresh.

Naturalists conjecture, that *salmon* would not live the winter through, if kept in fresh water; but I believe the point has never been completely ascertained. The *eel* not only lives, but breeds very fast in ponds, and other secluded waters.

In respect to the growth of fishes, very little has, I believe, been authenticated: we have fair reason for concluding that fishes do not, like the rest of the animal creation, grow during their prime only, and to any particular standard; but that they continue to increase in size so long as they live in health. We know, that even in situations where it should appear they cannot receive much sustenance, they do not cease to accumulate in bulk, and apparently in vigour.

Very large fishes have been taken out of small wells: and from little puddles, that had not the least communication

cation with any other water, I have seen fine *jacks* and *perch* taken. They were not suspected to exist in such situations ; the surfaces being grown over with brush-wood, and weeds, in such manner as to conceal the water entirely. I recollect reading a well authenticated instance of a *perch* having been found among some large stumps, in such a puddle ; its body was indented on every side by the pieces of wood ; among which it must have been long completely stationary, since it obviously had grown considerably in that situation.

The question is, how it subsisted so as not only to exist, but to thrive ? We cannot but conclude, that all waters, especially when stagnant, contain or generate a considerable quantity of nourishment, whether vegetable or animal, on which fishes subsist when no other aliment offers.

Fishes are extremely hardy, so far as relates to bites, bruises, &c. It is by no means uncommon to find them with large scars, which can easily be distinguished among their scales, and sometimes with broken backs. I have caught one wanting a gill-cover, and have seen a few from which a pectoral fin had been taken.

Some kinds of fishes may be considered as amphibious ; thus the *carp*, the *eel*, the *jack*, and the *tench*, will all bear removal to many miles distance, if properly treated.

There are males and females in every kind of fish ; but the latter are by far the most numerous ; they are ordinarily known by having *roes* in the spawning season ; whereas the males contain only a card-like substance, called the *milt*, or *melt*. Almost all kinds of fishes are in season when about to spawn.

The *eel* never contains any *roe*, which gave rise to
many

many absurd conjectures, of which the *water-quacks* did not fail to take advantage, by publishing various recipes for breeding *eels* from horses' or from human, hair; from blood, from dewy turfs, and a thousand other such ridiculous nostrums !

The fact is, that the *eel* is of the viviparous class ; that is, produces its young alive, without the formation and digestion of *spawn* : but of this more will be said in its proper place:

However singular my opinion may be, yet I have frequently thought, that fishes at certain periods of their lives moulted, or cast their scales. I have caught several, especially *dace*, which appeared quite sickly, and had few or no scales on them; though there seemed to be new ones issuing from the *matrices*, or cells, in which the old scales had been fixed.

This might have proceeded from disease ; but when we reflect, that the lobster is said to be in the habit of changing its shell, and that all the serpent tribe (which approach very closely to fishes in their nature and osteology) cast their skins every year, perhaps my conjecture may appear to be in some measure correct.

I have heard, that the gold and silver fishes kept in vases, at stated times change their appearance in such a manner, as contributes to support my opinion.

If fishes do *moult*, they are, doubtless, at such times out of season, and unfit for the table : indeed, we may take it as a pretty general rule, that such kinds of fishes as afford most play when hooked, are firmest in their flesh ; and that such of those strong kinds as chance to make but little resistance, are proportionably flabby, and unpalatable.

Besides,

Besides, all fishes that are what we term "out of season," that is, whose flesh loses its firmness, and in some kinds its colour, are more or less in a state of periodical disease; and when hooked, not only fail to display their usual vigour, but even appear divested of that brilliancy they derive from health and good condition.

I shall, in the description of each fish respectively, inform the learner at what times they are out of season; an object of some importance, since it is then next to useless angling for them, as they neither take the bait freely, nor are worth sending to the kitchen.

One observation should, however, be carried in mind, viz. that all fishes in ponds are more or less valuable, according to the extent of their waters, and as the bottoms are more or less gravelly and firm. Such fishes as are bred in spacious deep basins, or lakes, whose bottoms are not muddy, approach nearly in perfection to those found in streams.

The larger and more rapid the stream, especially if the waters be clear, and not impregnated with any mineral, or other deleterious matter, the larger and more vigorous will the fishes be, and, as before observed, their firmness will correspond with their vigour.

Some kinds of fish are apt to be muddy, even when taken from waters that are tolerably pure; of this the *tench* is a conspicuous instance. All *eels* that have very yellow bellies, and generally those fishes whose scales are of a duller colour than others of their kind, may be suspected of a muddy flavour.

This, however, may be chiefly, if not entirely, removed, by keeping them alive in a tub, or other capacious reservoir, of clear water; in two or three days, especially

pecially if the water be changed, they will become perfectly sweet.

If you have not the means of keeping them alive, take out their eyes as soon as possible, and fill the sockets with fine white salt. This will divest them in some measure of their muddy taste, and cause them to eat firm : they will also keep much better when thus treated.

Above all things, never keep dead fishes in water ; it is the sure way to make them decay. Sprinkling with cold water now and then, keeps them cool and pliant ; but, to say the most, fresh-water fishes will not keep long ; they ought to be eaten soon after they are caught.

Having said thus much regarding *fishes in general*, I shall now proceed to describe them in detail, giving proper directions how, and where, to angle for them, and explaining their several peculiar habits, and times of spawning.

Of the Salmon..

Whether for size, comparative weight of flesh, or flavour, the *salmon* may be considered as the most valuable of all the fishes that come within the ordinary course of angling. Naturalists reckon 29 species of this genus, but that which comes under present notice is the *Salmo salar*, or common *salmon*, such as is sold at the fishmongers', and is sent from various parts of the kingdom, pickled in small tubs, under the well-known name of " Newcastle salmon."

This fish is found in almost every river that has communication with the sea ; it is partial to those clear rapid streams that characterize most hilly countries, such as those in Scotland, Wales, &c. where *salmon* have been caught in prodigious abundance.

Salmon

Salmon are frequently pursued by the *porpoise* and the *tunny*; both of which destroy great numbers, as they return towards the inlets and mouths of rivers, after their winter's excursion to sea: indeed both *porpoises* and *tunnies* have occasionally been caught in the higher parts of rivers, where they have ventured in pursuit of the *salmon*.

In the spring, the *salmon* may be seen darting up the rivers in numbers; they generally take their course through the strongest parts of the water, and if they meet with any impediment, such as a weir, a dam, or a fall, leap over in a surprising manner: nor are they easily discouraged by one or more failures; on the contrary, whether actuated by instinct, or by emulation, they redouble their efforts, and seldom in the end fail of success.

Many are shot while in the act of *leaping*, as it is called; and numbers are caught in nets, suspended in such manner under the fall, as to receive such fishes as may not be successful in their attempts to reach the higher water.

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.

It is wonderful that, on arriving at the top of the fall, the impetuosity of the current does not hurry them back to the lower water: this very seldom, or never, occurs; on the contrary, so soon as the salmon feels the element, he instinctively opposes himself to the stream with such a readiness,

readiness, and such astonishing rapidity, as strongly evince his powers.

Salmon grow to a great size, sometimes reaching to upwards of 70 pounds in weight ; but such are very uncommon : their average, in great rivers, may be from 10 to 30 pounds ; in the lesser streams, from 8 to 20 pounds constitute the general run.

They are not considered as *salmon* until after the fifth year, till which time they are known in different countries by various names, some of which are applicable to their annual growth. Thus, during the first season they are called "*salmon-fry*," or "*smelts*;" in the second year, "*sprods*," or "*spurts*;" then "*morts*;" "*fork-tails*;" "*half-fish*;" according as they appear to be advancing towards their final designation. I consider it, however, a difficult matter to fix the age of a *salmon* thus exactly, and rather approve of the Scotch mode of classing them.

In that quarter, all marketable fishes, that is, such as cannot pass the *cruives*, or *salmon-traps*, are called "*salmon*;" while such as can make their way past them, are known by the general name of "*grilts*."

Cruives are made in the rivers throughout Scotland, of those large pebbles every where abundant. They consist of a short, but immensely substantial, barrier, raised in the middle of the stream, by placing the stones loosely to the thickness of many yards, with a considerable slope, especially within. At the ends of this barrier, are two railed cages covered over with plank, and firmly fastened by piles and by arms, to both the bottom and the rampart.

From the exterior of the cages, or traps, two very substantial buttresses of loose stones diverge, so as to go
about

about 200 yards down the stream, expanding at the same time until they approach the respective shores; leaving a channel on each side of about 20 feet broad, but contrived so as to be very shallow, the main body of the water rushing through the cages.

The *salmon*, attracted by the velocity of the stream in the middle, and by the fall (often of many feet) into them, are eager to rush into the cages, where they are taken. None but ascending fishes are prized; as those which bend their course downwards have spawned, and are out of season. Nor, indeed, do they usually descend the streams until the fishing season is, by law, closed.

There being sometimes distinct fisheries for the net above *cruives*, which belong to other parties, the law has interfered to prevent the rails from being set too close together; else the value of the upper proprietors' fisheries would be destroyed, and the produce of succeeding years be considerably reduced.

As it is, I must confess, that mismanagement appears to be somewhere existent; for, with few exceptions, the fisheries for *salmon* throughout Scotland, especially in the *Ness*, which was formerly of the first rate, are confessed by all to decline miserably! We can only attribute one cause to such an effect, namely, the great rise that has taken place within these few years, in the rents of all the fisheries; by which the fishers have been actuated to narrow the *cruives*, as has been done, to my knowledge, in some instances; thus taking fishes before they attain a good size.

This is, in fact, eating all the chicks, and leaving none to grow up into fowls. Besides, young fish, though they

they do breed, have very little spawn, compared with those of greater age.

Thus much is necessary to be understood, by way of checking that very sanguine idea which many anglers entertain regarding the abundance, and the size, of the *salmon* in Scotland.

The simple truth appears to be, that the generality of the waters in that quarter are desperately poached by those who rent them, and who are, almost to a man, jealous of a line being thrown within their bounds.

What with *cruives* and *nets*, *salmon* are becoming very scarce, and will be still more so, if the proprietors are not more attentive to keep the fishermen from encroaching on the legal measurements both of *mesh* and of *rail* !!!

Many assert, that *salmon* will return regularly every season to that water in which they were spawned: this *may* be true, but I cannot imagine by what means the supposed fact was ascertained. A few partial instances would serve but as a weak ground for a general rule.

In the early parts of the season, the *salmon* are to be found generally in the deep strong waters, though they will at times lay upon the *scours*, or shallow swift parts of streams, to prey upon *minnows*, and other small fishes.

During the summer, the *salmon* basks near the bottom in places exposed to the sun, on gravelly or sandy places, but in more gentle and shallower water than in the spring time. About the middle of June, the males acquire a horny excrescence under their chins, which seems to be intended by nature as an instrument wherewith to form an excavation in the sand, or gravel, for the

the accommodation of the female, which usually *spawns* in July, or in August: some, indeed, later, and some earlier; but the hottest time of the year appears to be that of their greatest fecundity.

When the female is first in spawn, she is in excellent condition; but, owing to absence from salt water perhaps, gradually becomes more and more loose in her flesh, which changes from a deep rose colour to nearly white; while the head becomes blacker, and the whole exterior betokens indisposition. She does not recover until she again visits the sea. When in this state, they are called *black-fishes*.

The male keeps floating over the female while she is spawning; and, when she has deposited the whole in the cavity where she laid, he, in a careless kind of way, grubs up the sand or gravel, and therewith slightly covers the spawn: from that time, Nature is left to do the rest.

The young fry may be seen about two months after, as long as a little finger, or more; and by the time they have got to the mouth of the river, in general grow so much as to vie with a middling gudgeon.

I do not think they venture far out for the first year; as they are to be seen, during the whole of the winter, on the scours, at the edges of deep strong waters, and sometimes in shoals where there is a deep hole in a warm situation. But, in such cases, they will only remain where the sea flows in freely.

For some time before the *salmon* quit the higher parts of the fresh waters, they become very sportive among the flies that frequent the rivers in autumn, and select the more retired situations in strong deep waters. When they begin to descend towards the sea, they remove daily to
some

some fresh spot, and, in many places, disappear suddenly; as though the least brackishness in the water summoned them to the ocean.

The time of their return into the rivers is extremely uncertain; for many are seen, during favourable winters, to run up so early as January; indeed, some have been taken in that month full of spawn. The generality may be expected in May, perhaps a little earlier.

It should seem, that *salmon* are not invited by circumstances in any degree respecting warmth or flavour in the fresh waters, to quit the sea; but that they retire, in all probability, from hosts of their natural enemies, which would devour their young, and perhaps the spawn itself, were the means left for them to do so.

After so ample an explanation, I trust the learner cannot feel himself at a loss in regard to the situations wherein he is likely, at various seasons, to find *salmon* (indeed they do not study concealment so much as other fishes in general). He will also have informed himself as to their *probable* seasons, for that does not appear to be yet a settled point.

In some waters, *salmon* are taken all the year round in good condition. These anomalies, and deviations from the ordinary course, are not to be the angler's guide; though he should take every advantage they may afford.

The *tackle* proper for *salmon*-fishing is of the heavy class. If the *fly* is used, a rod of about 18 feet long will be requisite; this should not be so pliant as *fly-rods* in general, but well made, and without the smallest blemish, especially towards the tip.

The wire loop at the end ought to be very thick, and every thing suitable to the struggle a very vigorous fish,

weighing

weighing from 10 to 40 pounds, must be expected to make.

The reel should be of the largest size, and furnished with a sound line of not less than 40 yards long. Those who angle for *salmon* in Scotland, use a very stout line made of horse-hair, generally black, wound on a cross stick fastened to the butt, as has been already described.

The Scotch people angle for them in earnest; being often for six or seven hours up to the middle in the stream, into which they wade, so as to throw their flies over the *salmon*'s haunts.

When you think the *salmon* runs large, your hook should be on double gut; else, with the best management even, you will rarely land a good fish.

Many talk of catching *salmon* with single hairs; but, admitting that such may have happened, under favourable circumstances, no man in his senses would expect to be successful, who had no stronger check upon the fish's disposition to go his own way.

Indeed, *salmon*-fishing is not such a finical amusement; it is a laborious one, and requires both skill and a strong arm, to follow with any advantage. Those who have ever felt a fish of 20 pounds weight at the end of their line, must be sensible of the necessity for having *very strong tackle*.

Further, the *salmon* is extremely voracious, and when on the feed, does not stick at trifles; that is, in proper waters. In still clear water, where the deception may be discovered at some yards off, he is at least as prudent as his neighbours.

Under the head of *Flies*, those suited to *salmon* will be shewn: they are best used in the middle of cool breezy days,

days, during the summer, and will sometimes prove highly successful in the evenings following sultry noons.

The greater part of our English anglers make a great fuss about the proper flies for *salmon*; whereas the Scotch anglers, who are very skilful, and possess many admirable qualifications for the sport, content themselves with either a heron's or a bittern's hockle, or the red feather from the wing of a turkey-cock, which answer for the wings; while a little fine wool, of a sulphur yellow (sometimes rather deeper), makes the body of such a fly as the *salmon* seem to relish greatly. The Scotch anglers all *bush* their own flies, for so they call the art of manufacturing them.

In the morning, that is, so soon as you can after the day dawns, your best sport will be with the worm. For this purpose take two well-scoured *lobs*, run one up (as described in the directions for baiting) above your hook, which should be No. 1, or No. 2, and let its tail hang down, and cover the second worm, which should be threaded so as to occupy your hook entirely, and to have about half its length, or less, pendent.

Your *gut* may be *treble*, but should at least be *double*, for about six or seven feet. At a foot distance from your hook, put on a swan-shot; and before you loop your line on to the swivel, which should, in this branch of angling, be at the top of your *gut*, slip on a *coffin-lead*, already described, to sink your bait so as to play on the bottom. The swan-shot will keep the lead from going too low, but will not fix it, nor prevent the line from drawing through when a fish bites.

Let the above point be ever attended to; that is, never to attach your *coffin-lead*, or any other heavy weight, to
your

your line : if you do, the fish must drag the weight when he attempts to move your bait, which he will instantly let go, on feeling the least detention ; whereas, when your line passes *through* the weight, the fish can carry away your bait without feeling the smallest impediment ; the weight laying still, and allowing the line to draw through it to any extent.

A float is not only useless, but an hindrance, when angling for *salmon*, which will not in general take a *tripping-bait*, or one suspended to a float. When the water is deep and rapid, you will find *roving* an excellent method, especially among foaming eddies, and under impetuous falls, where the *salmon* leap.

When a *salmon* takes your bait, you will feel the line tighter ; sometimes you will feel a sudden pull : in the former instance, give the fish time to gorge, and then strike pretty sharp, but not violently ; in the latter case, it is ten to one but the fish has hooked himself, and you should strike more moderately ; but, in both instances, keep a tight line.

Avoid, however, irritating the fish, and let him keep low down in the water, unless the bottom be foul ; if it be so, keep the fish well in hand, yet without provoking him to ascend, which he will be apt to do if urged, and will then leap and lash in a very dangerous manner. With calmness you will soon subdue him, especially if you can contrive to lead him gradually into still water, where you can controul him much better than among the rapids.

Although *salmon* are very strong and active, yet I do not think them very difficult to manage. With a good

bottom-rod, about 16 feet in length, and stout tackle, in an advantageous situation, the angler should not be afraid of the largest *salmon*. I consider a *jack* of the same weight, to be far more formidable.

Salmon will sometimes take a live bait, but may be more readily caught by the common method of trolling with a *minnow*, especially if you can anchor a boat in the middle of the stream, so as to have an ample scope for spinning your bait across it, as you sit at the stern. In this way you may have good sport, keeping an excellent command over the fish.

If there is a good ripple on the water, the *salmon* will bite freely, particularly on the tails of strong currents, running on sand or gravel. They do not frequent muddy situations.

Some troll for *salmon* with small *gravlings*, or *last-springs*, as they are called in some parts; others use small *trouts*. They are no doubt all good baits; but I have always remarked, that though the largest are the most enticing, the smallest are the most certain. If you play your bait with a quick motion, so as to make it conspicuous, and to conceal the device, you may be assured, that, if the large fishes are on the feed, they will not be long in announcing themselves, and will take a *minnow* as soon as a *gravling*, &c.

The angler, when he is intent on catching *salmon*, will find it necessary to keep as much out of sight as possible, and to avoid moving his rod. This precaution, indeed, holds good in every branch of angling.

The *salmon* is very singular among fishes in one particular, viz. so soon as hooked, or netted, it instantly empties

empties its maw, in which nothing is ever found. In this it resembles the woodcock and the snipe, which void their excrement whenever they take wing.

Before I quit this part of our subject, I must inform my readers, that great numbers of *salmon* are taken in the Highlands of Scotland, in those pools generally formed by the impetuosity of the current, under falls, by means of what is called the *stanger*.

This is a stiff pole about 12 feet in length, with a metal loop at its end, and rings along it, as in rods; through these a strong hair line is passed, having at its end a very strong double hook, very sharp at the points, and deeply barbed. The superfluous line is wound on a cross stick, as before described. The operator lets down the hook into the water, to the depth of 12 or 15 feet, holding down the point of his rod as low as he can reach. After allowing it to remain in this position for a little while, he raises the point of his rod, as far as he can reach, with a sudden pull.

It has sometimes happened, that a salmon has been on each hook! This would appear a very improbable manner of catching fish; nevertheless, I have seen seven caught in an hour; and know *for certain*, that the man who caught them did, in the course of one day, thus obtain upwards of seven scores of *salmon*, weighing from six to fifteen pounds each: some were caught by the head, others by the belly, or near the tail, just as they chanced to be in the way of the hooks when they were jerked up.

Even in this mode of catching, some skill was required to get the fish safely out of the water; it being impossible to judge how far the hook had penetrated. Each fish

was therefore managed with care, and led to the still water, where a landing-net was in readiness to receive it, as soon as ascertained to be firmly hooked.

In regard to the junior classes of *salmon*, their habits being precisely the same as those of their seniors, nothing particular need be said concerning the mode of taking them. They begin at a very early age to nibble at a worm; and, when about the size of a small mackerel, are extremely keen after the fly, especially those of a dark colour.

They frequent the long flat *scours* on the sides of rivers near the sea; and when the surface is ruffled by a smart breeze from a warm quarter, towards the autumn and fall, may be caught in great numbers.

Your tackle for this sport should be very fine, and the flies on hooks not exceeding No. 6 in size; indeed No. 7, or 8, will be sometimes found to answer best. If you do not wade into the water up to mid-leg, your line will require to be let out to a considerable length; as the fishes generally lay some distance from the shore, at the edge of the deep water.

Do not consider it a wonder if, in casting for the infants, you should hook one of the parents; which, in such waters, will give you much trouble, by frequent leaps, and lashings with the tail.

Salmon being often too heavy to be taken out of the water by a common landing net, the *gaff* is in common use among those who pursue this diversion.

I have already described that instrument, and shall briefly observe, before I pass to the next chapter, that the *gaff*, having a cord fastened at about a foot from the upper end, may be carried over the back, much in the
same

same manner as muskets are slung by soldiers, the other end of the cord being tied to the butt of the hook.

But to say the most of it, I do not think a *gaff* is indispensable; while it is, on the other hand, a dangerous companion.

Of the Salmon-Trout.

This fish, though somewhat singular in its form and appearance, is nevertheless often mistaken by anglers for young *salmon*; but it is not so flat in proportion as a *salmon*; indeed, it in some respects is more like a *mackerel*, and is, besides, more bright in its marks.

The scales under the lateral line exhibit a pink tint, which gives them a peculiar and beautiful lustre. Besides, it is more variegated about the head and gills than the *salmon*, being marked with rich specks of red and black; in some more inclining to clay colour, and deep brown; but such are generally going out of season.

Salmon-trouts rarely exceed five pounds in weight, and their average may be taken at about two. I have heard of some being taken that weighed eight pounds, but such must be very uncommon: perhaps, as above-stated, there was some mistake.

These fishes frequent the same parts of rivers with the *salmon*; but they are far more keen after the fly, being very sportive and ravenous. They *spawn* in the autumn, about Michaelmas, and immediately after run down to the sea; disappearing, in general, from the time of the first frosts until the cherry begins to blossom, when they return in shoals into some waters.

Like the *salmon*, they run high up the rivers, and sometimes work their way over shallow flats, with inex-

pressible vigour and nimbleness. They are in season when they come from the sea in the spring ; but gradually lose their flavour, colour, and appearance of health, as their spawning season approaches. Some are found all the year round ; but in the cold months they are not worth dressing.

Angle for them after a *fresh*, or as in some parts called a *spit*, when the water is strong and discoloured, with a well-scoured *brandling*, or a large *red-worm*. At such times they often take the bait near the surface, especially at the edges of whirls and eddies. Both *trolling* and *roving* are good modes ; but your *dead bait* ought not to exceed the size of a *minnow*.

When the water is clear, you must try the rapid *scours*, and under *mill-aprons*, *weirs*, and all small falls from which the water runs smartly. Most of these places are deep where the water tumbles in, and harbour the finest fishes.

Your tackle should be strong, but fine ; such as a very substantial single *gut* for your foot-length, and increasing it after about two feet, by twisting *two* moderately thin ones together very neatly ; this may continue for about four or five feet more, and then loop on to a very small swivel, whereby it should connect with a taper hair line.

Such will be found applicable, not only to *salmon-trouts*, but to all fishes of this class which do not exceed seven or eight pounds ; though with proper management, and under favourable circumstances, it ought to hold fishes of far greater bulk.

Your hook should be No. 3, where the fishes run large ; but where they do not exceed four pounds, No. 4 will be preferable. As this fish has a good-sized mouth,
you

you may *strike* almost as soon as he *bites*. This should indeed be more taken as a guide when fishing for the *predatory* tribe, than it seems to be ; for it is obvious, that those which have small mouths, however ravenous in their dispositions, cannot so soon gorge the bait.

Of this the *barbel* is a strong instance ; while, on the other hand, we find that little fish, the *miller's-thumb*, or *bull-head*, owing to its capacious jaws, almost invariably gorges the bait at once, and gives some trouble to get the hook out. But when you *rove* for *salmon-trouts*, you must be guided by the feel of your line, as directed in a former instance.

This fish does not readily take a *tripping-bait*, any more than the *salmon* ; therefore never use a float for them, but have one good shot about a foot from your hook : if the water is deep and rapid, two, or eventually three, may be necessary to keep your bait down.

When you hook a *salmon-trout*, give him line, for he is both strong and impetuous : be careful not to let him get down too deep, where the bottom is rocky, or in other respects foul ; for he will endeavour to entangle your line, and thus give you the slip.

These fishes take the *fly* freely during the summer, but are apt to be very shy when their spawning season is at hand. I have remarked, that they are partial to a *red-spinner*, and to such double-winged flies as are made of deep brown, or black, covering drab-colours, or tawny.

They sometimes take a *dropper* ; that is, one put on at some distance from your *stretcher*, or *end-fly*, by means of a short piece of *gut*, looping on above a knot. See *Fly-Fishing*.

The *salmon-trout* is, however, like the *salmon*, during

the very hot part of the year, partial to highly-coloured and bright flies: both are sometimes taken by means of the *jay's wing* for legs. But their taste for such is of very short continuance.

Imitations of the brown and of the green locust, sometimes answer admirably. Indeed, when those insects can be had, they prove excellent baits; but great care must be used in committing them to the water, as they would inevitably fly off, if the least violence were used.

Of the White-Trout, Whirling, or Sowin.

These, and many more, such as *bull-trout*, *bleachers*, *bulgers*, *scurffs*, &c. are all names for this remarkably fine fish, which comes up from the sea late in the spring, and is to be found until the first frosts, when they return to the salt water.

Some spawn in the rivers in September, and others are to be found retiring from them full of roe; but as this only occurs where the northerly winds prevail strongly in October, we may, perhaps, be right in concluding, that they cannot bear cold weather: their very late access from the sea is some confirmation of this opinion.

Some are deeper coloured on the back than others; but in general there is a brilliancy on every part, which causes them to appear quite white at a little distance. They are of a light bluish brown down the backs, and are beautifully marked with spots of red; a few smaller black ones being intermixed all over the sides, down to the lateral lines, which are richly but delicately coloured.

The head of this fish is bluff, not unlike that of the *chub*; its fins are strong and stiff, and the tail is broad, but not much forked.

They

They are extremely partial to brackish water ; and are caught in great numbers at the entrances of rivers by the fishermen, who, when the tide is coming in, carry their nets out obliquely from the shore, and sit in their little *col-boats* at the outer end, watching for the fish, which, when entangled, agitate the net considerably : their general shape is longer than that of the common *trout*.

Some authors state, that this fish weighs "from one to three pounds ;" but my own experience tells me, they generally run from two to ten, or even to twelve, pounds. I once *saw* a whittling of that size ; I have *bought* them frequently weighing from six to ten pounds ; and my own hook has procured me more than one very little under eight.

From the above description the learner will collect, that the tackle proper for this fish corresponds with what has been directed for *salmon-trouts*. However, I am rather inclined to think, that *whittlings* of a small description run higher up the rivers, than those which have arrived at greater bulk ; wherefore, lighter tackle must, in some situations, be preferable.

The rod ought to be about 16 feet long ; not so much owing to the great size or strength of *whittlings*, but because they in general lay out in the stream, and require a great extent of line to reach their haunts.

They must, when hooked, be managed with great caution, on account of their propensity to rising out of the water, even when delicately treated ; sometimes in five or six successive leaps, to the height of four or five feet.

These fishes will take the worm very well in some situations ; therefore, *rove* for them, if under falls, or in

deep rapids, with well-scoured *brandlings* and *red-worms*; when on the shallows, if you will wade out, or can get above them, so as to let out 12 or 14 yards of line, fine, but strong near the hook, with one or two shots, you may, by allowing your bait to play near the ground, on a gravel or sand bottom, catch many about sun-rise.

Towards the middle of the day they generally bask in shallows, where the water is rapid and unfrequented. At such times, and during the whole of the evening, especially if there be a ruffling wind from a warm quarter, and between slight showers of heat-drops, they are keen after almost any fly that is on the water.

Generally speaking, however, I should expect to find them rise best at the yellow May-fly, while it is in season; and at a red, or a black, or a grizzle, or a grouse's hockle; the hook being about 4, 5, or 6, according as the fishes may run for size.

You will often find *whittlings* in streams whose surfaces are smooth (because there is but little current), while the beds are interspersed with large pebbles, or pieces of rock: in such waters they snap eagerly at whatever tempts them; and, like the common *trout*, dart from under ledges and shelves of stones, or from under stumps, &c. with astonishing rapidity.

But they have a wonderful faculty of checking themselves, or discovering the deception, and quickly eject what, in their hurry, may have been mouthed. Therefore, when you find them to be thus disposed, you must be quick in striking the moment you think they have taken the fly.

In worm-fishing, they do not require much time for
pouching,

pouching, they being extremely greedy; but, like all short-jawed fishes, possessing the greatest promptness in ejecting whatever gives uneasiness to their stomachs.

They may sometimes be seen labouring thus to disgorge your bait, when the hook has penetrated into the maw. This consideration should cause the angler to strike in time.

The flesh of the *whitling* is of a light rose, or something approaching to a reddish cream colour; peculiarly firm, but not so fat as that of the common *trout*; it flakes like that of the salmon, and requires rich sauce.

Of the Black Trout.

This fish is little known in the South of Britain; indeed, it is chiefly to be found in the large *lochs* (or lakes) in the northern parts of Scotland; and I have heard, that some of the waters in Ireland abound therewith.

The *black trout* is remarkably handsome, its back being of a deep tawny hue, its sides partaking somewhat of the same cast, but brightened by a rich yellowish tint, that relieves its appearance considerably. The spots are of a crimson, and of a deep gold colour; and the lateral line, as well as the head, bear some dots of a smaller size, but at least equally rich.

The tail and fins are yellowish red, and, when in season, somewhat speckled. In the water, this fish is beautiful: its very short head, broad tail, large fins, and great depth, give it a certain resemblance to the *carp*.

Black trouts are in season, and indeed in most circumstances correspond, with the common *trout*: they are, however, more powerful, and greater strugglers, rendering it indispensably necessary to use them very gently.

They bite freely at the worm, are very partial to a large bait, being very greedy ; but prefer quieter waters than any other of the *trout* species. This suits them well to the *lochs* ; however, they are to be found in all the great rivers, though chiefly *above* the cruives, or other impediments ; whence I conclude, they do not relish brackish water.

Black trouts do not take the *minnow* well : they are to be caught by *roving* with a worm, and with the fly, from the end of May to the end of November : while the snow is on the mountains they retire to the deep waters, and are very rarely to be seen.

During the summer, they take flies of rather a bright appearance ; but as the year approaches to a close, they prefer such as seem mealy, heavy, and deeper coloured.

As this fish generally runs from two to six pounds, and has a large mouth, your hook should be No. 4, or 5 ; your *gut* very select, and single for about eight or nine feet. Your line very long ; for they sometimes lay at a great depth, and will not rise near the surface so readily as the other sorts of *trout*, when a worm is offered.

You will require two large shots, and a neat swivel, letting your bait sink very low, in the *lochs* especially ; for in some the depth of water is immense. *Loch Ness*, which abounds with *black trouts*, is said to be unfathomable.

The flesh of *black trouts* is remarkably fine, not very red, but more of a strong cream colour. When in season, they are rich and firm ; nor do they fall off either in flesh, or in flavour, so early as others of the same species. From their being caught with full roes both in July and in October, it is probable they spawn twice during the season.

Some,

Some, however, are occasionally taken big with roe during the whole of the interval between those months, which we may, perhaps, correctly pronounce to be their regular periods for gestation.

Of the Common Trout.

Of this admirable fish there are many varieties; each, however, so trifling, that in describing one, I shall deviate but little from those anomalies with which every thing in nature is more or less diversified.

The common *trout* is a very handsome fish, having a well-formed body, not unlike that of a *salmon*, though rather stouter in proportion to its length: its head, however, is short, and not so pointed; its eye more bright and expressive; its tail not so much forked; and its fins more lightly tinged, they being of a yellowish red cast, towards their edges especially.

This fish abounds with beautiful red and black spots, which ornament the body in general, as well as the gills, while it is in season; and which appear more faint and distinct as it approaches to its spawning time, during which it is scarcely eatable.

Trouts continue a long time sickly after spawning, and retire to the deep water; where they remain for a long time in a state of languor approaching to torpidity.

They usually spawn in all October and November; though some are earlier, but none, I believe later. When first impregnated, they are peculiarly high in colour, and present a rich glowing tint on their sides; in some pink, in others straw coloured. At such times they are excellent for the table.

Trouts are fond of sharp waters, especially such as run
among

among masses of stone, and other obstructions, causing every where little falls: they lay also under weirs, banks, and other secluded haunts, where they find abundance of food; for *trouts* are extremely ravenous, and destroy immense quantities of small fry of all kinds.

They are very partial to those situations where they can lay concealed, especially if the long flowing water-weed is played over them by the current; there they lay in safety from the net, and are ready to dart out at whatever prey may offer to their view.

The males are by far the keenest, but are not so strong in the water as the females; which are deeper in the body, and are in general richer and higher flavoured, but not so firm as the males.

Trouts vary in size according to the waters they inhabit; in some places they are considered as *very large* when they weigh two pounds; in others, many are caught weighing seven or eight pounds, and are only deemed *fine fishes*. I have heard of some reaching to fourteen pounds; but such must be rare indeed.

Those bred in small streams seldom attain to any great size; but they become very numerous, and afford excellent diversion by their eagerness, especially after the *fly*.

The largest are almost invariably found in great waters, and in those parts which are frequented by the *barbel*. Indeed, I have seen many *trouts* of eight or nine pounds weight, taken out of those holes where gentlemen have been angling, with *greaves* on their hooks, for *barbel*.

When *trouts* are on the feed, they generally run upon the *scours*, being then in chace of *minnows*, and other small fishes. In such case, you cannot do better than *troll* with a *minnow*, or throw a *fly* over them; that is

to say, a foot or two before them : by this means they have not time to contemplate the object, and are caught quite by surprise.

The cool of the morning, and of the afternoon, are the best times to angle for them. In the morning they take the worm, but during the rest of the day the *minnow*, or the *fly*.

Though *trouts* are extremely voracious, they are, nevertheless, equally cunning; and do not run very blindly into a snare : on the contrary, of all the river fishes, they are, in my opinion, the most knowing.

Whether it be from the immense quantity of bungling tackle presented to their view, they acquire that habit of discrimination which marks all their actions, when they have time to look about them ; or that they are instinctively subtle, I cannot take upon me to say ; this much, however, is certain, that those who angle for *trouts* must possess much skill before they can command success. I consider *luck* to be out of the question on this occasion ; for I am fully convinced, that he who uses the finest tackle, and the best baits, applying them properly, and keeping out of sight, must, in the same waters, completely distance all competitors who are deficient in any of those requisites.

A *trout-rod* should, for *trolling*, *roving*, &c. be about 14 feet long, very firm, and well mounted in all respects. The reel-line should be strong, but not too thick. The hook, about No. 5 ; but if the fishes run large, No. 4. The bait, well-scoured *brandlings*, *marsh-worms*, *red-worms*, *grubs*, &c. according as you find the *trouts* disposed to take any one kind in preference.

No float, unless in very deep channels, where you can proceed gently by the river side, or follow in a boat; in such case you will frequently, during hot days, find the *trouts* inclined to bite; but you will be more subject to the attacks of *perch*, *barbel*, and *chubs*, if they are in the waters.

When you use a float, a swivel will be unnecessary; but I do not recommend a *tripping-bait*, knowing from experience, that *trouts* prefer such baits as play freely in the water, at about half depth usually; or such as lay near the ground. But there are waters in which the float is almost indispensable.

Trouts are keen after flies of all kinds, but are particularly partial to the red and the black *palmer*; also to the yellow *May-fly*, while it is in season; the *woodcock's* wing, the *grouse-hackle*, and the small brown *locust*.

During the very close summer evenings, they will take the double-winged fly, *i. e.* deep brown and drab, as well as the brown and the black *ant-flies*.

The hooks in such flies ought never to exceed No. 4; and in the common course of angling, perhaps No. 5 will prove equal to every purpose. The *foot-length* should be well-selected *gut*, coloured to the same tint as the water you angle in; or if it be very clear, your *gut* should be of a very light blue, or green cast; so as not to shew so conspicuously as white *gut* is apt to do; when the sun shines especially.

The cunning of the *trout* renders every precaution necessary; therefore your knots must be very small, and neatly tied down; your *gut* should be single, but taper a little; being rather thinner near the hook, and becoming gradually

gradually stouter as it approaches your hair-line. This will make it throw with greater ease, and prove far more deceptive to the fish.

Some suppose, that *trouts* breed worms after spawning; but I know not of any foundation for such an opinion. All fishes are weak after spawning; and we ought to conclude, that such a great change as takes place in their bulk, almost suddenly, must affect their system in proportion; this, added to the alteration as to the disposition of those juices which nourish the spawn, will account for that lassitude which no doubt preys upon them at such periods.

With respect to the varieties of *trouts*, only one appears to deserve particular notice, viz. the *Gillaroo trout*, found in some parts of Ireland. This has the extraordinary peculiarity of a kind of gizzard, resembling those in poultry, which is esteemed a great delicacy. It does not, however, appear to be connected with digestion, being more fleshy and less compact than a real gizzard, and without any cavity. Its purpose remains unknown.

I shall conclude this chapter with remarking, that *natural flies, grubs, &c.* such as you can provide in the fields, or from trees, bushes, docks, &c. are all excellent baits for *trout*; but as they will not bear to be thrown out at the end of your line, you should put them on your hook very neatly; having first formed artificial wings for such as have none, by lapping a bittern's, or a black, or red cock's hockle, round the butt of your hook, which for such purposes may be No. 3, or No. 4; according to the size of your natural bait.

Shorten your line, and dip from behind bushes, &c. into places where you think the *trouts* frequent: if you
manage

manage well, success will generally crown your efforts. In this way you will probably fall in with *chubs*; especially under banks bordered with osiers, &c. where the water is deep and strong.

You cannot be too cautious in regard to keeping completely out of sight, and preventing your rod from moving unnecessarily. The spring is the best season for the fly; during summer the *trouts* will take *worms*, *minnows*, and every kind of good bait that is properly tendered to them; especially after a *fresh*.

Of the Shedder, or Chedder, or Samson, or Graveling.

There is a motley tribe of fishes, which are known in various parts by all the above different names; and indeed by many more; but these are the most general. Not only anglers, but naturalists, have been somewhat puzzled how to class them; for they are very various in their marks, are seldom found with roe, and appear to associate as though of one species.

They cannot be brought to any particular standard; for they are evidently of many different kinds. The most general opinion seems to be, that they are the young of the *salmon* and of the *trout* in their several varieties. Their being about four to six inches long, when they first appear in the spring, and their being sometimes four or five ounces weight in the latter end of the season, when some contain roe, seem to favour this opinion; especially as they are in the first instance, destitute of those beautiful spots, which come out upon them as the summer advances.

Whatever they are, the angler will find very pretty pastime in *whipping* for them on the *scours*, with very fine tackle; using small black flies, on hooks No. 7, or
No.

No. 8. When in the humour, these delicious little fishes bite very freely ; especially when the surface is a little ruffled by a warm wind.

They sometimes may be seen in shoals, in deep holes under steep banks, enjoying the sun's warmth ; but when so situated, they for the most part disregard every kind of bait, and after one has been taken, commonly quit the haunt, retiring to some more secluded deep.

For *salmon* and for *jacks*, the *grayling* is an excellent bait, if selected of a suitable size. It is remarkable, however, that even when only five or six inches in length, they may be seen chasing the *minnows* and small fry ; whence we may derive some confirmation to their title to be classed among the *predatory* tribe.

Of the Jack, Pike, or Luce.

This is properly called the *fresh water wolf*, for certainly it is the most bold, merciless, and voracious of all the fishes within our rivers. It does not confine its depredations to those of other kinds, but attacks without reserve such of its own species as it can swallow.

Hence we observe, that the *jack* is a solitary animal, not mixing in shoals with others of its own kind ; while on the other hand, all other fishes, large and small, invariably retire on the approach of a *jack*.

Indeed, I have on several occasions been led, when the weather and other circumstances have been favourable, on finding I could not induce any *familiar* fishes to bite, to try for a *jack*, and very rarely failed of catching one in a very few minutes. Such is the dread occasioned by the vicinity of this ferocious plunderer, that even such fishes

as

as it cannot master, viz. *salmon*, *trout*, *perch*, &c. of a large growth, avoid him as though he were infected !

One exception may however be made to this, otherwise invariable rule, namely, that no *jack* will touch a *tench* of any size : on the contrary, he will go and rub against a *tench* ; especially when sickly or out of season, or after being hooked ; just as though he received benefit or solace from the contact.

Nor does the *tench* appear to avoid, or to be any way apprehensive from the visit ; he remains quiet, and allows the *jack* to do just as he pleases ; seeming to entertain a perfect confidence as to his own *safety*. Other fishes likewise resort to the *tench* when sickly, or in pain ; whence some call it “ *the fishes’ physician*.”

The *jack* spawns generally in March, though sometimes in the last week of February, or in the early days of April : according as the weather may be more or less mild. At this period, the females retire among the heavy masses of weed, generally growing at the edges of the waters in shallow places, where she casts her spawn, the male attending her with apparent solicitude.

So soon as the spawning is over they return for a few days to the deep water, and during the middle of the day lay on the surface, basking in a state of torpidity, enjoying the warmth, and for the most part, with their faces towards the sun. In this state they are frequently taken, by what is called “ *haltering*” or “ *snaring*.”

This operation requires a stout pole, such as is used to hay-rakes, &c. at the top a piece of strong cord about two or three feet long is fastened, having at its lower end a piece of stout brass or copper wire, formed into a draw loop,

loop, large enough to allow a man's head to pass through. In using this you must look the *jack* full in the face, keeping your eyes fixed on his; whereby he will be in a manner fascinated, and will remain motionless.

Lower your pole very gradually, so that the wire loop may pass under his level at about a foot before his nose; when you think you have got it to such a direction as may girt him all around, without touching him in any part, you must gradually move the noose or loop forward, until you have passed his gills; then with a sudden jerk, pull tight, so that the loop may draw close upon his shoulders, and without any delay lift him out of the water. See *Fig. 5, Plate IV.*

The learner will perceive that a steady hand, and a no less correct eye, are requisites to ensure success in this branch of the sport. He should be careful that his tackle is sound; for when he has to deal with a *jack* of ten, or twelve pounds weight, whatever defects there may be, will soon disclose themselves to his great mortification and chagrin.

The wire for this purpose ought to be as thick as the thinnest size of knitting needles; and as it is very apt to be brittle and untoward, if used as it comes from the mill, the angler will do well if he purchases a whole ring, which may be had for about a shilling, and put it into a small earthen vessel, filling it up with dry sand, or brick-dust, &c. This being set on the fire, will in a little while heat the wire sufficiently to render it more flexible, and take off the brittleness to which it is subjected in milling. If it be not sufficiently softened by the first *nealing* (as this process is termed,) let it be repeated until the wire is tough and pliant.

It

It is a great peculiarity among *jacks*, that the largest fishes are the most apt to indulge in basking : the blood of all fishes is cold, but I have always thought, and the more I considered it the more was I convinced, that the blood of *jacks* is peculiarly so.

Possibly, this is occasioned by their living wholly on animal food ; for the *jack* does not, I believe, at any season, partake of the vegetable sustenance on which most other fishes, at least partially, subsist. This, however, is completely involved in darkness, and seems to be contradicted by the great shyness evinced by *jacks* at their basking seasons, that is to say, early in the spring, and late in the autumn ; though they may be seen basking even during the summer. At such times they will seize a bait with great seeming eagerness ; but for the most part relinquish it instantaneously !

When the *jacks* are thus shy, the angler must take them at the *snap* ; that is, he must be quick in striking so soon as the bait is seized. This requires a particular apparatus, whereby the fish rarely escapes, under proper management.

The *snap* tackle may consist of a single hook, larger and stouter than any within the register, which being fastened to strong *gimp*, is inserted at the mouth of a *gudgeon*, or other small fish (the smaller, indeed, the more certain), and brought out either at the middle of its side, or just before the vent.

But the *treble-snap* is by far the best : being made of three such hooks tied fast together, and secured to a piece of *gimp* ; which being inserted by means of a baiting needle at the vent, and carried out at the mouth, which is afterwards sewed up and perforated by a lip-hook,

hook, as has already been shewn under the head of *dead-baits*, the three hooks being spread into different directions, it is a thousand to one but that the *jack* is hooked. See *Figs. 2, 3, and 4, Plate III.*

There is a peculiar kind of hook made expressly for this purpose, called "*the double spring-snap.*" It is on a construction admirably suited to the intention; and, if in good hands, cannot fail to fix itself in the fish's jaws: it is made as in *Fig. 6, Plate IV.*

The size of the hooks of every description employed in this pursuit, should be accommodated to the strength of the line; and both should be applicable to the growth of the *jacks* in the waters where you angle. We may in the long run, consider them as weighing under ten pounds; though I have killed them much larger, and that too, where I was assured there was not one of five pounds weight. *Jacks*, however, are great ramblers, and I possibly fell in with those from a distance.

I never killed one exceeding seventeen pounds, but have seen one of twenty-five, and have heard of others being taken that weighed thirty-two pounds! Authors inform us, that in the Irish lakes they sometimes rise to the enormous size of seventy or eighty pounds!!!

Whatever may be the length or thickness of your line, you will always find it useful to have a small swivel on it, somewhere; if within a yard of your hook, the better. You should be extremely careful in your management of a *jack* when hooked; for he will, if possible, run into the most desperate situations, and try the strength of your tackle, by various stratagems.

Treat him tenderly, for his mouth is very hard, and frequently

frequently you will find, that the hook, instead of having gone through the jaw, rests by a very slight hold of the point on some tough part, from which it is easily displaced: when such is the case, your hook is in danger of snapping at the bend, against which the point acts as a lever, when so situated.

I consider it very hazardous to let a *jack* have more line than he will run off the reel when he first seizes the bait; because he will to a certainty, if there be any weeds, or other shelter at hand, go in, and lead you into difficulty; but circumstances must govern on every occasion.

When the *jack* takes your bait, if the water is clear, you may see him to a great depth; at least there will be a perceptible agitation of the water, proportioned to its depth, and to the size of the fish: for a *jack* generally seizes with violence, even though the bait be close to him.

At all events, if you do not *see* any of these symptoms you will soon *feel* him. If you are prepared in the *snap* way, strike firmly, but not with a jerk, lest you tear away through his jaw, or break your hook.

If you have *gorging* tackle, as described under the head of *Dead-baits*, you must let him run as far as he may please; avoiding to check him, and pointing your rod down in the direction he takes; so that there may be no hindrance, and he may not feel the smallest control. Give him time to swallow your bait, which he will do almost instantaneously, if he be of a good size, and not too full of other prey; as sometimes happens.

In general, a *jack* will lay quiet while he *pouches* the bait; but if it be too large, or that any other *jack* be in sight,

sight, he will run with it until he can lay concealed, so as to turn and chuck it about according to his fancy.

You should make it a constant rule to *give abundance of time, and not to be sparing of line*, in the first instance; for though a large *jack* may bolt the bait so soon as seized, the major part of them, more particularly where they average from one to three pounds only, will require some time. Let them lay a few minutes, say about four or five, and then so soon as they move, strike, and manage with caution.

If, however, after laying a minute more or less, or perhaps two minutes, the *jack* runs again, it *may* be prudent for you to strike; especially if he is intent on gaining a dangerous cover. In this you must be guided entirely by circumstances; for if the *jack* is obviously large, and your bait small, there can be little hesitaion; since in all probability, he gulped it down without difficulty; but when you have reason to think your bait is rather too large for the fish, you cannot show too much forbearance, provided you are in a safe water.

On the whole, you will find the greatest advantage result from giving plenty of leisure for the fish to swallow the bait: you ensure the prize; because if he has pouched he cannot escape; and if he has not pouched, you ought not to disturb him.

When a *jack* evinces his bulk by the agitation of the water, or by rising so near the surface after your bait as to be distinctly seen, and after stopping for a few seconds, shakes your line and runs off, you may be tolerably certain that he has pouched, and is desirous to eject the bait; which, if you use a double *gorge-hook*, he cannot possibly do. See *Fig. 6, Plate III.*

In such cases you have only to keep a tight line, and prevent his running among weeds.

With respect to the choice of *snap* or *gorging* hooks, you must be regulated entirely by the season of the year, and by the waters in which the fishes lay.

During the basking seasons, the *jacks* are very shy so far as relates to pouching, therefore the *snap* tackle is then indispensable; it is also proper where you cannot venture your line beyond a very limited length; for instance, where you *dip* with a *dead-bait*, or have a live-bait with a float, in small open breaks, at places where the surface is generally covered with *docks, water, bay, &c.* in such waters you would not act prudently in giving much line; but if the season be appropriate in other respects to the *gorging* system, you may allow a little more time before you strike, than you would in the basking seasons.

When you see a great number of very small bubbles rising from the spot where you know, by the direction of your line, the *jack* is laying, you should forbear from striking; it being a certain sign that he has not pouched your bait. I request the reader to refer to that chapter which treats "*of bubbles in the water,*" for a full discussion of this point.

Jacks will sometimes take down the *water-rat*; but, whether owing to the resistance that animal makes, which I have witnessed to be very fierce (and that too under the water), or that the hair or the scent displeases, I know not, however it does not appear they are very partial to that quadruped. I have repeatedly seen the *rats* pass such *jacks* as were obviously on the alert, and of a good size too, without being attacked; though the

the former generally seemed to have all their eyes about them, and to keep close in shore.

In my opinion, unless the *jack* should seize a *rat* about the middle, so as to press the lungs, the former would stand but an indifferent chance, in regard to making a meal. As to *mice*, they stand no chance; though I think them a very indifferent bait, and not to compare with a good yellow frog.

I have great reason to believe, that unless very hungry, *jacks* will not rise to the surface: for on many occasions, I have seen them follow my bait until it was nearly out; but not being in time to make a snatch before it was on the surface, they have suddenly darted down: on throwing in again, and giving deep play to my bait, I have always had them at me very quickly.

Possibly the fishes begin to smell the trick as the bait retires from the deep; when, even though they should not see the angler, they feel some diffidence, not to be overcome but by a keen appetite.

I do not know any branch of angling that requires more patience, temper, and skill, than *jack-fishing*. A knowledge of the most likely haunts is easily attained; for *jacks* will seldom remain in the clear parts of the water, unless in search of prey; they prefer what are called "*black-waters*," i.e. such as either being overhung by arborage, or banks; are shady and gloomy; or where there are deep holes among, or near to, heavy masses of weed. But when on the feed they occasionally frequent the shallows; laying concealed among rushes, flags, or shaded hollows; from which they dart forth upon whatever they think they can swallow.

It is sometimes highly interesting to watch the motions of these depredators, when they get on the shallows in pursuit of *dace*, *gravlings*, &c. They sometimes are so extremely eager, as to run absolutely out of their element, and to lay exposed on the shore. But they are very alert in gaining the water. I have seen several large *jacks* so situated; indeed I have known one of more than six pounds weight, to be caught by a boy, who put his foot on him and lifted him very neatly.

Here it is proper to observe, that a *jack* has remarkable sharp teeth, both in his jaws and on his tongue; and that his bite is extremely severe! On this account, it is dangerous to handle him for the purpose of taking the hook out, as you would do with other fishes. The only safe way is to take him by the eyes, pressing your thumb and finger strongly into their sockets.

If the *jacks* are very large, the *snare* is an admirable aid; for when once you have them *haltered*, and fast by the eyes, you can manage them well enough.

When you want to get your hook out of the *jack's* jaws, turn him on his side, and set the hollow of your foot close behind his gills; then, with your *spud*, wrench open his mouth, and introduce your *disgorger*.

If the hooks are in the maw, as they usually are under the *gorging* system, open the fish's stomach about the middle, and you will be about opposite to, or rather under the points; so that your *gimp* will be safe. Cut away the parts that are hooked, and unslipping the knot that holds the *gimp* to the reel-line, draw your *bait*, *hooks*, and *gimp*, all through the aperture you made in the stomach.

This will disfigure the fish far less than cutting down
the

the jaws, until the hooks can be got out through the mouth.

In order to avoid unnecessary repetition, I must request my reader to look back to the directions regarding *live* and *dead baits*, where he will find many particulars immediately relating to this part of the subject. They are of the greatest moment, and should be completely understood; else little success can be expected in *jack-fishing*.

I dwell a little on this point, because I hold this chapter to relate to one of the most pleasing branches of the art; and from the conviction that a good *jack-fisher* will not fail, with common attention, to become expert in all the other branches.

I shall now offer a plan for catching *jacks* in those waters, where, owing to the borders being either long, shallow marshes, or to the immense quantity of flags, &c. which grow in the water, it is utterly impossible to use a rod, or any ordinary tackle. My mode is peculiarly applicable to those lakes and streams thus situated, but which are not more than forty or fifty yards wide, and whose channels or middles are tolerably clear. My invariable success enables me to recommend it to the angler's attention.

Take a strong compact line, such as is used for hanging window-leads; in length, equal to the utmost breadth of the water you mean to fish in. At each end fasten on a slight pole, about seven feet long; and on each pole fasten a *reel* of rather a large size, so as to hold abundance of line.

On the cord, at about ten feet on each side of its centre (or in the centre, if you use only one reel), tie a neat

little *block* with a pulley in it: this need not be more than sufficient to pass a reel-line.

Each reel-line is to be passed through that *block* which is nearest to it; and then to be made fast to either *snap* or *gorging* tackle, as you may judge proper (see *Plate V. Fig. 1.*); but well loaded.

All being ready, draw your cord tight, and begin at the end of the lake, or if it be a river, let one person cross to the opposite side with one of the poles in his hand, carried upright.

The two persons holding the poles being opposite to each other, on different sides of the water, move on at the same pace, the poles overtopping the rushes, &c. and the baits lowered down into the water, to such depth as may be proper.

When any weeds, &c. may be in the way of either hook, the person to whose reel it is attached, winds it up, or lifts his pole; as may be requisite.

The motion of the cord occasions the baits to play admirably, and seldom fails to attract such *jacks* as get a sight of them. So soon as one takes the bait, he is managed precisely the same as in any other situation; the two pole-bearers fixing their poles on the ground, and straining to keep the cord tight.

In this manner the *jack* is soon exhausted; the elasticity of the cord being extremely distressing to him. When he is overcome, the two persons may retire to such place as may be convenient for landing him.

If it be a pond, no difficulty occurs, but in lakes and streams, it may be necessary to take off the reel from that bait which is at liberty, and fastening its line to the butt of its pole, to veer away, until he whose line holds the
the

the *juck*, may have secured his prize. The reel-line will then draw the pole back, and the operation can be continued.

Observe, however, that the *flat-reels* I invented are particularly applicable to this device ; as they direct the line every way.

Barrel-reels, however, answer extremely well for this purpose, if at the top of each pole, a small block or pulley be fastened, to direct the line up thereto ; whence it will afterwards run along parallel with the cord, until its passing through the pulley in the middle ; from which the bait is suspended in the water.

It should further be observed, that in drawing the baits through waters whose banks are perfectly free from bushes, and other impediments, the two persons managing the tackle may tie the cord ends round their waists ; and have the reels upon short *batons* or on walking sticks. In this way they could stretch the cord very tight.

Under the head of "*floats*," the reader will find the description given of what are called *fox-hounds*, or *flying-floats* ; these are made of bladders, to which baits are suspended, and are sent to sail, as it were, on extensive waters. By such means it is said, that very large *jacks* are taken : I never tried that method in the way there described ; but have found a bladder-float excellent in *jack-fishing* with live-baits ; and also with *dead-baits*, when there has been a strong wind at my back.

All you require is, to tie the line to the neck of the bladder, leaving sufficient of it below for the bait, and after casting both the bladder and the bait, clear of the weeds, &c. near the shore, to veer out as much line as you may judge proper ; then fasten down with a stake, &c.

In this manner the wind will drive the bladder about, and give the bait good motion.

Though *jacks* will take both live and dead fish, and frogs, rats, &c. yet they will at times bite freely at the worm. I have often been in a ticklish dilemma, by their attacking the bait intended for some of the *familiar* tribe; my only chance was, to make a bold effort, and to pull the partly unwelcome visitor, without ceremony on to a shallow, where I could seize on him with my hands: or if I could get at my landing net, to raise the *jack* up to the surface as soon as possible, and during his struggle to get the net under him.

I have succeeded in both ways at times, but only with moderate sized fishes; such as were under two pounds. When they have been larger, I could not treat them so roughly, and always had the mortification to see them cut my *gut*, and go off with my hook.

When I have not been able by any means to obtain small fishes for bait (a thing that will now and then happen), I have had recourse, and with occasional good result, to another device of my own invention.

Observing that *jacks* were very fond of a large bait, and that they would snap at guts, &c. thrown into the water, it occurred to me that a very large bait of worms would answer well. Accordingly I took two pieces of *gimp*, of equal lengths, about two feet each, and at the four ends set on four very stout hooks, such as I use in my *snap* tackle. I then doubled the two *gimps* in the middle, and fastening on a strong swivel, fixed it to my line firmly by a draw-loop.

The four hooks were each baited with two large *lobs*, and the whole were kept together by a tie just above them;

them; taking care that the hooks stood back to back; all pointing outwards. In this manner I took the *jacks* either at the *snap*, or otherwise; just as I judged proper: and caught some very respectable fishes.

I found it necessary, in some waters, to have a piece of thin sheet-lead carried once or twice round my *gimps* at a few inches above the worms, in order to give them good play. I also caught one very fine *perch* in this manner.

The *pater-noster*, or many hooks on one line, is a very common apparatus among the country people; who pull out the fishes they hook without any mercy, sometimes lifting large *jacks* of ten or twelve pounds, clear over their heads.

The *crown-net*, as it is called, is a basket about three feet in diameter, which is thrown by those who frequent the fens in Lincolnshire and Cambridgeshire, into the shallows; where numbers of *jacks* generally lay. The basket has a round hole at the top, through which the fisherman puts in a stick, on feeling which the *jack* will instantly display himself. He is taken out with a short *gaff*, or a harpoon, or with a small net.

This kind of net, or rather basket, is in use in various parts of the world, where, during the inundations, such fishes as get into shallow water, being quickly perceived, are pursued, and the inverted basket is thrown over them.

I can easily believe that much amusement arises from what is termed (by a gentleman who wrote a treatise on angling) *fluxing*; that is, driving a goose or a duck into water where there are *jacks*, with a bait tied to one of the bird's legs. No doubt but the contest must be plea-

sant ; but I apprehend, that if a duck is employed, it should be a full grown bird ; for *jacks* are apt now and then, to take down those of a lesser size, and sometimes to make free with a good sized gosling. Indeed instances have occurred of their attacking dogs, and children while bathing.

It is a very remarkable circumstance, that *jacks* invariably swallow such fish as they catch head foremost. This no doubt is occasioned by their sense of the difficulty that must attach to beginning with the tail ; whereby they would feel some inconvenience from the scales and fins ; which is not the case when the head goes first.

But that little fish, the *bansticle*, or *prickle-back*, which abounds in the fens, and in many other waters, swims close to the *jack* without fear, conscious, no doubt, of the security afforded by those sharp prickles on his back and sides.

Nor will a *jack* meddle with such *perch* as, from their size, are able to present a formidable spike on their back fins ; but they do not stand on such ceremony with those of a more tender age. When you bait with a *perch*, you must cut off the back fin, else, though a *jack* may seize, he will in all probability let go so soon as he feels the spike ; of which he entertains great apprehension.

Those who put *jacks* and *perch* into the same water, under the idea that the latter will not be molested, are right so far only as relates to the grown fish ; but the breed will cease ; for the *jacks* will to a certainty destroy all the young fry : nor will the *perch* pay more deference to the very young *jacks*.

The cunning and boldness of *jacks*, when they perceive the intention to net them, are wonderful ! on such occasions

occasions they will wriggle between the net and the bank; or they will sometimes use their teeth, with such effect, when strenuously opposed, as to make your assistants decline the contest.

I recollect a curious instance of a very fine pond being dragged for three days successively; until the owner assured me he had not left either a *perch*, or a *tench*, or a *carp*, or a *jack*, of half a pound weight; for he took away all that were worth removing in a cart every day, throwing back the small ones. Knowing, however, the nature of the *jack*, and having seen that, while the people were dragging, it was *possible* for them to have escaped, I ventured a small wager that I would in the course of three days, catch a *jack*, at least as large as any he had removed; none of which were equal to five pounds.

During the first day I did not get a bite, the fishes being all alarmed at what had passed; but on the second evening, I caught two very fine *jacks*, one upwards of seven, the other not quite nine pounds!

It must be observed, that I had derived considerable advantage from the cleaning of the pond, which, before the net could be got in, was weeded by four men, who brought a boat for the purpose; they were nevertheless upwards of two days clearing less than an acre of water. My advantage arose from being able to *dip* where, and how I thought proper: so that if a *jack* remained, it was next to impossible but he must see my bait; which was all I wanted.

I have before said, that the *live-bait* is by no means eligible, where a dead one can be used. Before I was "up to the trick," I used to sit very patiently, following the advice of some who thought themselves excellent

anglers, and watching my large float ; but the few bites I obtained in that way, added to the instructions of a near relation, who is very expert in every branch of angling, made me try the *dead-baits* ; wherewith I have since killed abundance of immensely fine fishes !

The young angler, when intent on catching *jacks*, must not overlook those little pools and ditches which sometimes appear to afford little shelter ; for in such he will often meet with fishes that will make his rod groan, and put his tackle to the proof.

At the time I am writing this, a *ditch* is in my view, no where six feet broad, nor three feet deep, where I see *jacks* of six or seven pounds weight laying in numbers ; but though there is not, I am confident, a single fish of any other kind in that water, yet I never have been able to induce one *jack* to bite.

The ditch in question, communicates with a very small river, at least it is so called, though the spring which feeds it is barely sufficient to turn a small mill, and its bed is scarcely any where larger than the *ditch* in question. It is remarkable, that when the *jacks* enter the river from the ditch, they take the bait freely.

With regard to taking *jacks* with the *fly*, I am not able to say any thing from my own experience ; but I see no reason why they should not rise to one of a very large size, made of gaudy materials, so as to entice.

I am rather of opinion with an author who writes confidently on this subject, and who, indeed, asserts that he has taken *jacks* with a fly (or more properly speaking a bird), made somewhat resembling, and as large as a wren ; though far more shewy.

I have frequently seen a *jack* rise at a swallow, as it skimmed

skimmed along the surface ; and as I once saw a Highland boy (to whom I had given a little tackle with which he was whipping within a few yards of me), catch an eel of near a pound weight, with a *red-spinner fly*, I really cannot see any argument in opposition to a *jack's* rising to a proper lure.

I never have had occasion to make any trial of a fly, having always had the good luck to induce the *jacks* to take my fish, or worms, or frogs, with as much readiness as the season, and attendant circumstances, could lead me to expect.

I shall conclude this chapter with remarking, that in the summer time *jacks* rarely take freely in the middle of the day ; unless in very gloomy unfrequented places : but that during the rest of the year they will come forward according to the weather and to the situation : we may however expect, that in the winter they will take best during the middle of the day.

They are very averse to cold ; and when the northerly winds prevail, or that a frost is on the ground, will seldom stir, though you place the most tempting baits close before them. I have already said, that at such seasons, they appear to be in a torpid state.

Of the Perch.

This very wholesome and well-flavoured fish abounds in such fresh waters as are clear, deep, and not too rapid ; though *perch* are occasionally found in quicker streams, and where the water is subject to be much discoloured by freshes.

In ponds they breed very fast, but soon extirpate other kinds, being extremely bold and merciless. They are
apt,

apt, unless the bottom be of chalk, gravel, or sand, to acquire a very muddy taste; from which, however, they may be purged, by keeping in pure water for a few days.

Whether in rivers or in ponds, the *perch* attains to a good size, frequently averaging from one to three pounds each, and sometimes reaching to five pounds. I think they acquire greater bulk in ponds; but have not so much vigour, nor are they so firm, nor so high coloured, as those bred in strong clear waters.

The *perch* is one of the *predatory* tribe, and has very sharp teeth; his scales are not very large, but have a peculiar rough feel. His back has a sudden rise from the setting on of the neck, giving that peculiar appearance we call "*hog-back*." *Perch* are very strong, and afford excellent play.

You should bait for them with two worms on your hook, which should be about No. 5, or 6, according as the fish run; or you may use the *minnow*, the *stickle-back*, or the *loach*; putting your hook through their lips, or through the fleshy part of the back. When you use the *stickleback*, you must cut away the back and side spikes, else the *perch*, though he may bite, will not gorge.

Where the *perch* run very large, you may use a small *gudgeon*; taking care to have such a float as it cannot pull under water. The best worms are the middle-sized *brandlings*, especially those found in tanners' rotten bark: next to them I should choose the common *red-worm*, or the well-scoured *cow-dung lob*.

Your tackle must be strong; such as a very thick *gut* for your foot-length; or if you suspect there are *jacks*, you may substitute the smallest sized yellow *gimp*, which I find they take better than they do the white sort.

Angle

Angle for *perch* in such places as are overgrown with weeds, under shelves and banks ; or where you see small fishes skimming about near to deep holes, and in the whirls made by gentle streams.

These fishes do not seem partial to muddy bottoms, nor when on the feed do they hesitate to go into the shallows. But they very rarely, if ever, lay upon *scours*, or other very rapid places ; unless in the hottest time of the year, and then only to refresh ; for in such situations they do not bite well.

As you should give a *perch* time to swallow your bait, you may use two or three rods of rather a light construction, and with rather thin lines on your reels. But you must be careful how you strike ; for the *perch*'s mouth is hard, and if your point comes against a bone, a jerk might break your hook : besides, as he has a very large mouth, a too forcible twitch might draw the bait clear out.

When you determine upon *perch*-fishing, you should bait the hole for a few days ; for no fish can be more regular than they are in attending to such supplies : they usually take at mid-water.

Roving is particularly appropriate to them ; at least, I have always been most successful when I adopted that mode ; using, however, small *lobs*, as the *perch* is very greedy, and does not hesitate long in *pouching* the bait, if the hook be properly concealed.

Perch bite best in the months of April and May ; in the midst of summer, they are glutted with the small fry of other fishes, and, indeed, of their own kind. In September, if the weather proves favourable, they are tolerably keen. Cloudy weather, with a brisk wind
from

from a warm quarter, are extremely favourable, and induce them to take good baits with great eagerness.

They do not bite well when about to spawn, which is generally towards the end of May, nor for a while afterwards.

In some waters, particularly where they are shallow, the *perch* intermix with the *dace*, and take a fly: this, however, is not their general habit. They prefer a rich *palmer*, or a heavy-bodied yellowish fly.

I have taken great numbers by *bobbing* over a bush into a gravelly hole, with a natural fly, but especially with a large caterpillar. They will also take the *cadbate*, when it has attained its proper colour by keeping, as described in treating of that bait.

I have read of *perch* biting well in the winter, but my own experience does not in the least corroborate that information; on the contrary, I think, after the *jack*, they are, of all fishes, the most difficult to allure from the middle of November to the end of February, when they will begin to feed, provided the weather proves open.

Of the Eel.

Although so common in our ponds, and inland waters, it is nevertheless a sea fish, and only comes up our rivers for the purpose of securing its young, which are all born alive, and may be seen in vast numbers, at the edges of streams, working up as far as they can reach before the winter floods carry them to the sea.

These little animals are called *elvers*; but such is the rapidity of their growth, that by the end of the year they will be from eight inches to a foot, or more, in length: they are then called *griggs*.

There

There are four kinds of *eel*, three of which are very common, the other being far more scarce. First, the *silver eel*, which has a coffee coloured back, and a bright belly; the head rather narrow, and somewhat conical. This rarely reaches to a pound weight.

Next, the *green eel*, which is much flatter, has a deeper belly-fin, and has a belly something of a water colour. This grows to about two pounds.

Then the *black eel*, which has a very dark coloured back, and a yellowish belly. This often is seen of four pounds, and some have weighed nearly eight! If the produce of clear waters, running chiefly on chalk, gravel, or sand, they are well flavoured and wholesome; but when taken from foul or stagnant waters, with muddy bottoms, they are not only very unpalatable, but extremely unwholesome, often occasioning the *cholera morbus*, and at times proving absolutely fatal.

When *eels* of any description are taken from such waters, they should be put into a tub, or pan, with plenty of good water from a chalk, gravel, or sandy bed, and have about three or four inches deep of fine sand to work into.

In the course of a few days they will feed on crumbs, malt, oatmeal, &c.; and by a week's end will have purged themselves from that deleterious oil, engendered in the slime they inhabited.

The fourth kind of *eel* is the *hawk's-bill*; it is extremely scarce, and rarely comes beyond the flow of the salt water. It has a greenish back, with a beautiful clear, brightish green belly. Its head is very small and pointed, and the upper jaw hangs over with a little hook.

This

This fish rarely exceeds half a pound, and is sometimes caught by turning up the sands where the water is brackish. Its flesh is peculiarly wholesome, but rather dry. It very seldom takes the worm, but may be caught with the *perriwinkle*, or a piece of *muscle*, &c.

Few *eels* will bite in the day time, except in deep waters, or where they are in muddy holes. Sometimes, indeed, the smaller description of eels, especially the *silver*, will bite freely during the whole day, either at the *minnow* or the *prickleback*: of the latter they are extremely fond, but its prickles must be cut away. They are in season throughout the summer and autumn; in the winter they are lean and flabby.

With regard to baits, the *eel* (particularly the *black* sort) will take almost any thing: they are greedy to an extreme, gorging instantly, whether it be *worms*, *guts*, *fish*, or *greaves*; and, as I have experienced, not even rejecting the *slug*. But they give loose to their voracity chiefly at night, when they sally forth in search of prey, and may be seen running upon the *scours* in great numbers.

During dark gloomy nights, and especially when thunder is at hand, the *eels* bite very keenly; sometimes so fast, as scarce to allow time to attend to a second rod.

If you fish on the *scours*, you may keep a rod in each hand, letting your baits lay on the gravel, by means of two or three shot. All the above baits are excellent; but I think when wasp-maggots can be had, they are peculiarly acceptable to this fish. When you angle in deep water during the day, your tackle should be stout; for you may sometimes meet with very heavy fishes, which will not only writhe, and pull hard, but with their
file-

file-like teeth cut your line asunder. I have therefore to recommend to the angler, to use very fine *gimp* of the yellow kind,

In treating of *night-lines*, I have shewn why *gimp* is preferable to wire; it is proper to add, that they should be laid for *eels* under banks and stumps, near to mud banks, or such loose sand, or small gravel, as the *eels* can penetrate into.

The finest sport may be expected near bridges, old buildings, and especially near to (and rather below than above) large towns, mills, &c. where there are large pebbles and stones laying confusedly in the water, as is generally the case in mountainous countries, where the impetuosity of the vernal and autumnal floods, washes away the smaller parts of the soil, leaving only such bulky and hard substances as are not easily dissolved, or moved.

Where there are holes in bridges, piers, and other old buildings standing in the water, and in the sides of stranded vessels, you will find very large *eels*; these will not always come out to a bait; but if one is artfully introduced into the fissure, or cavity, wherein an *eel* harbours, he will generally take it.

This practice is called *sniggling*, and is managed by means of a slender switch, just stiff enough to convey the bait into the hole; the point of the hook is placed slightly upon the end of the switch (or *sniggling-rod*), and the line is held rather tight in the other hand; the bait being thus conveyed into the *eel's* haunts, the rod is withdrawn, and the angler sits patiently in his boat, waiting for the line being drawn further in.

Time should be allowed for gorging; and when proper

to

to strike, it should be done very gently. If there be no opposition, forbear to pull, and allow the fish to draw in again. But if the eel opposes the retraction of the bait, give one little twitch, so as to fix him well, and keep the line as tight as it will safely bear. At first the eel will bear hard against you, but in the end will relax, and come out.

Violence should be particularly avoided, for it never does good : you may pull your hook through its hold, or tear away the eel's jaw ; but until he becomes tired and numbed, by the constrained position in which he opposes you, no effort can be successful !

Some, instead of hooks, use *sniggling-needles* ; these are short pieces of steel (see Fig. 3, Plate V.), on which a worm being threaded, the line is tied round the centre of the needle, from which it cannot slip, if properly drawn tight on the groove. The end of the needle is then set into a very small cleft in the end of the rod, and being put, as above shewn, into the eel's haunt, by shaking the rod a little, it disengages.

The needle is rather surer than the hook ; for if your line be of good whip-cord, and the needle once fairly down in the maw, it must fly across the eel's throat, and have a better hold than the hook, which is more subject to accident.

Eels are not very scrupulous about the fineness of tackle ; but I have always had best sport when my *foot-length* has been of very stout *gut*, or rather of *weed*, which I think is peculiarly applicable to this purpose. The hook, from No. 4 to 6, as the fish may run ; very stout, and short in the shank. With regard to night-lines, no hook can equal the common kind made particularly

cularly for the occasion, with an eye for the reception of the line.

Eels swallow fishes head-foremost, the same as *jacks* and *perch* ; but they have a cunning trick of taking your dead baits by the tail, and of stripping them off the hook.

I sometimes match them, by wrapping some common sewing worsted round the tail of my dead-baits, so as to secure them to the *gimp* ; the fibres getting among the *eels's* teeth, cause him to desist, and to swallow the bait without further trouble. Wire does not answer this purpose near so well, as it is apt to cut the bait when pulled ; besides, the ends wound the *eel*, and frighten him.

Towards the latter end of summer, and in autumn, many rivulets abound with *griggs*, which bite very keenly at a worm. They are taken in great numbers at such times, by what is called *bobbing*. A moderately stout pole sustains a good *laid-cord* line, which at the end spreads into four directions, and perforate the four corners of a piece of sheet-lead, about six inches square.

The lead is pierced in many places besides. A number of thick worms, or chickens' guts, being threaded, by means of a kind of baiting-needle, on a long line of common worsted yarn ; they are tied up in loops under the lead, which, being thus prepared, is let down into the water, very gently, to within two or three inches of the bottom.

The *griggs* soon attack the worms, swallowing the loops, and endeavour to cut the worsted, which entangles among their teeth. In this state, the line being gradually lifted, indeed very slowly, the *griggs* will come willingly to the surface ; but they try to get quit as soon as their noses are above it ; therefore, the person holding the

the rod should cant the *eels* to the shore with a quick but steady motion, so as not to jerk them off: for they are held merely by the fibres of the yarn.

A boat is a great help on this occasion, as the *eels*, when disengaged, give no trouble to hunt for them as they do in the grass.

There are various devices for catching *eels*, such as wooden boxes baited with guts, &c. which being sunk at their haunts, they soon enter; and not being always disposed to go out when they have made their meal, such as remain are taken out with the box, when it is drawn up.

I recollect, when I was quite a boy, seeing an *eel* taken out of a box wherein, from the utter impossibility of its then passing through any of the augur-holes, it was supposed to have been for a long time. The box was taken out of a pond (near Wandsworth) which was clearing out, and no person knew that a box had been sunk in it.

In all probability it had been left by some former proprietor. I should remark, that in the *eel* were found two smaller ones; whence we may conclude it was latterly compelled by hunger to destroy its own species. The fish weighed several pounds.

Baskets made of *withen*, or osier, are set in many places at the bottom of the water, for the purpose of catching *eels*, or whatever may offer. These are called by various names in different parts, such as *hullies*, *keils*, *krails*, *wires*, *weirs*, *cags*, *cages*, *flues*, and I believe as many more. Some are small, and are laid chiefly for *gudgeons*; while those in use principally among the millers in the West of England, are as big as a hogshead, and are very strongly bound together,

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This latter kind are usually put under one of the mill-gates, or sluices, and receive immense quantities of *eels*, which, during the first heavy winter floods, come down the streams in their way to the sea. I have heard of near half a ton of *eels* being caught in one night at the mills on the *Avon*, between *Milford* and *Bristol*!!! Some have weighed six and seven pounds! but the average were under twelve ounces.

I believe it is almost impossible to get *eels* out of such waters as have deep muddy bottoms. They burrow to a great depth, and are extremely cunning when they hear the spade near them. When using an *eel-fork*, I have seen their wriggings by the agitation of the mud, so soon as they felt the instrument's approach. They are not so easily taken in this way as people suppose; especially in soft mud.

I have more than once found an *eel* some feet from the water, in the night time; whence I am inclined to believe what is stated, regarding their being ramblers from one water to another. They should by all means be kept out of ponds where there are valuable fishes; for they are worse than even *jacks* and *perch* in destroying small fry. Besides, they feed principally at night, and therefore are more certain of their prey.

Large *eels* may sometimes be haltered, or noosed in a snare, as is practised with *jacks*; but it requires rather more skill and judgment to carry the wire to a proper depth, so as to slip over the *eel's* head, as he will usually lay deeper than the *jack*, and some allowance must be made for the great deception to which we are subject, in estimating the depth of water at sight.

The snare should be carried over so far as to pass the

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eel's pectoral fins, so that the greater weight of the parts behind them may not allow of receding, whereby the head might else be drawn back through the snare, unless it were drawn extremely tight; for the *eel's* skin is peculiarly slippery, it being coated with a kind of slime. The skins of *eels* make a very fine glue.

Eels cannot endure severe cold, which accounts for their immersing themselves in the mud, and for their taking advantage of the winter floods, to escape from such places as do not afford them shelter in frosty weather. When kept in ponds, they usually remain torpid during the winter; but if a number of straw trusses be bound tight at their several ends, and be thrown into the pond before the *eels* have plunged into the mud, they will get into the trusses for warmth, and may thus frequently be taken: if the ends were left open, the *eels* would easily escape.

Of the Chub, Chevin, or Nob.

We now enter on the *familiar* tribe, though I really have my doubts whether this fish does not, in some measure, appertain to the *predatory*. I am sensible that the *chub* is considered as subsisting on worms, weeds, flies, &c. and is supposed not to prey on small fishes; but having caught one while trolling with a *minnow*, and having observed *chubs* at times very busy among small fry, there appears some reason for concluding that, when pressed by hunger, they are not over scrupulous in that particular. The general habits of the *chub* are assuredly innocent, and its not having teeth in its jaws, evinces that Nature intended it to be so.

The *chub* is extremely well formed, and is altogether
very

very handsome ; not very dissimilar to the *carp*, but not so deep in the body. His meat is not delicate, and, owing to the immense number of small bones to be found in every part, is not much esteemed.

Just before their spawning time, they are worth catching for their roes ; which, made into a pye, well seasoned, and with a dash of vinegar, are delicious. The month of March, or beginning of April, is the best time for the above purpose. During a fortnight, or more, after spawning, they are weak, and consequently, flabby ; but they recover gradually, and are in high season about Christmas, at which time the small bones are not so numerous, or, perhaps, become more distinct, and consequently, not so dangerous or troublesome.

In various waters, these fishes grow to different sizes : in small brooks they very rarely exceed three pounds, but in larger rivers, where they get plenty of food, and a rapid change of water, they reach to a large size. I saw four caught under a *weir* in one evening, of which the smallest weighed eight pounds, the largest upwards of nine. They afford excellent sport, being peculiarly strong and impetuous.

When rendered desperate, they will run, head on, against a boat, &c. and make furious plunges to the bottom, especially in deep strong waters.

They will not lay much in muddy situations, but prefer sand, or those clay holes found under steep banks overshadowed with arborage : they are partial to the steep sides of the *aights* (or small islands) in the larger rivers, where they creep into the holes made by water-rats, &c.

It is extremely common to see very fine fishes taken

out of such places by groping with the hands, taking care to move very gently in the water, so as not to alarm the *chubs* while they lay sleeping in the holes. They also frequent rocks, and heavy stumps, that lay in or near strong waters ; for the *chub* will not stay long in a slack stream. At the bottoms of *weirs*, *locks*, *mill-aprons*, &c. the *chub* will lay at times in the eddies, and sometimes at the tail of the rapids.

They may occasionally be seen on the *scours*, where they are very active, and, in my opinion, then prey on *minnows*, &c.

From the above description it will be seen, that good tackle should be used when angling for *chubs* ; but, on account of their peculiar timidity, it should be as fine as you can trust to.

Your float should be only of quill, for a cork one alarms them. Your hook, about No. 4 (for their mouths are pretty large), baited with two well-scoured worms, either *brandlings*, *red-worms*, or *cow-dung bobs*. They are most readily induced by *salmon's roe* ; and, owing to their habit of laying under foliage, whence many sorts of caterpillars, &c. are shaken by the wind into the stream, they shew a great partiality for baits of that description.

The *cock-chaffer*, and *black* or *brown beetle*, answer admirably ; the outer hard wings being previously cut away, and the insect suspended tail foremost, so as just to dip into the water.

This is called "*dipping*," and is practised in hot weather from behind bushes, keeping out of sight completely, and scarcely moving your rod, for the *chub* will fly even from its shadow.

If you cannot obtain the *salmon's roe*, use the paste described

described as a substitute: you will find old Cheshire cheese, not the rotten part, but what is white and crumbly, or the spinal marrow from the back bones of oxen, or of calves or sheep, answer pretty well; the marrow should be left in its skin, to resemble a large white maggot, of which, as well as of *gentles*, *cadlates*, &c. *chubs* are eager devourers.

Chubs prefer rising to the bait; but if you fish at all under water, it should be near to the bottom, as they lay deep, constantly eyeing the surface. Their bite is extremely quick and deep; therefore, you should strike soon, but rather gently.

In very cold weather they grub into the sand, or gravel, and lay in hollows among the clay, mostly in very deep water, and often among the *barbel*, if any of them remain so late: they dart among weeds, or under banks, and into holes, at the least alarm.

Chubs bite during the summer all day at a fly, but chiefly in the mornings and evenings at a worm. The best time for *dipping* is the evening, in sultry weather. During the cold months, or when the wind has been for some days from a cold quarter, they will only bite in the middle of the day, and then not freely.

When you use the fly, you cannot have too fine tackle; that is, in proportion to the size of the fishes. The best mode is, to whip from the head of a boat, which should be allowed to drop very slowly down the stream, by what seamen call "*hedging*;" that is, with a very light anchor, or stone, out astern, with just sufficient rope to allow the anchor to trip over the bottom, occasionally checking the progress, so as to go rather slower than the current.

In this manner stand in the fore part of the boat, and throw before you down the stream ; using either a very nice *red-spinner* on No. 5, or 6, or an ant, or a gnat fly on No. 8, or 9 ; for at such they will rise well, and afford excellent sport.

When you have hooked a fish, you can render the boat stationary by serving out more rope ; or you can cause the waterman to pole away to such a part as may appear better suited to allowing a good scope of line, which, with such small tackle, must be freely given, else you will lose all the large fishes.

Take care to subdue well before you venture to draw too close to the boat ; for at sight of you the fish will make desperate exertions, and do all he can to avoid your landing-net.

In this way of proceeding, which I have detailed under this head because it is peculiarly appropriate to *chubs*, you will frequently catch fine *trouts*, and perhaps occasionally some *perch* ; though the latter prefer the worm to the fly.

By casting over the *scours*, and upon the shoals, as you *ledge* down, you will have variety of fishes, especially very fine dace, and *graylings*, where they are in the waters.

If you have not a boat, try from a headland ; and, keeping carefully out of sight, take the advantage of the wind in your back to blow out a very fine line, baiting a small hook with a common house-fly, or a blue-bottle, &c.

I have heard that *chubs* are to be taken with *cherries* ; but I never made the trial : I should, however, rather think it time thrown away, and that the angler would
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have far better sport with any of the above-mentioned baits. I have noticed this lure (if it really be one), that I may not appear deficient in regard to any matter which may tend to inform the learner, or to diversify the practice of the more experienced.

Of the Tench.

This is a very handsome fish, having a peculiar colour when in season, which makes it appear in some points of view as though bronzed. It is remarkably tenacious of life, and may be conveyed, under proper management, to a considerable distance.

Being, however, more common in ponds than in rivers, and remarkably fond of laying on a muddy slimy bottom, it usually acquires a bad flavour, and requires to be kept in clear water, in which it should be fed on crumbs, bran, malt, or worms, for at least a week before it is consigned to the kitchen. Such as are taken from hard bottoms, but especially from gravelly rivers, are peculiarly delicious.

The *tench* is covered with a slimy or mucilaginous substance, which renders it very slippery : from the common practice of other fishes to rub themselves against him, for even the *jack* will do so, and never offer any violence, it is supposed this slime possesses some peculiar qualities, especially as only sick or wounded fishes resort to him for, what we suppose to be, a cure.

I rather think the slime acts merely in a mechanical manner, by sheathing the wounded parts after they have been rubbed, and consequently become smeared therewith : perhaps any other mucilage that would resist the water, might be equally efficacious.

This fish delights in reclude deep waters that are turbid and foul; in such it increases very fast in size, and propagates very rapidly. It spawns about Midsummer, or later, in some waters; it being earliest in those which are warmest: it falls off very much after spawning, and does not recover for at least two months, when it begins to get firm, and increases in condition until it spawns again.

The mouth of the *tench* is moderately large, and as it sometimes reaches to a good size, namely, as far as four or five pounds, your hook should be about No. 5, or not less than No. 6, on a good *gut*; though I think for pond-fishing, *weed* is preferable, as the colour of the water is in your favour.

Cast among weedy patches, generally below mid-water: if you have previously baited the hole, you may reckon on good sport; if that has not been done, throw in some malt, or grains, and clay-balls with worms stuck in them.

The best baits are the *brandlings* from rotten tan, which are full of a yellow liquid. Your float should be light; but if you bait with *grubs*, *palmer*s, *wasp-maggots*, *gentles*, or *cadbates*, it should be as small as can be used.

Tench do not swallow very quickly, sometimes holding it in their mouths for a while; therefore give them good time, and let them either keep the float down, or, as is often the case, let them rise with the bait, so as to lay your float on the water.

This is an excellent sign, and warrants your striking; but rather gently, lest the fish should be only sucking the bait; for he will seldom return after it is drawn from his mouth.

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The *tench* is a great struggler, and very fond of plunging down with your hook when he feels its point: give fair play, for in waters where they abound, you will rarely find those very small that take your bait: they generally weigh at least half a pound, and, taken one with another, will amount to full a pound and an half each. I do not think they grow near so large in rivers as in ponds.

Like the generality of fishes, the *tench* bites most freely during the cool of the morning, and of the evening, in summer: indeed, during the winter they are not easily taken. I have, however, observed, that the time of day makes very little difference if the water be deep, and especially after it has been sullied by heavy rains, or by a fresh.

With regard to the *fly*, it is of little or no use; for though possibly a *tench* may now and then be caught in that manner, it must not be construed into a habit. Indeed, from their peculiar tendency to suck the mud, we may more properly conclude that they subsist chiefly on maggots, &c. they find therein; and this is confirmed by their *sometimes* biting at *snails*, *perriwinkles*, and *gentles*; they likewise take the small green *willow-caterpillar*, and such as are found on the leaves of currant-bushes, on rape, turnips, &c.

Of the Carp.

*Carp*s form so large a portion of the stock in our fish-ponds, as to be entitled to particular notice, especially as they afford fine sport to the angler, being very strong, great strugglers, and remarkably cunning. They are greatly admired when stewed; without which prepara-

tion their flesh is not very palatable, being coarse, and rather full of small bones. Their roe is remarkably fine, and, with proper ingredients, makes admirable sauce for all kinds of fish.

The *carp* is, like the *tench*, apt to be extremely muddy when taken from ponds; but the river *carp* is not only more free from that impurity, but is superior as to the quality and delicacy of its flesh.

The *carp* bites best about its spawning time, which occurs so often, that some naturalists say they breed every two months. They certainly are seldom without roe, and they increase in numbers beyond all calculation.

They are best in season during the spring, and about the fall of the elm-leaf; at which time their colour is more glossy, and their eyes display more vivacity.

To catch an old *carp* is, sometimes, a very difficult matter; for they either are so diffident, or so crafty, that your tackle must be fine, and be well managed, before one will bite.

Of all fishes this requires the finest *gut*, and the greatest art in respect to offering the bait, which should be the best *blood-worms*; fine, but rather small, *brandlings*, *cadbates*, or *green caterpillars*. These should be on a hook about No. 5, on a well-stained *gut*, very round, and free from the smallest ruggedness, or flaw; your joints very well tied down, and your float as small as may be practicable.

Use but little shot, and fish near the bottom, in deep shady places, where the current (if in a stream) is very gentle. Above all things conceal yourself, and be not in a hurry when the fish bite, unless you find them in the humour to nibble, as is often the case; when it will
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be necessary to keep your line as tight as the wind may permit, and to give a gentle twitch whenever your float sinks in the least : this requires some judgment, a quick eye, and an obedient, delicate, hand.

In large waters, especially if you cannot approach the chief haunts, you should bait the spot where you intend to angle, for some days previously, with *malt, grains, bran, blood, or refuse worms.*

The *carp* will sometimes take a piece of salmon's roe, or its substitute ; but I never knew one to rise at a fly. When about to spawn, they generally lay near to the surface, with their noses out, or under such parts of the dock, or other leaves, as do not lie close down upon the water. In such situations they may be heard to *pout* all day, but especially towards the evening, in close weather.

When this is the case, you will have little or no success with a float, or by sinking your bait low down ; on the contrary, you should put a very fine *worm*, or a *gentle*, or a *cadbute*, or a *green caterpillar*, on rather a small stiff hook, without any shot on your line, or, at most, only one, and cast, or rather gently *drop*, your bait, so as to hang over the edge of a leaf, and to be only in part immersed in the water : observe, that the *carp* has a very small mouth.

If you manage this point dexterously, you will *hook* many fine fishes ; but as to getting them out, that is quite another affair. The moment the *carp* feels the deception, he will give either a desperate splash on the surface, or dart down like an arrow, leading your line into many an awkward labyrinth.

The contest in general ends with his escape ; unless, indeed, you can, by more than common good luck, bear

him up into a clear part, and there depend on your line to prevent his tricks from taking effect.

The river *carp* are chiefly found in the deep, weedy, foul parts of the water, and are not a whit less discreet than those in ponds: it really at times is highly provoking to see how they will keep playing at the bait, so as scarcely to agitate the float.

I have remarked, that when in this humour, they bubble occasionally; and that when they do so, they rarely give a fair bite: generally they draw down very, very slowly; and when they take the bait really into their mouths, rise a little, and lay the float down, seemingly with the intent to feel whether any thing be attached thereto. In the latter instance, the angler is generally to blame if the fish escapes, provided the water is clear of weeds, &c.

We commonly call it a good *carp* when reaching two pounds weight; but in some waters, especially if not overstocked (as is not often the case), they frequently weigh four or five! I have heard of their being *much* larger, but not so well authenticated as to authorize my stating it as a fact. I never saw one that weighed six pounds in this part of the world; though I have seen the *rooe*, which is the *white carp*, taken out of the Ganges, often equal to 50 or 60 pounds, and once nearly 80.

In hot climates they thrive immensely; but being only exotics, do not in our latitude bear any comparison, in regard to their ultimate bulk abroad. Nor, indeed, does the perch, though I believe a native of our waters, compete with the *black perch*, or *cutlah*, of Hindostan, which often attains to 60 pounds weight.

I shall conclude this article with observing, that he
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who can command success among large *carps* (for I look upon the young ones in a very different light), must possess several qualifications extremely valuable to the angler, and bids fair, by general practice, to be, according to the old saying, "able to teach his master."

I ought to state, that one author directs *green pease*, a little boiled, as a bait for the carp: not having tried that lure, I cannot speak as to its merits.

Of the Grayling, or Gray Trout, or Umber.

I cannot boast of any *great* intimacy with this fish, not having had so much access to it as to other kinds, owing to the *grayling* being found only in particular rivers. Such, however, as I have caught, gave me the opportunity of making some essential remarks; and local information has supplied me with sufficient, I trust, to answer the purpose of my reader.

This fish grows to about four pounds, though they average about two; they are keen after the *double-winged fly*, as also after the *black-spinner*, and the *May-fly*, both grey and yellow, when in season. They are not however strong, nor do they struggle nearly so much as the trout. They are best suited by a hook No. 6, their mouths not being quite so large as their size should indicate: the line should be very fine. When you have a bite, give a little time, and strike gently; for their lips are rather tender.

Angle at the bottom without a float, baiting with *cad-bates*, *gentles*, *salmon's roe*, or very small *blood-worms*. They are very fond of nibbling away the bait, unless it can be taken into the mouth with ease: but they will pouch it readily when it is so.

I found that No. 8 was the best size in bottom-fishing; though I believe some authors advise No. 5 : perhaps I may err, but I confess myself partial to small tackle in general, being completely satisfied of its superiority.

I found the *graylings* always among the *trouts*, and generally caught about the same number of each. They bit admirably when the sky was overcast with approaching rain; but when the wind was norther, or to the north of east, I seldom had one at my hook, whether bottom or fly. They are extremely fond of the latter, and are perpetually rising after it. I found all hours much alike; and that they were far bolder, as well as more simple, than the *trout*.

The meat of the *grayling* is very fine; equal, in my opinion, to any fish I ever tasted. They would not take *trolling*-baits; and I was informed, that although they chase the *minnows*, it is only in sport, as they are said never to touch one: of this, however, I have my doubts.

The *grayling* spawns in May: I found several in that month, as also in the end of April, remarkably big with roe, which gave them an extraordinary appearance (as it does, indeed, to all fishes that are at all flat-sided); the more so, as they have but little increase of depth from their noses to their vents, which lay nearly in a right line.

From this fish disappearing when the frosts set in, that is, the generality of them, I am disposed to believe they visit the sea during the coldest months; at least, that they go to the mouths of rivers, and recruit by means of the brackish waters. Of this I am the more convinced, because, with the exception of the Humber and Trent, which

which run into the German Ocean, I believe all the rivers containing *graylings* lie in the West of England, and in Wales : besides, they are never found but where *salmon* abound.

Of the Bream.

As this fish is found in but few waters comparatively, it rarely becomes the object of the angler's attention, usually being an unexpected visitor, and not always a welcome one ; for though it presses hard for a few seconds, it soon throws up, and lays on its side.

It is a species of the *carp*, though but little resembling it, except about the mouth, and in the form of the body. Not being very palatable, but flabby, and full of bones, few persons care to have it dressed when caught. Its roe is, however, rich and large.

It frequents quiet deep waters, where there is a sandy bottom ; and about Midsummer retires among the thickest patches of weed to spawn, remaining very poor for near two months. At such times they scarcely ever touch a bait, though they will rise, and throw themselves out of the water in the evenings.

Their first effort being extremely forcible, your tackle must be rather strong, on a hook about No. 6. Your bait, a *gentle*, or a very small *blood-worm*, or a bit of *salmon's roe*, or its *substitute*.

Breams take a natural fly, especially the *blue-bottle*, and the large grey *stone-fly*, or the *gad*. You should angle for this fish much in the same manner as for *roach* ; both early in the morning, and in the cool of the evening : they take well in some places all the year round, observing in cold weather to choose the middle of the day.

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You will find great advantage from the use of *ground-baits*; and if you throw in lumps of clay mixed with clotted blood, you will be sure to attract them, and perhaps some *carp* and *tench*.

The *bream* being rather a shy fish, you should be careful to keep out of sight, and to lower your bait very gently into the water.

The large *bream*, such as weigh more than a pound, are sometimes very bold, and give a very decided bite; but owing to the smallness of the mouth, it is prudent not to be too quick in striking: when struck, be ready to give plenty of line, where the situation admits; if it stands the first or second pull, you may conclude the fish is your own.

I should not omit to state, that the *bream* will rarely be found in narrow confined waters; it being particularly timid, and fond of laying out in the broadest parts, where the shadows of men, cattle, &c. do not affect it.

Of the Barbel.

This is a remarkably handsome fish, but its flesh by no means corresponds with its outward appearance; being poor, stringy, and dry. The roe is held to be *poisonous*, and even in small quantities, will occasion violent gripings, and sickness at the stomach: this fish attains a very large size, sometimes weighing near thirty pounds!

It is remarkably fond of those irregular depths in the gravel, which are called by the seamen "*over-falls*;" that is, sudden shallows, and holes, alternately. *Barbels* may be often seen from the tops of bridges, &c. in great numbers, some large, some small; though I have remarked, that the very small ones, such as are under a pound

pound weight, are extremely uncommon; whence I consider the assertion of their going to the salt water after spawning, as being well founded. It is certain that *barbels* are never seen but in streams communicating with the sea; and that about Martinmas they all disappear.

These fishes dig holes with their snouts, which are much like those of swine, and burrow in the gravel or sand, at the bottom of those large cavities, over which the stream runs with velocity; especially under heavy banks, camshots, &c. They are in their appetites not unlike swine, preferring *carrion* and *greaves* to more sweet food. When men, &c. are drowned, the *barbel* never fails to repair to the spot, and to make a meal as soon as an opening may present itself; for having no teeth, it is obliged to suck, which it does very greedily.

The stiff spine on the *barbels'* backs, no doubt preserve them from molestation on the part of *predatory* fishes, but they are sometimes attacked by leeches, which probably are attracted by their sanguinary appetites.

The *barbel* spawns about Midsummer, but has not, in general, roe proportionate to its bulk. Nor do I think it is a fast breeder, for I never caught one under two pounds weight, that had any roe in it. They retire gradually into the tide's way as the sun gets to the southward; and may sometimes be taken in such parts, while not one is to be seen in the summer haunts.

You may angle for *barbels* either with a *tripping bait* on a hook No. 4 or 5, with five or six stout shot at about a foot above your hook, and a double gut, foot length; or one of *weed*, and a cork float; letting your bait, which should be *greaves*, or *lob-worms*, go down with

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the stream over the holes where they lay, at about two or three inches from the bottom ; or you may lay at the bottom with a *coffin-lead*, as described before for *salmon*.

They also take *salmon's* roe freely, but I never knew one to take the substitute paste. I have often baited with cheese, &c. as advised by several authors : but to no purpose.

Though the *lurbel* almost invariably remain attached to some particular hole or *over-falls*, yet you will find it advisable to use ground-bait, both before and while angling ; it being a great chance but you get a good *trout* by so doing. For this purpose, clay and clotted blood should be mixed into large balls, and be thrown in, so as to lay where you keep your line.

Give time when you have a bite, unless your rod be pulled ; when you should lose no time in striking.

When you have hooked a fish manage him cautiously, for, like the *chub*, he will be apt to run head on, at whatever he can see, and will even lash with his tail at your line, and rub his nose against stones, stumps, or whatever offers, in the endeavour to disengage your hook. Therefore hold him well out, in clear water, yielding moderately when he pulls hard, so as to keep him in temper.

As your gut is apt to be chafed by the *coffin-lead*, especially when you are obliged to throw your line out, I recommend the fine China twisted line, which is sold at all the tackle-shops in London, and at some in the country, as being more calculated to resist the weight ; it has not those knots, which in *guts*, *hair*, &c. are inevitable, and are extremely apt to give way, when a lead is used.

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The China line I allude to, is sold in small circular bundles, running from thirty to forty yards; though some are shorter: be particular in observing, that it is of the twisted sort, composed of *three* strands or threads; for there is another kind made up in the same form, which is all of *one* twist, and does not answer, as it opens in the water: this last kind is, however, when chosen of a proper thickness, very good for the first string of a violin.

Both kinds are made of white silk, and are of prodigious strength. Care should be taken to open the skein completely to its whole length; suffering it to lay on the grass, &c. to get out the extra twist; also rubbed gently with a bit of soft flannel, &c. it makes an admirable light *reel-line*; capable of subduing a fish of twenty pounds weight, under fair circumstances.

Before I conclude this article I must remark, that the *barbel* bites best about sun-rise, and sun-set, in warm weather; that he will not touch a bait in general, when a cold wind blows, except there is a fresh in the water; and that unless your baits are very neatly set on, notwithstanding his swinish similarity, he will seldom bite at all. You must not expect them to bite freely before the frosts are entirely gone, and the spring well advanced.

In taking this fish out of the water, beware of the stiff ray, or spine, on his *dorsal* or back-fin; and if you are disposed to serve him up to table, give directions, or rather *see*, that the roe be thrown away; else those who do not know its baneful effects may eat of it. The *barbel* is best baked, with a rich pudding in his belly: it is, indeed, one of those fishes that depend entirely on a good sauce.

Of the Roach.

This is perhaps the most common fish in the English waters, and in consequence, is not so much valued as those that are more rare, yet do not exceed in point of flavour. The *roach*, when in season, which it is chiefly during the winter, is both firm and well tasted. They are tolerably good in the early part of the spring, and until they have spawned, which generally happens in May; though I have caught them full of roe so late as the end of July.

They are fond of weedy situations during the summer; when they associate with the *dace*, and sun themselves in shallow water; generally preferring sandy, gravelly, or chalky bottoms: where there is either yellow or blue *marl*, they thrive prodigiously.

Such as are found in rivers are far brighter coloured, stronger, and less muddy, than those bred in ponds. They grow to a good size in some waters, averaging from about six ounces to a pound; though they occasionally reach to two pounds weight; but such are very rare. Those of a middling size are the best flavoured, but are troublesome eating, on account of their numerous small bones.

The *roach* bites freely before it spawns, and will do so shortly after having cast her roe: the winter is the best time for angling for this fish, when they lay down at the bottom, under the deep slow currents, and take a fine worm very well: the best bait for them, especially at such times, is the *salmon's roe*; though they will bite passably at its substitute; they likewise take the *gentle*, the *cadbate*, and most *grubs*; nor do they refuse
those

those flies which are taken by the *dace* ; but they do not rise so well as that fish.

Your tackle for the *roach* should be remarkably fine ; for though it is a silly fish, it will not readily take when the line is coarse. Your hook should not exceed No. 7, and generally a smaller will be preferable. Your *gut* should be coloured, with only one shot about six inches from the hook ; if you want more, let them be at about six inches higher up : a light float is indispensable, for their mouths are very small, and their bite very delicate, whence it will be advisable to keep your line ready to strike.

In rivers, they often draw the float down until they get to the bottom ; when this happens you must not be in a hurry ; for it is almost a certain sign, that they have only laid hold of the worm's tail, and want time to complete the bite.

You will find it proper to bait the hole where you fish, with oatmeal, a little browned over the fire, and then made up into balls with a small quantity of treacle : this draws them together far better than any other ground-bait I ever heard of. Throw such a ball, about the size of a marble, now and then, where your hook lies : it will gradually be dissolved, and attract numbers.

When the *roach* lay in the tide's way, you must only expect them to bite when the flood comes in ; especially at the first of it, when they commonly are very keen. If there is a fresh in the water, they will bite during the latter part of the ebb : at such times they lay chiefly on the flat gravels and sands, on the sides of streams, especially below bridges.

As you seldom have occasion for a reel when angling
for

for *roach*, though the prudent sportsman will never be without one, when to be had, you should have a line expressly for such purposes, about ten or twelve feet in length, according to your rod ; which I always consider to be such as suits the general run of fishing, and will in all probability measure fourteen feet. Such a line should be taper, becoming full four times as thick at the top, as it is at the lowest link of hairs.

The experienced angler well knows the great powers of such a line ; and that it is far superior to such as are, throughout, uniformly of the same thickness.

Where the *roach* are very numerous, and well on the feed, you may take them with a *minnow* line (provided your centre *gut* be strong enough), often two, and three at a time ; but you must be quick with your landing net, and not give them time to dash about.

In the evenings of very sultry weather, when a slight shower has fallen, they will take the common house fly, either on the surface, or at some depth ; on the whole, I think that, next to the *salmon's roe*, you will have best success with *gentles*, *cadbates*, and *blood-worms*. But above all things, have fine tackle ; that is, a small hook, on a well chosen piece of superfine *gut*.

Of the Dace, or Dare, or Dart.

This is more compact in its make than the *roach* ; indeed in many points, it bears a very strong resemblance to the *chub* ; its flesh is firmer, and better eating, besides being far less bony. Its mouth is also wider, whence it can take a large bait, of which it is very fond ; generally giving a decided bite, and struggling much on being struck.

Dace

Dace swim together in immense shoals, often covering extensive shallows where the water is clear, and rather gentle; or laying on the *scours*, where they snap at every thing that falls into the water.

Hence they are easily taken with the fly; for which purpose you may have a *stretcher* made of a *red-spinner*, or a very small *double-winged fly*; and two, or even three *dippers* (or *droppers*) at about a yard, or less, from each other, the whole on a good tapering *gut* line, which should be thrown so that the flies, especially the *stretcher* (or end fly) may light in the water (but without the smallest splash or agitation), a foot or two above where you perceive the leading fishes to lay.

I have paid great attention to this point, and have found that the leading fishes, by which I mean such as lay at the head of the shoal, are, for the most part, the largest and keenest. When they have declined my fly, it has always been a bad omen; for I generally found the rest treat it with indifference; or, if they did approach, it was so deliberately, as to convince me they did not intend to bite.

The best flies for *dace*, at all seasons, I have found to be the small black *ant-fly*, or the *gnat-fly*, on a hook No. 8, or No. 9. Your single *droppers* must be on short pieces of *gut*, not more than three inches in length; so as not to entangle on your line, as they would inevitably do if longer: loop them on above knots; which should always be well tied down, with very fine dark brown silk, properly waxed.

You will sometimes find the very large *dace* in the deep strong waters, among the *gravelings*, and *trouts*: in such places they bite very sharp, and struggle with
great

great violence. If your tackle is very fine, as it should be, you must treat them very gently, or they may break away ; at all events, get them to some distance from the place where you perceive other fishes ; which will else take the alarm, and become so timid as to spoil your sport.

When you use bottom tackle, take care that it be delicate, but sufficiently firm, for the *dace* lay in deepish water, such as is frequented by larger fishes ; though in the summer they will be found associating with the *roach*, among weedy shallows ; and, like them, rather averse to bite during the middle of the day.

After slight showers, or even heavy rain, following upon very sultry, clear weather, when the air is cooled, the *dace* will take freely all day ; but they will often take at the deeps, when they will not rise to a fly ; notwithstanding their peculiar fondness for the latter.

Angle for them with fine worms, of almost any kind, but the more transparent and glowing the better ; or with well prepared *cadbates*, or three or four gentles ; or a piece of salmon's roe (but not the substitute, for they seldom touch it), on a hook about No. 6 or 7 ; your line slightly leaded, unless in a stream ; when perhaps a cork float may be indispensable, otherwise a swan quill is best ; and throw in now and then some balls made of browned oatmeal and treacle, as before described ; or some ground malt. Do not use any thing for ground-bait that they will make a hasty meal of ; for they are very greedy, and quickly satiated ; not caring to leave what they are eating.

Dace will not stay long where the water is not generally clear, and the stream tolerably free ; hence, they
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by no means thrive in ponds: when found in standing waters, you may be assured there is some very strong spring, or some inlet, near which they take their station. They are not so good as the river *dace*, nor do they make such efforts when hooked.

The young angler cannot do better than devote one summer entirely to whipping for *dace*; he will thereby acquire many excellent qualifications: for his hand will move very lightly, so as to cause his fly to light *imperceptibly* on the surface; which is an object of the greatest moment. He will learn to direct his line correctly, to any particular spot; and as he will at times be attacked by fishes of a superior class, he will acquire a knowledge in respect to playing of fishes, and be ultimately convinced, that fine tackle is not only the most attractive, but in good hands, is generally equal to the subduing of such fishes, as the bad angler could never manage, even with stouter apparatus.

I lay some stress on this point, being thoroughly satisfied as to both its utility and the indispensable necessity of such an opinion being inculcated, and received, before the learner can be said to have made any proficiency. In a word, throwing the fly for *dace*, may be considered as the best school to which the angler can resort.

During the evenings he may *whip* for them, from about two hours before sun-set, till the fishes can no longer distinguish the fly: when it grows darkish, he should use flies of rather a brighter colour; such as deep purple, chocolate, or coffee colours, and of rather a larger size; which, however, must be thrown with the utmost delicacy, as their bulk will cause them to fall
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with more force than the smaller sorts before recommended.

If the *dace* do not rise readily at the bare fly, use such as have only wings; the shanks of the hooks being left naked for the reception of a *gentle*, &c. which ought to be slipt up until it lays close to the wings, and appears like the body of a fly: such a device is peculiarly killing.

When *dace* all on a sudden run into the shallowest water, betraying fear and uneasiness, you may suspect that some *predatory* fish has appeared, and should be prepared for an attack. I have had small *dace* and *bleaks* taken off my hook by *jacks* and *trouts* several times.

Of the Ruff, or Pope.

This is a diminutive species of the *perch*; its form being similar; its scales possessing the same roughness and appearance; and its haunts the same. They are, if any thing, more thick in proportion, and their flesh is, at least, equal to that of a *perch*. They rarely weigh more than four or five ounces, but when in the humour, bite so very freely, that the angler may speedily procure an ample dish of them. They spawn twice, viz. in the spring, and about Michaelmas.

They do not touch small fry, but take fine, well cleansed worms, particularly such as have been kept in moss, well moistened with sour cream; whence, they probably derive a flavour which renders them peculiarly acceptable to the *ruff*.

Some angle with three, or even four rods; but I think, two are as much as can be well managed; indeed,

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I have occasionally seen them so keen after my cream-fed worms, that I could scarcely find time to bait a second hook.

Ruffs are very voracious, and, like the *bull-head*, are apt to gorge the bait in a second ! this is in the angler's favour, when he uses more than one rod ; as he is then tolerably sure of all that bite, if left to themselves ; but he must keep his disgorgers at hand.

I do not know any fish that, including all seasons, bite more promptly, or more decidedly : they seem to be little choice about weather, especially when they can get a good haunt, among thick weeds, with a gravel, or sand bottom, about three or four feet in depth. They will occasionally bite, even when there is a sharp frost ; but such is rare.

I cannot say that I ever saw a *ruff* but in running water : and then chiefly in retired tranquil parts ; such as the backs of small islands, where the current was very moderate, and the bank little frequented. They are not so shy as fishes in general ; for they will play about a boat, though the persons in it are in motion, and do not remain either silent or steady.

As you may expect *perch*, and large *roach* where the *ruffs* commonly lay, it is prudent to have sound tackle ; your hook, on account of this fish having rather a large mouth, may be No. 7 ; your gut fine, and well stained ; only one small shot, and a *very* delicate float. When you have a bite, give a *little* time, and draw tight ; the *ruff* will hook himself in general. Take care how you handle him, for his fins are rather sharp.

With respect to their proper season, I really have never been able to form an opinion ; having found them at all

times remarkably fine : when big with roe they are delicious ; especially when broiled in buttered paper.

I am of opinion, that these fishes change their haunts but seldom ; for I never knew a place where they once assembled, that was at any season totally deserted by them ; unless from the water becoming stagnate, when they speedily quit for some new haunt : as before observed, I think they cannot remain in standing water ; and consequently are not suited to ponds.

I never knew one of them rise to a fly, though I have tried all colours.

Of the Rudd, or Fin-Scale.

This is a very scarce fish, and is much admired for the delicacy and sweetness of its flesh ; especially those that grow to a good size ; it rarely exceeds a pound and a half ; though I have heard of some being taken equal to three pounds. There is something handsome in its appearance ; produced probably by the spots on its gill-covers, and by the rich colour of its fins : it has the peculiarity of double nostrils.

The *rudd* being a great struggler, must be angled for with strong tackle, such as a hook No. 5, on a good single gut ; without shot, and allowing your bait, for which a fine *blood-worm* or a *cadbate* are preferable, to play about with a very gentle motion about a foot deep, among weeds that are not very thick ; now and then lowering your bait to mid-water, or more.

Angle in this manner in the deep bends of gently meandering streams ; early and late, when the weather is close and sultry ; but when there is a moderate, ruffling breeze, you may catch them at all hours ; especially in
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the spring, and fall ; and sometimes in the winter, when the weather has been mild for some time, and there falls a little sleety rain.

These fishes are partial to soft water, such as flows over chalk, marl, or deep, slimy mud ; but not to clay soils ; nor are they found much where the bed of the stream is coarse or pebbly ; on fine sand, where soft weeds float, they are sometimes to be seen in numbers ; especially in the spring, when they are about to cast, or have spawned. If you use a float, let it be very small and put only as much shot as will make it stand.

The *rudd* will sometimes rise with great avidity at a neat, brown fly ; or at a *red-spinner* ; but, they are extremely cunning, and are more easily taken by means of a natural fly ; especially the *grey stone-fly*, and the *yellow cow-dung fly* ; both of which they seem to be partial to.

When you angle for this fish, keep well out of sight ; for it in general, swims near the surface ; and from its haunt among the weeds, looks around very sharply ; scudding away at the least appearance of danger.

You may occasionally use other baits ; such as *gentles*, *baked wasps*, and the *salmon's roe* ; but, in my opinion, the *worm* and high coloured *cadbate* are by far the best.

I believe the *rudd* is never found in ponds, or any water that has not some current. I recollect conversing with a brother angler, whom I met by chance some years ago at *Wansford* ; when, on my mentioning the *rudd*, and inquiring whether there were any in the river *Nen*, which passes through that town, he said that one had been caught full of roe, and was conveyed into a pond on a gentleman's estate ; where however it did not live,

but was seen a few days after laying dead on a shelving part of the shore.

The pond was said to be extensive, covering many acres, and the water very deep. We may from this be led to infer, that the *rudd* cannot live in standing waters : but on the other hand, this solitary instance should not suffice to fix the hypothesis ; more especially as the fish in question was wounded by the hook ; a circumstance to us apparently trivial, but fatal to great numbers, which pine after being hurt in the mouth. Hence bunglers often destroy as many fish as a good angler would take out of the waters.

Of the Charr, or Torgoch.

This is a delicious fish, found only in large lakes in the West of England, in Wales, and in Scotland : it thrives best in such waters as are supplied by the thaws of snows on high mountains, and is partial to dark rocky bottoms, where it breeds fast, spawning in the autumn ; at which time it will take some baits well, such as a very small, well-scoured *blood-worm*, a *cadbate*, or a *gentle*.

It is said that they seldom rise at the fly, and that they rarely quit their native lakes, to enter the rivers with which they are connected, unless when the thaw comes down them strongly ; in short, the *charr* seems particularly attached to very cold waters.

They are usually caught with long deep nets, and are in season all the spring, and till they spawn : in the early months their flesh is as red as the salmon's, but it loses its colour after the fish is impregnated.

The *charr* rarely weighs half a pound, but is a great struggler ; at least, such I found the few I once caught
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at *Loch Leven*, near *Kinross*, in Scotland. They were extremely shy, and it was some time before they would bite; however, about mid-day, I hooked four or five: they had a great resemblance to *salmon-trouts*, but their sides were more beautifully coloured.

I was told, that my success was remarkable; for that many gentlemen had tried for years, and scarce ever caught a *charr*. From the complexion of my informer, a needy boatman by whom I was poled and sculled about the lake, I thought it very probable he had the same morsel of flattery ready for all who employed him; and I was rather confirmed in this (perhaps unjust) sentiment, from being afterwards assured, that *charrs* were frequently hooked in numbers.

My baits were small *red-worms*, fresh taken from old stable dung; and I am inclined to think, notwithstanding what I heard to the contrary, that with a fly my success would have been much greater; for their appearance, especially about the mouth, indicated their *bent* to be towards the surface.

It may be proper to explain my meaning; which is simply, that observation has taught me to consider such fishes as are broad, flat, or much hog-backed, as being best suited by *worms*, &c. as in bottom-fishing, or roving; while such as are more round and long in the body, almost invariably are keen after the *fly*: a very slight reference to the descriptions given in this Volume, will suffice to prove the truth of this position.

The *charr* is not known to anglers in the South of England, except from its excellence when potted; though even in this particular they are under some deception, for the people who prepare them in that manner, it is

said, are not very exact in putting nothing but *charrs* into the pots: if report be true, they mix up many a good *trout*, and, now and then, a bit of *salmon*.

From the great quantity of what is called "potted charr" consumed by epicures, &c. I am rather disposed to believe that the above opinion is not unjust; for I do not think such a quantity, of *charrs* only, could be collected in any one season; they being a very scarce commodity, even in some of their own waters. This kind of deception pervades many matters; thus, we see more *Madeira wine annually imported*, than that island could furnish in ten or twelve years.

Of the Gudgeon.

Of all the fishes to be found in our rivers, none, I believe, is so much persecuted as this little delicious one: it is not only taken by the hook for the purpose of being served up at table, but is caught in *hullies*, *keils*, &c. with the intention of baiting *jack-hooks*, &c.

The *gudgeon* is remarkably fond of gravelly, or slightly muddy situations; and propagates remarkably fast on chalk soils. It is properly a river fish, but is occasionally found in ponds supplied by ample drains, &c. in which there is a constant flow of water. Gudgeons seldom take but on, or very near to, the bottom, and then will bite at almost any insect, but prefer small *blood-worms*, *gentles*, *cadbates*, and *grubs*.

If you mean to set in seriously for *gudgeon*-fishing, your best way is, to fix a punt across that part of a clear gentle stream where the bottom is of fine gravel, and tolerably level, also free from weeds. Plumb the depth, and set your quill-float to such a length, as may cause
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your hook to trip along the bottom with the current ; drawing up whenever your float begins to lean towards you.

This, done very gently, will generally attract the gudgeons ; especially if the water be not so deep but that you can stir up the gravel smartly, now and then, with a long-handled rake : this will occasion them to crowd to the disturbed part, at the same time that it conceals your line, which should be very fine, and rather shorter than your rod : your hook about No. 8, or 9.

The gudgeon is extremely greedy, and having a very broad mouth, can take a good sized bait : do not spare your worm-bag ; but when a worm has been in the least injured, change it for a fresh lively one ; thereby you will not fail to have excellent sport during the whole of the day, especially in hot weather, from the end of March till the end of October. Observe, that *gudgeons* very rarely feed but when the sun is up.

I am much inclined to believe, that the *gudgeon* spawns both in the middle of spring, and about Michaelmas ; especially at the latter time, when the young fry may be seen in shoals that darken the shallow sandy, or fine gravelly, bottoms, in which they greatly delight.

I have generally found the best mode of taking them was by means of my *minnow-line*, letting my baits all lay on the bottom ; but when on the eve of spawning, and for a few weeks after, they do not shew much disposition to feed. In cold weather they leave the shallows, returning to the deeps, and do not bite freely.

When you are angling for them, throw in some pieces of coarse *biscuit*, also a few shreds of unsoaked *greaves*,

cut small ; taking care they should sink about the place where your hook trips.

Give a little time before you strike, especially if your bait is rather large ; and remove the hooked fishes as fast as you can out of the water, else the whole shoal will take the alarm, and be with difficulty brought back.

You will find, that the *minnow-net* is an admirable instrument for taking *gudgeons*, when the water is shallow. You must first rake the spot well ; then lower your net gently to the bottom, and, over the place where it lies, throw in grains, meal, &c. In this way I have often taken more than a peck of *gudgeons* in a few pulls.

Of the Flounder.

This is properly a sea-fish, and is rarely found but in waters communicating with the ocean ; yet *flounders* not only will live and propagate in other streams, but even in ponds, growing to a greater size than when in the tide's way.

This fish delights in a soft, flat, or gently declining bottom, where they will take various baits, but principally well-scoured *worms*, and *greaves*. You will have but little sport unless the place be previously baited, for they are remarkably indolent ; though when once assembled, no fish can keep the angler better employed.

Use strong *gut* with a hook No. 7, or 8, rather stiff in its make ; put four or five shots on your line, and let your bait go close to the bottom ; or lay upon it ; give a little time when you have a bite, for the *flounder* is a great glutton, and will, if possible, gorge your bait, provided he be not disturbed.

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You may use two or three rods, especially where the stream is moderate, and the water deep : in such places, however, you will probably find *barbel*, and large *eels*, which are generally caught promiscuously when angling for this fish ; especially in gloomy weather.

When the tide comes in strong, the *flounders* are all on the alert, and bite very sharp, particularly in the slow eddies which flow over flat sandy banks, after the water has passed through a bridge, &c. They are not particular as to hours, nor, indeed, in regard to weather, so much as most fishes.

When you hook a *flounder*, treat him gently, for he is a great struggler, and will sometimes hug the bottom, or skim under a bank, so as to give you much trouble ; besides, many of them grow to near a pound weight, and require good *gut* to hold them in.

Their hold is apt to break if you strike too soon ; therefore, it is best to allow a few seconds for the fish to gorge your bait, then you will make sure of him. Observe, that a small *brandling*, or a *blood-worm*, are the best baits ; and that, if the *flounders* run small, you should use a hook in proportion ; sometimes *minnow-hooks*, *i. e.* No. 9 and 10, are most serviceable.

Much cannot be said in praise of the *flounder*, as an article for the table ; but, when very fresh, they are sweet and nourishing. Those taken in brackish water, and in the tide's way, are generally smaller, but much firmer, than such as are taken further up the rivers, which they ascend sometimes to very near their sources.

The *flounder* spawns some time in the summer ; generally about the beginning of June ; though some do not cast till September, while others cast in April and May :

this depends much on the water, and on the state of the weather.

They are in high season when full of roe, but become remarkably flabby and woolly when they have spawned ; nor do they probably recover until they get into the tide's way again.

Of the Smelt.

This is a very voracious fish ; and if we consider the form of its mouth, as well as the many teeth with which both its tongue and its jaws are furnished, we might, in all probability, be correct in classing it among the *predatory* tribe.

I believe it is not a settled point, whether the smelt is a separate species of the *salmon*, as Linnæus states it to be, giving it the name of *Salmo eperlanus* ; or whether it is the young of some other kind : I am disposed to the former opinion, from our never seeing any fish of a size larger than the *smelt*, such as we should suppose it to appear after the growth of another season ; and because this fish, when it arrives at a moderate size, is frequently found full of roe.

Smelts rarely exceed eight or ten inches in length ; though I have seen a few at table, that could not have measured less than a foot.

The *smelt* is in high season twice in the year, viz. during Christmas, and again about July : they are best during the winter months. They spawn in March and April, and immediately go to the salt water, leaving their young fry in the rivers ; they return in about six weeks, or two months, very firm and well flavoured : in taste they much resemble a fine cucumber, though some think
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they are more like the violet. When dried, they make an excellent relish, being sold at the oil-shops under the name of "*sparlings*." The flesh of the *smelt*, when just taken, is peculiarly delicate and wholesome.

Smelts never stray far from salt water, or, at least, from where it is a little brackish : thus, they come in with the flood, especially during spring tides, and return with the ebb. They are fond of deep holes; and, when the tide is nearly full, may be caught with a stout *minnow*-line (or a very delicate *pater-noster*), in such places.

They sometimes get into docks, and are shut in after high water; in such cases the young angler may have excellent sport, baiting with *gentles*, *cadbrates*, or *blood-worms*, on hooks No. 10. To attract them, a little burnt oatmeal, or raspings of bread, should be now and then thrown in. With good tackle, and with good management, a peck may often be caught in a tide.

They vary in their depth of swimming, but in general, lay about seven or eight feet from the surface, and still lower in very deep water. If fresh raw shrimps can be had, or small pieces of raw *lobster*, or *crab*, they will prove very superior baits.

A certain similarity, added to the periods in which *smelts* frequent the mouths of rivers, render it probable there may be some truth in the conjecture, that the *white-bait* are the fry of the *smelt*. Their habits and localities are exactly the same. The latter are often caught in immense quantities.

Of the Lamprey.

This little luscious fish is found in several waters; but there are two kinds, viz. one that is only found in salt
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water,

water, or where the brackish water flows, and lives in sand, or among coarse gravel; the other, that burrows into the mud, and is common in some inland streams.

The sea *lamprey* often measures a foot in length, while the others rarely come up to eight inches, and are rounder in their bodies than the former sort.

The heads of both kinds are remarkably small; their eyes are scarcely to be discerned, but are sometimes covered with a blue membrane, such as the *black eel*, in particular, often draws over its eyes.

The sea *lamprey* is easiest caught in a basket, which being put into the holes near their haunts, and baited with any offal, or blood, but especially with *crabs*, or other *shell-fish* beginning to decay, will attract them in numbers. Many are thus caught in *eel-boxes*, but they are remarkably quick, and dart through the holes like lightning: when they attempt to escape through the intervals in the wicker-work, they stick fast for a while, during which the water is draining out, and leaves them exposed to view.

When you angle for them, which, by the by, is a very tedious operation, you must bait the hole well for several days, and be careful to go at such hours as you have been used to throw in the *ground-bait*, which should consist of *stale shell-fish*, or *greaves*.

Bait with a piece of *raw crab*, or of *shrimp*, on a hook No. 10, and give time to gorge, which the *lamprey* will do very greedily.

The fresh-water *lamprey* is very difficult to catch with a hook, it being so very small; nor is it to compare with the sea *lamprey* for flavour, though extremely rich: they are all best potted, or made into a pyc.

They

The *lamprey* is viviparous, and casts her young during the summer, among clefts in the rocks between high and low water generally, where, indeed, the old ones will often be taken by sniggling, as for *eels*; but be careful not to let the flood tide overtake you, for it comes in very rapidly in some places; where the shore is bold especially.

I have heard that *lampreys* are sometimes taken in great numbers, when the weather is cold, by putting some *worms*, &c. into the foot of a worsted stocking, which, being thrown into their haunts, will sometimes contain many *lampreys*. I never saw this practised; but am disposed to think better of such a device than I am of *angling* for this little fish.

Of the Mullet.

I consider this fish as the link which joins those that remain in the fresh water for certain periods, with those that appertain exclusively to the sea. The *mullet* is, in some countries, found in shoals at the distance of a thousand miles from the sea, but only in rivers communicating therewith: they run up the *Ganges* as far as its source, stemming the most rapid currents, and swimming, in vast numbers, with their eyes out of the water, snapping at small flies, and at such things as may appear eatable.

With us, however, this fish is never found but near the sea, in such rivers as have flat entrances, on which they are very sportive, and will take most kinds of artificial flies, especially the *double-winged*, the *black palmer*, and the *gnat fly*: nevertheless, the best sport is with a natural fly, on a hook not exceeding No. 6, carefully covered

covered by the bait ; for the mullet is both cunning and strong.

You may likewise take them with very small *blood-worms*, or *gentles*, when the water is a little coloured ; being careful that your *gut* is tinted in a suitable manner, and keeping your bait near the bottom. They never, I believe, exceed two pounds and a half weight.

No fish requires more care, in regard to concealment, than the *mullet* ; so much so, that when they are surrounded by the net, in places where they abound, if a man, or a dog, &c. approaches, they will all leap over ; whereas, when properly managed, they submit with remarkable resignation.

Mulletts are fond of sandy shallows, in which they grub and leave their marks : they visit the coasts in summer, and are then in high season ; their flesh is remarkably fine.

I speak, however, with deference to a modern author, who says, " it is not so delicious as the *ancient Roman mullet*, which appears to have been a different species."

This seems, to me, to be rather a bold assertion ; for I do not think it a very easy matter to determine so intricate a question as, in spite of the *antiquity* alluded to, is peremptorily decided by the above *flat*. I leave the reader to make his reflections on the value of a publication, in which this mode of examination, or of description, forms a very prominent characteristic. But, peace be to the *Doctor's* ashes !

The *mullet* is rarely found with roe ; but when so, looks extremely heavy and dull : this generally is the case about the latter end of summer, or perhaps as late as the end of August ; after which, *mulletts* become very scarce.

Some

Some are caught later, but they invariably appear to be diseased.

Those fishes which are caught on the sands about the coast of Sussex, during the fall of the year, are, however, very fine, and are much in request among epicures. They are then called *sea mullets*, though obviously the same as the above.

Of the Bleak, or Blear, or Blanc.

This little fish, which peculiarly resembles the *anchovy* in its form, though it is not quite so round, comes in season during the summer. The *bleak* is remarkable for having a transparent skull; its sides are extremely brilliant, owing to the smallness of its scales, which are employed in the imitations of pearls.

The young angler may, with almost any small bait, but particularly a *gentle*, or a house-fly, on a hook No. 10, have excellent amusement at the borders of rivers, and in shoal waters, by *dipping* for bleaks. I have seen a lady catch ten or twelve dozen, in this manner, in the course of the evening. They are remarkably sweet eating.

Of the Minnow, the Pink, the Stone-Loach, and the Bansticle,

I shall not say any thing; they being beneath the angler's notice, except as baits, under which head the modes of taking them have been described: they are all, however, very palatable. I have described them in the Appendix, and given the outline of the first.

OF SALT-WATER FISHING.

On many parts of our coast, those who are fond of the sport may find ample scope for their amusement, from piers, headlands, &c. while such as are more venturous, and who are not subject to be incommoded by the motion of a boat, may find a thousand opportunities of gratifying their curiosity by a small *douceur* among the fishermen; who, under such circumstances, will frequently take young folks with them to the fishing stations; either with net or line. It is true, they do not relish such a visitor, who is rather apt to be in the way; nor can they afford any very pleasant accommodation, or any choice fare.

The adventurer must, therefore, equip himself with a good glazed hat, a very stout great coat, a pair of trowsers, strong boots, &c. together with some good spirits, tobacco, and a few eatables ready dressed, sufficient for the use of his comrades; who will, when thus treated, do all in their power to render the trip agreeable.

With regard to hooks, lines, baits, and all the necessary apparatus, no provision need be made; the crew will furnish every thing of that description, far more applicable to the occasion, than could be procured from any directions that might be herein given.

But as the angler will sometimes wish to amuse himself from such parts of the shore as may give him a command of the water, or eventually near to the beach, in a boat, I shall give a few hints, such as will, I trust, be found serviceable; and enable him to pursue his amusement with pleasure and success.

Two sizes of line, and of hooks, are, generally speaking,

ing, all that will be wanted. The larger tackle should consist of a line, about seventy or eighty yards long, as thick as a good sized crow quill, very firmly made, and either white or black; but I prefer the latter, on account of its not increasing so much in thickness when wet; and that it throws off the water better when drawn in; consequently, is not so long in drying, and less liable to rot.

To such a line, you should have a hook about two inches long in the shank, about three quarters of an inch broad from the point to the shank (measuring to the outside), and about the same depth in the bend: the point very sharp, the beard very well cut and raised; and the tip of the butt a little flattened, to prevent the whipping from sliding off.

The lesser line should be of the smallest sized whipcord, and about forty yards long: the hook about an inch long, with a suitable bend, sharp point, &c. as above described: it ought to be very stout. The first kind may be had under the designation of *small cod-hooks*; the latter under the name of *mackerel-hooks*; together with the appropriate lines, under the same terms.

Each kind of line will require to be leaded, according to the depth, or strength, of water in which it is cast. The best that can be used are the *coffin-leads*, already described, which should be kept up at about a foot, or two, from the hook, by means of a piece of packthread interwoven among the strands of the line, so as to form a neat knot; or rather a kind of collar for the lead to rest upon. The sizes of these leads may be from one to four ounces.

The angler will derive convenience from having a neat spliced loop at the top of his foot length; which should be about four feet long, and another at the bottom of his
line

line (each loop about four inches long), for the purpose of taking off and on ; so that he may change his hook, &c. in case of accident, and take it off altogether when he has done fishing ; for he will find the good folks at the sea-side rather forgetful, in pocketing other people's tackle : *mistaking* them no doubt for their own !

In fishing from a boat, some little practice will be requisite before you can ascertain when you have a bite ; unless indeed, when some large or ravenous fish, which is often the case, makes a dead pull, and leaves nothing for the exercise of your judgment ; he hooking himself at the first attack.

The proper position of the line must be understood ; thus : lay the back of your wrist flat on the side of the boat ; the hand being overboard, with the back downwards, and in a horizontal position : let the line pass over the flat of the hand, and over the middle joint of the fore-finger, which must be thrown something forward into the direction of the line ; the other three fingers partaking a little of the same inclination, but doubled down so as to keep the line firmly in the hand.

The thumb lays flat between the fore and middle fingers ; not pressing the line, but keeping it steady in its direction over the middle of the fore-finger ; which principally governs the line.

The boat will rise and fall considerably ; especially if there is any wind, or any swell ; drawing the line up and sinking it, alternately, in proportion to its own motion ; whereby the bait is well displayed to the fishes. But this motion comes sometimes rather suddenly, and occasions a sensation on the fore-finger, not unlike a bite : a very little practice will teach the difference.

When

When a fish bites but gently, you must be all attention, and in readiness to strike him at the second pull; whether it be slight or strong. To do this, you should not lift your arm, but merely with a twitch, bring your hand up; the *wrist* serving as a pivot for its motion: if, however, the boat is descending at the moment when you have occasion to strike, you must raise your lower arm with your hand; making the elbow the pivot, and keeping your upper arm close by your side.

A very few instances will suffice to give expertness to him who is at all conversant in the more common branches of angling, and will accustom the hand to the weight on the line; which, to the novice, is sometimes very perplexing and deceitful.

When thus employed, you will frequently have occasion for a good stout knife; nor will a disgorger be superfluous; for many of the sea fishes, taken on our coasts, have very large mouths, and make nothing of pouching such a bait as would astonish a *trout*!

Moderate sized baits are however to be generally preferred; but you must take care to conceal your hook well; though sea fishes are not so *very* particular in that respect as the fishes in fresh water. Let not this tend to indifference on that head; for, as I have always said, he who has the best tackle, under equal skill, &c. will always kill most fishes.

Such persons as make coasting voyages, such as from Leith to London, and are fond of fishing, may frequently find opportunities for casting a line; especially in the summer time, when vessels are obliged to anchor, during an opposing tide, for want of wind to bear against it.

Often

Often we see vessels admirably situated for casting a line, and wonder that no one on board should be provided.

But it will be necessary; previous to embarkation, to obtain, if possible, a few *live crabs*, or *lobsters*, or *mussels*, &c. for baits; or if such cannot be had, those that have been boiled: or *fresh herrings*, pieces of *cod*, *haddocks*, &c. may be substituted.

I was once in a vessel, of which the captain had some good tackle, though but indifferent baits; yet with some raw beef, and a few slips of fat bacon, he contrived to catch us several very nice fish, while at anchor off the coast of Norfolk, and at the mouth of the Thames.

It is necessary to premise, that the larger fishes of almost every kind I shall treat of, are to be found only in particular situations, generally on certain banks far removed from our shore: the angler therefore must content himself with a smaller race of adventurers, when he remains on *terra firma*: he will, however, on many occasions have excellent sport; especially if he chooses good situations; which, in a short time, he will distinguish at first sight.

Sea-fishes always bite best when the tide is rising; they then seem to be confident as well as hungry. As the tide begins to ebb, they commence their retreat, often rather suddenly; perhaps they are fearful of being left on the sands.

Having said sufficient, I hope, to serve as a general guide to those who, being particularly keen, follow their game to a distance from the land, I shall proceed to give a brief description of the several fishes they will probably find at their hooks, together with their appropriate baits, &c.

Of

Of Sea Baits.

These are extremely various ; for those fishes which are found far at sea will take any thing that is eatable : thus, the *shark*, the *albacore*, the *boneta*, and many others, take *salt beef*, *pork*, &c. nay, I have even seen them bite at a piece of potatoe.

But, generally speaking, such fishes as frequent our coasts, subsist on *shell-fishes* ; viz. *muscles*, *crabs*, *shrimps*, *oysters*, &c. all of which prove very alluring ; as are also every kind of bait used for river fish ; especially *lobs* and *greaves*.

Few sea-fishes will refuse a bit of one of their own species ; but the flesh of the *salmon* and of the *albacore* (which is not unlike bad beef), seem to be preferred by the greater number.

There is a peculiar kind of sea-fish, if it may be so called, which grows on the rocks, in many places on our southern coast ; it is extremely common in many parts of Europe, and indeed, of the whole world, but abounds chiefly on the rocks surrounding islands, especially in warm latitudes : it is, of all the baits I am acquainted with, the very best. I never knew a fish to refuse it ; but have, on the contrary, seen all kinds competing to get at my hook.

This bait is called the *animal-flower*, the *actinia sociata* of naturalists ; and is thus described.

“ The *actinia sociata* is a tender, fleshy substance, which consists of many tubular bodies, gently swelling towards the upper part, and terminating like a ball, or very small onion : its only orifice is in the centre of the
upper-

uppermost part, surrounded with rows of tentacles, or claws, which, when contracted, appear like circles of beads. This opening is capable of great extension; and it is amazing to see what large fishes some of them can swallow; such as *muscles*, *crabs*, &c. When the *animal* has scratched out the fish, it throws back the shells, through the same passage. From this aperture it likewise produces its young ones alive; already furnished with little claws, which they extend in search of food, as soon as they are fixed. At low water the *animal-flower* is found on the rocky coasts of Sussex and Cornwall; attached in the shallows to some solid substance, by a broad base, like a sucker. This base is worthy of notice; the knobs observed upon it, are formed into several parts, by its insinuating itself into the inequalities of rocks, or grasping pieces of shells; part of which frequently remain in it, covered with the fleshy substance. *Animal-flowers* very much resemble the exterior leaves of the *anemone*, and their limbs are not unlike its shag, or inner part."

This description cannot fail to prove a faithful guide, to direct the angler's search for so excellent a bait: it was at one time called the *sea nettle*, from an erroneous supposition that it stung all who touched it.

Sea Fishes.

The <i>Cod</i> .	The <i>Gar-fish</i> .
The <i>Bass</i> .	The <i>Skate</i> .
The <i>Coal-fish</i> .	The <i>Halibut</i> .
The <i>Turtot</i> .	The <i>Sand eel</i> .
The <i>Haddock</i> .	The <i>Congor eel</i> .

The

The *Plaise*.

The *Lobster*.

The *Mackerel*.

The *Cray-fish*, and

The *Whiting*.

The *Crab*.

The *Herring*.

Of the Cod.

This well-known fish rises to a great weight, sometimes exceeding 20 or 25 pounds: it is extremely voracious, and its stomach, called the *sound*, is so strong, that it can even digest whole *crabs*, &c. *Cods* snatch at every thing they see moving, and are particularly attracted by all substances of a bright red; whence they are frequently taken, on the great banks, with pieces of scarlet cloth on suitable hooks.

Those who fish for them on our coasts, and in the friths to the northward, bait with *bullocks' liver*, *lights*, *small fishes*, and especially with one called the *cuddy*, which, at some seasons, abounds so much, as to be caught by dipping a basket into the water.

The *cod* delights in places comparatively shallow; though it is rarely found of any size where the water is not 40 or 50 feet deep. *Cods* feed near the bottom; therefore, when you are intent on taking them, let your lead sink till you touch the ground, and then draw up a few feet. Vary your depth now and then, and you will scarcely miss of them, if you are properly situated.

The fry of the *cod*, that is, such fishes as rarely exceed one or two pounds, frequent our coasts, and will be found on those long shelving sands which are never dry, and which have connexion with rather a bold shore. Use the strong tackle. The *bass*, *coal-fish*, and the *ling*, may all be classed with the *cod*.

Of

Of the Turbot.

This fish lays more over on the Dutch coast ; but the small ones sometimes come upon our shores, and are caught while fishing for mackerel, &c. &c. Their favourite bait is a *lamprey*, of which we export often full 400,000, from the Thames chiefly, for the supply of the Dutch fishermen, who readily pay from forty to fifty shillings per thousand, entirely for *turbot-baits*.

The *turbots* average from six, to twelve, or fourteen pounds ; some grow to the weight of twenty-five, or even thirty, but their flesh becomes coarse. They are also caught with small pieces of fresh *herrings*, *haddock*, or *bullocks' liver* ; but the *lamprey* is preferable.

Fish for them on the banks before described, as also on long, flat, shelving sands, that lay dry when the tide is out, but on which it rises very fast ; there they will be found among the other flat fishes, which run in with great keenness to pick up what may be exposed on the sands. Your tackle of the smaller size.

Of the Haddock.

These generally weigh from one to four pounds, but have been known up to fourteen : they are best about Christmas, when in roe ; they are also very fine about Midsummer.

These fishes take a worm very readily, hanging below mid-water, where it is not very deep. You may use a large *cork-float*, as for *jacks*, or a *bladder-float* ; but in so doing, you will miss many when you strike ; especially if you let your float stand far from you.

Bait with large *lobs*, on the smaller tackle ; or you may

may put a large raw *muscle*, an *oyster*, or the inside of a *crab*, which must be tied on firmly with a little white worsted. *Haddocks* have large mouths, and bite very sharp; but be not too violent in striking, lest you may have some large fish at your hook.

You may use a stout rod with a good line: hook, No. 1. Your reel-line at least 50 yards, and the reel, properly, a multiplier. In such fishing as this, where you often will require 20 yards, or more, of your line to be out, your float should be of the *double-plug* kind, so that as you wind up your line, the float may traverse down it.

Of the Plaise.

The coast of Sussex abounds with these fish, which lay on the dangerous flats that run far out to sea near *Rye*, *Hastings*, &c.: they generally weigh from two to six pounds; though sometimes they are caught on our coasts, up to nine or ten pounds, and off the Dutch shores, sometimes up to near twenty pounds.

This fish bites very eagerly, but requires small tackle; indeed, it may be taken with a rod and a stout line, hook No. 2 or 3, a large float, and abundance of line on a multiplying reel. Bait with *worms*, *raw muscle*, or *oyster*, or a piece of fresh *salmon*.

You should, properly, be in a boat, and angle about mid-water, when the tide is half in, but lower as it rises. *Plaise* will also take fresh *shrimps*, first peeled, and large *grubs*. Be gentle with them when hooked, for their mouths are rather tender, and apt to give way; nor should you strike too soon, but give time to gorge.

Always extract your hook from the maw of a flat-fish.

by cutting crossways with your knife under the lower eye; that is, when he has gorged it; else it may be disengaged in the ordinary manner.

Of the Mackerel.

These fishes appear on the coast during the spring, and early part of summer: in weight they rarely exceed a pound and an half, even when full of roe, which is during the month of May in general, though sometimes later. When you are among them, bait with a piece of raw fresh *salmon*, or of any fish, or even with a bit of *scarlet cloth*.

You may use a stiff rod to great advantage, but your line must be all the way strong, such as the China line I have before mentioned; and your hook a very stout short one, made expressly for the purpose; *roving* is far better than a standing bait, letting your line go about a yard, or occasionally more, under water; though *mackerel* take very well from the surface.

When you have a bite, give a little time; do not fear to strike tolerably firm, but allow no play, and lift the fish at once into your boat; otherwise, the rest will be alarmed, and become shy. I have caught great numbers from the stern of a ship, by baiting with a piece of raw *lobster*, or *cray-fish*.

Of the Whiting.

This fish is chiefly taken at about a mile or two from the land, where they may be found, during the spring, in very extensive shoals; they rarely weigh more than a pound; indeed generally, scarce half so much; therefore you must use the same tackle, and angle much in the
same

same manner as for mackerel ; observing, that the *whiting* is far more choice in regard to the bait, which must be very fresh *liver*, good *worms*, *gentles*, or a piece of any *white fish*.

You should be careful not to take them under six inches in length, at least while within the district of the Thames or Medway ; it being contrary to law, and subjecting you to informations, which will prove very troublesome, and not less expensive.

I have before cautioned you "always to consider yourself attended by spies ;" there being persons every where, who get their livelihood solely by lodging informations !

Of the Herring.

Though this fish is rarely taken with the hook, being principally caught in very extensive nets, yet it will not refuse a bait, as many experience who now and then hook a stray herring, after the shoals have been thinned and dispersed by the fishermen, and by the dog-fish.

The herring will take almost any bait, being extremely ravenous, on account of the scarcity of provision naturally attendant upon so large an accumulation of these greedy devourers.

It is not easy to instruct how to angle for them ; the fact is, that when taken it is quite a matter of chance, and generally forms a part of the sport while fishing for *whittings* late in the season ; for the *herrings* very rarely visit our northern coasts before June, when they are full of roe, and they do not come southward until much later in the year.

If, however, you find them come in any proportion to your bait, it would be in favour of your sport, were you

to put on rather a smaller hook than when the *mackerel* and *whitings* abound. Herrings have four gills, and die as soon as they quit their element.

Of the Gar-Fish.

This fish a good deal resembles the *eel* in its make, but has not the *dorsal* or *vent* fins, though it has a long, spiny, fibrous ridge both above and below. Its mouth is very long and slender, armed with small sharp teeth; and its sides are marked with narrow longitudinal stripes, from the head to the tail, of a light bluish olive colour. It sometimes measures two feet in length, yet rarely weighs more than a pound.

In hot weather, this fish plays on the surface; sometimes great numbers may be seen about ships: they may be easily taken with any of the common sea-baits before described, on a hook about No. 6, mounted on very strong *gut*, or rather on *weed*. They are tolerably well flavoured, but rather dry, and are best when boiled: good sauce is necessary: indeed, they are more valuable for the sport they give, by their eagerness to deprive each other of the bait, than for their flesh.

Give them time to get the bait well into their mouths, and then strike freely: draw out as soon as hooked.

You should have a small shot or two near your hook, to prevent the wind from blowing it away: let your bait play on the surface, or an inch or two below it.

Gentles are well calculated for this sport, as are also *cadbrates*. I should think *lansticles* remarkably well suited as a bait for this fish; but I never tried them. I have taken great numbers, but always with a piece of raw *shell-fish*; at which they bite ravenously.

Of

Of the Skate.

These fishes abound towards the North of Scotland, where they are taken of a good size, generally weighing from six to twenty pounds. Some small ones come upon our long shelving sands in the South, and take almost any bait: they are prodigiously strong in the water, and require very sound tackle, as well as a great length of line.

The rod is not at all proper for this sport. Your tackle should be of the large description when the skates run to any size; otherwise the small line, &c. will answer very well.

Fish for them near to the bottom, and allow good time; permit the fish to take out some yards of line before you strike: you may know them by a succession of slight pulls, and at last a strong one with a quick run: they are then pouching. Strike firmly, and manage in a way suitable to the stress you feel.

The *skate* spawns in the spring, and is then in season; but they bite best when there is a smart breeze with a little swell. If you should be far from land, and lay on the ground for *skates* (as is proper), you will require at least 100 yards, or more, of excellent line, both on account of the deep water, and the necessity of giving good play; for this fish sometimes weighs two or three hundred weight. Take care how you handle the long-tailed skate, as he has a tremendous spine on the middle of his tail: the wounds made by it are extremely dangerous.

Of the Halibut.

This fierce fish lays in deep water, and on the common fishing banks; it is properly a ground fish, but takes a bait either on the ground, or a few feet from it. Your tackle must be very stout, for the *halibuts* generally weigh from 30 to 70 pounds.

They seize like the *jack*: give them a little time, and when they move on again, strike; but be ready to give plenty of line, for it is a very strong fish, and struggles desperately.

The best baits are, *fresh fishes* cut into pieces, several *muscles* or *oysters* threaded on your hook, or even large *lobs*, or a small *eel*, or a rasher of *bacon* cut in form of a fish.

But if you can get the *animal flower*, it is peculiarly inviting to the *halibut*, and is, indeed, the very best of *sea-baits*; for all large fishes in particular. I have described this under the head of *Sea-Baits*.

Of the Sand Eel.

This very fine little fish works its way into the loose sands on the sea-beach, and remains concealed while the tide is out; sometimes it may be seen to put its head out, but wriggles under cover on the least alarm.

Go with a three-pronged fork, just above low-water mark, when, by striking it in once or twice, you will sometimes see the sand agitated; be quick, and you may turn up a *sand eel*. It rarely exceeds a foot in length, has a sharp head, and a bright side, the back of a light olive-green, with greenish silvery sides; it is remarkably sweet eating

eating when boiled, or broiled in buttered paper, or in a pye.

This is also called the *hawk's-bill* by many, on account of the peculiar form of its nose, which works downwards in some measure. While on the subject of *eels*, as relating to fresh-water fishing, this was mentioned, because it may be sometimes found within the tide's mixture with river waters. It is necessary to remark, that there is a fifth kind of eel, completely a sea fish, called

The Congor Eel.

This enormous fish, which sometimes weighs 100 pounds, or more, is sometimes caught on our shores. It is very common among the islands on the French coast, where they take it in the net, or with the hook.

It is quite a matter of chance when the *congor* bites ; but in general, you may expect them when you bait with a small *sea fish* on a proportionate hook ; letting your bait lay among the large fissures in the rocky bays. Give time to gorge, and pull up quick, so as to prevent your line being cut.

Some shoot the *congor*, when brought to the surface ; it being no very easy matter to get him into the boat, or to keep him there. At all events, he must be well beaten with a good pole, taking care not to strike near the line.

The *congor* is extremely powerful, and will take some strength to hold him in : his bite is very sharp, and he uses his teeth very freely.

In places where they abound, they sometimes get hooked by attacking *mackerel*, *whittings*, &c. that have taken your bait ; but you must not expect to get them in ; for they commonly are too strong to be held by the

tackle, which will, besides, cut your fingers terribly, if you have not a pair of stout gloves on.

The *congor*'s flesh is very coarse, and should be dressed either in the collared form, or prepared like salt cod, *ling*, &c. when it is not only palatable, but exceedingly agreeable, though not very wholesome.

Of the Lobster, the Cray-Fish, and the Crab.

The learner is not to suppose that I am about to instruct him how to *angle* for these fishes, which are taken by the fishermen with a very different apparatus from any herein mentioned; but I shall state to him how they have been frequently taken. I have participated in the diversion, and am therefore qualified to speak to this point.

Get a very large iron hoop; such, for instance, as the centre one from a puncheon, or butt; fix to it a strong net, rather larger than the area, or space within the hoop: then fasten four strong pieces of line at equal distances on the hoop (as described in making a *minnow-net*), and at their meeting over the centre, make them fast to a sufficient line.

Observe, that the net should be very stout, and rather slack; but it must be laced all round to the hoop.

In the middle of the net tie raw meat, or raw bones, &c. and lower it down to the bottom, in about four to ten fathoms of water, in any bay or creek where lobsters, or cray-fish, or crabs, abound. Now and then, that is, at every quarter of an hour or twenty minutes, draw up your net; at first very slowly, but quickening as you proceed, and you will frequently catch many of the above shell-fishes.

This sport, however, succeeds very rarely in the day time, but about midnight is sometimes excellent! I have repeat-

repeatedly seen six and seven thus obtained during a night, or rather, in the space of a couple of hours; for the fishes in question do not, I believe, ramble much from their rocky haunts, except at night; when they are very busy. We always had the best sport between twelve and two o'clock.

OF FLY-FISHING.

This is, without doubt, the most cleanly, most pleasing, most elegant, and most difficult part of the science! The apparatus being comparatively small, renders it also less burthensome in many respects; though the management of the rod will, for a while, cause the arm to experience many an ache: a moderate period of practice, however, soon habituates to that motion which, at the first, gives some uneasiness, and furnishes to the angler a certain habit (which we may be right in considering as a *knack*), that gives both freedom of motion, and ease from weariness.

It is remarkable, that no one has yet (or at least I have not met with any publication that has) supplied the learner with such plain matter-of-fact directions, in respect to the management of his *fly-rod*, as should at once enable him to cast his line out without constraint.

The want of such indispensable instruction causes my being more particular in my directions on that head; for it appears to me impossible for any person to succeed in this branch, who does not, in the first instance, acquire the *only true method* of throwing the line with that inex-

pressible lightness, which shall place the fly on the water, as it were, imperceptibly.

Perhaps I may be mistaken, when I think it easy to define such a progressive motion of the arm, as will principally produce the above effect ; I shall, however, attempt it, and trust, that in the event of my not equalling my own wishes, or the expectations of the learner, I shall at least evince the earnestness of my intention to give him every aid in my power.

The rod should be well balanced in the right hand, so as to feel light and obedient ; if it fails in this, when handled about a foot or fifteen inches from the butt, it is faulty, and is probably too light under the hand.

This may be very easily remedied, by taking off the brass ferril, and after boring a hole with a large gimblet for about two inches in depth, filling it with a leaden plug made to fit in tight. There must be more or less lead, according as the balance is improperly situated : when duly corrected, let the ferril be replaced firmly.

In the first instance, practise with a very light fly, at the end of a line made chiefly of single gut for at least six feet from the hook ; after that, you may loop on a hair line (if wove, all the better), beginning with three hairs, and growing gradually thicker as it approaches the tip of the rod.

The whole length, from the hook to the tip, should be exactly the length of your rod ; or, or least, should by no means *exceed* it. I cannot too forcibly recommend attention to this primary point, for it is one of the most essential in the rudiments of the art.

Take hold of the bend of the hook between the fore-finger and thumb of your left hand, holding the rod in
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your right hand at its balance ; that is to say, where you have a command over it ; the same as you would over a well-balanced whip. Let the rod point a little forward, straight before the left shoulder, the elbow being kept close to your ribs, but without the smallest constraint.

First, turn your rod with a light graceful motion to the left (still the point a little lowered), and wave it back again in a similar manner, from the left to the right ; carrying the point of it backward at the same time, and quitting your hold of the hook, which, by this means, will go far behind your back ; but as your next turn of the rod is forward, and that the point is then considerably lowered, your line will double back, and take a new direction ; so that your fly will, at length, be carried completely before you, and give the lead to your line.

As you feel the line getting into its proper direction, carry forward your arm with an easy movement, until your hand is on a level with your shoulder. By this means, the little inclination the fly might have to tug, and consequently to be checked short when the line acquires its full extent, will be totally prevented ; especially if you yield a trifle more, by lowering your hand and arm *a little* ; keeping them in a straight line up to the shoulder : this is the *double turn*.

Thus you will cause your fly to light so very gently on the water, as often to leave you in doubt as to the precise spot where it fell ; but which is frequently pointed out by the rising of a fish, deceived, equally with yourself, by the slight you have attained.

Above all things, avoid imitating the motion of a whip ; for though this art is called *whipping*, it differs widely from it in regard to the manner in which it is done. He

who throws his line back as a coachman does his whip, will, like him, make it crack when it gets to its full extent behind his back; losing many a good fly, and coming forward again with such violence as, instead of alluring, scares the fishes.

The learner must practise the throw to the left, as well as to the right; it is only a change of the motion, and comes very freely when the above mode is well attained.

But he must make a point of taking a favourable wind, that is, in his back, when he first begins; for it will be a very great aid, and cause him rather to moderate than to urge the motion.

When he can master a short line *with* the wind, he may try to throw *against* a moderate breeze; but he must be extremely careful to preserve the delicacy and grace he has acquired, but which are very easily lost by impatience!

Another mode of throwing is, with the *single turn*, and commences with the rod pointing to the left, the hook as before: first, bring the point of the rod gradually round to the right side; then, making a sweep over the right shoulder, and casting forward, as in the *double turn*: this appears more easy than the *double turn*, but is not so; because it is far more difficult to make the fly light gently when the hand has so little preparation.

Both these modes must be well practised, to the right, and to the left; with, and against, the wind; and with the wind on the right and left sides alternately: the learner will find many streams which, by their windings, will afford all the desired positions within a very short distance. If he has not the convenience of a pond, he may throw his line upon a grass-plot, &c.; using a hook
broken

broken off at the bend, so as not to catch in the herbage, &c.

My earnest desire to instruct in the most perfect manner, and to render its attainment short and easy, induces me to repeat, that *the elbow must be kept down* until the line is getting before the rod; that it is then *to be raised gradually*, so as to throw forward the arm to its full length, the hand coming to a level with the shoulder; and that this motion must be *completely accordant with the fall of the fly*, so that it may *never be checked*, but only *guided to its destination*: for whenever a check takes place, the fly will descend suddenly, and cause more or less agitation on the surface!

When the learner can completely follow the foregoing instructions, he may proceed to such places as are frequented by the *dace*, or by the *bleak*; and there, with a very small *black fly*, on a hook No. 9, or 10, try his hand; observing, that when the fly has fairly settled on the water, he should begin to raise the point of his rod; by gradually sinking and bending the elbow joint; so that his hand may return to its place, opposite to, and about a foot from, his right shoulder.

This will raise the point of the rod by degrees, and cause the fly to come along the surface towards him, till at length it will rise out of the water; when the angler should immediately commence a new throw, without suffering the hook to come near him.

After having practised this, so as to be perfect in the manner and due time of drawing in, the learner ought to improve on the foregoing plain mode, by causing his rod to vibrate a little as it ascends, that the fly may appear to have a *spinning motion* on the water: this is effected
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by simply trembling the hand *very delicately*, as the elbow is depressed : if rightly done, he will soon have a fish on his hook. The arm high raised is very bad and tiresome.

The proper manner of *striking* a fish that rises at a fly, is an object of considerable moment, and must be properly studied ; else the best throws will be of no avail. It is proper to point out to the learner, that the fly being artificial, the fish no sooner mouths it than he feels the deception, and generally ejects it immediately : add to this, that by the time even the quickest hand can be brought to act, when the fish is seen to rise, the latter will have begun to descend.

Hence, the *striking* must be as quick as thought ; but at the same moment care must be taken to guard against a certain impulse, too prevalent, to strike as the fish is *rising*. When this is done, the fish is lost ; because he has not time to close his mouth, without which he cannot, except by mere chance, be hooked.

By this it will be seen, there is a critical moment at which the angler is to strike ; and even then, it must be done with great caution, or the line will pay forfeit. There are, in truth, very few, even of those who call themselves good anglers, that strike with judgment ; they are generally too quick, or too slow, and by far too forcible.

Nothing more is requisite than to turn the hand *up a little* as it is rising, so as to make not more than five degrees difference in the angle ; that is to say, the rod must be *suddenly* brought up about five degrees by a play of the wrist : this will make an immense difference in the situation of the hook ; which, if it does not catch in
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the fish's jaw, will come many feet nearer than it was when the fish rose.

If it should be the angler's good fortune to fix his hook, the gentleness of his manner, added to the elasticity of his rod and of his line, will save his tackle, and will never force the hook through the hold : besides, though a fish is always considerably agitated when first struck, yet it will invariably be found, that such as are tugged half way out of the water by a violent pull of the rod, are the most alarmed, and, indeed, the most lacerated ; whence they are actuated, both by fear and by pain, to their utmost exertions ; which frequently succeed, and procure their liberation.

This I have often witnessed, and formerly used often to be guilty of : experience, and that kind of consideration which Time will now and then bring in his train, for the benefit of those he journeys with, have taught me to controul my hand, and thereby to fill my basket.

The learner may establish an excellent standard with the *dace* ; for, so long as he pulls them out of the water, he must consider his manner of striking to be too forcible ; but when he just causes them to turn over, or to splash, *on the very spot where they take the fly* he has attained an excellent point of perfection, and may then let out his line to greater lengths *gradually*, and undertake more formidable adventures.

In due time he will catch the largest *trouts*, *chubs*, &c. with ease ; and may, in his turn, possibly obtain a decided superiority over many who ridiculed, or, at least, amused themselves with the awkwardness of his first essays !

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I beg leave here to point out an absurdity which many persons commit when using the fly; namely, that of using a long line made of various links, which they loop on to a reel-line, made perhaps of silk, or even of flax.

Now two things must be obvious even to themselves; firstly, that such a line is by no means calculated to throw a fly well; and secondly, that owing to the great length under the loop, when they have reeled up as much as they can (for when they come to the loop it will stop the reel), there is such an excess beyond the ordinary measurement of the rod, as to deprive the angler of all power over the fish; which I have many times seen to take the advantage of this bungling want of foresight, and very wisely dance the hayes so neatly among weeds, &c. as to give an opportunity for snapping the line, or for shaking out the hook!

When I undertake to instruct the novice, I may fairly claim the liberty of insisting on a due attention to the *proportions* as well as to the *quality* of his tackle: and I must be considered as leaving the whole blame on his own shoulders, whenever he errs, or loses his sport, under the *pretext* of following my advice; though at the same moment, he consciously negatives every precaution, by a want of consistency.

Therefore, when I allow him the liberty of using a long line for fly-fishing, and indeed recommend to him (when the waters will admit, both by their expanse and by the clearness of their banks from all obnoxious impediments), to use as long a line as he can even throw with delicacy and precision, I am to be understood, as founding such permission, or advice, on the safe means he ought to

to possess, of shortening that line at pleasure : under other circumstances, he is proceeding in a gross, and contradictory error ! -

Every one who *whips* with the fly, ought to have a good reel, and his rod ought to be ringed in a proper manner. This line should be of *WOVEN HAIR*, tapering to a point, not exceeding three, or at the utmost four hairs, where the loop should be made, with exquisite neatness, for fastening on the *gut* foot length ; which should also be taper, by means of the thickest lengths of *gut* being uppermost. All the knots on the *gut* should be fastened down in the best manner.

This hair line should increase gradually, from three (or four) hairs, to any number the circumstances may demand ; but in general, about twelve or sixteen hairs will be found ample. The line ought to be at least thirty yards long ; and where the fishes run large, fifty yards may be requisite ; especially in broad waters. Where a very long line is used, a multiplying reel is indispensable ; both on account of its size, and to wind up, or let out, with rapidity. In very extensive waters, use the *double-multiplier*.

I have before stated, that hair lines, in particular, must never be put by damp : it is better to leave your rod standing outside your house, let it rain ever so hard, than to bring your reel-line in wet. It *may* dry in your room, in time ; but if there is much warmth, the hair will snarl.

Where the waters lay fairly open, there will seldom be much difficulty in throwing the line to such places, within your reach, as may offer the lure fairly to fishes rising at flies. In judging of that circumstance, however, the
young

young angler must follow this rule, viz. " never to give himself the trouble of offering his fly to those fishes that are rising for pleasure.

The want of discrimination, in that particular, is the cause of an infinite number of useless casts ; and as, to my great surprize, no author has touched upon it, I deem it expedient to say a few words on the subject.

Sometimes the fishes will be seen to rise in all directions at flies that swarm on the water, especially during the evenings following sultry noons. When such is the case, the angler can scarcely mistake ; but he will find the fishes so glutted in a short time, that they will discontinue to bite ; or, at least, will be so indifferent, as to render it difficult to attract them : in the early part of the evening, at that hour when the fishes are keen, after a day's abstinence, and the flies just beginning to appear, the best effects may be produced by proper selection of the flies to be used.

But there are times when the fishes are every where rising, yet not one will touch a bait of any kind. Many circumstances occasion this ; but generally, it is owing to the water being so much warmed, as to become uncomfortable to the fishes : they then plunge into the air, which being cooler than the water, or at least, refreshing from its action on the wet surface of the fishes, proves particularly acceptable ; operating with them, no doubt, much the same as the cold bath, at the same season, does upon the human frame.

The great point to be attended to is, that when fishes rise to a fly, they come forth with rapidity ; rarely putting more than their noses out of the water : indeed, they often do no more than give a sharp whirl on the water ; per-
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haps scarcely reaching the surface, though it appears agitated. On the other hand, when a fish rises for recreation, he comes up more deliberately, makes a greater splash ; generally throwing all, or the greater part of his body out, and descending head foremost in a temperate manner.

When a fish leaps far out, he generally comes down on his side, and makes a large break in the water as he falls into it. I have observed, that such "are not to be had" on any terms.

The angler will find many fishes that are not to be attracted by one kind of fly, will strike readily at others ; therefore he will do well to put on a *dropper*, that is, a smaller fly than the *stretcher* (which is the name for that at the end of the line), and of a different colour.

Sometimes two, or even three, *droppers* are used, where the water is very broad, and the line very long ; but if more than one is set on, it should be observed, as a particular rule, to put the larger one nearest to the *stretcher* ; thus, making all the flies decline in size, as they approach the tip of the rod ; for, if this be not attended to, and a heavy fly be set on at a distance from the *stretcher*, it will cause the line to throw false, and render it impossible to regulate the motion, or the direction, of the *stretcher*.

It is also proper to give each *dropper* a little more length, of *its own* line, as it is more remote from the *stretcher* ; else it will seldom touch the water. When well managed, the *droppers* will generally prove the most successful lures.

If you use a *natural fly*, such as you can catch either in the house or in the open air, the greatest caution will

be requisite, and you must either take the advantage of a strong wind in your back, to get your line out to its proper length, or you must content yourself with such a short range as you may be able to command, without causing the fly to be jerked off from the hook.

Nothing can be more killing than the natural fly ; but it must be managed with the same skill as if it were artificial. Supposing the wind to be strong behind you, or a little slanting, you cannot do better than keep your rod nearly steady in one position, such as will allow the fly, whenever the wind slacks a little, to drop gently upon the surface, which in such case, will assuredly be more or less rippled.

I have often done this, and have seen various large fishes watching for the fall of my hook among them ; indeed, sometimes they grow impatient when the wind keeps the fly for any while hovering over them ; they will then make leaps at it. A very little practice will give the learner a full confidence in this admirable device, and teach him how to manage his rod to advantage.

Of Natural Flies.

The best are not very glaring in their colours, yet are sufficiently conspicuous, and of a size to cover the whole of the hook ; which, for such purposes, ought rarely to exceed No. 7 : I should prefer No. 8, or 9, on the long run ; knowing them to be far more easily concealed, and fully equal to catch very large fishes, under good management of good tackle.

Observe, however, that with the *natural fly*, you should not be so quick in striking ; because the fishes are not so apt to spit them out.

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The following will prove themselves the best baits.

The *common house-fly*, for dace in particular.

The *blue-bottle*, excellent for *chubs*, and many other fishes.

The *grey stone-fly*, is taken by *trouts*, *chubs*, *dace*, &c.

The *very large black-gad-fly*, is admirable for all fishes.

The *green-backed fly with coffee-coloured sides*, is a remarkably tempting bait.

The *yellow cow-dung fly*, peculiarly good for the fin-scale.

The *cock-chaffer* or *dummador*, in many places called *caterpillar*, is a very fine bait, especially for *chubs*, when the outer wings are cut off; leaving the inner ones to expand. This is chiefly used in *dipping* over banks, hedges, &c.

The *beetle* : of this there are various kinds; but the lightest coloured are generally the best : they must be treated like the *cock-chaffer*.

The *grasshopper* and the *locust*, are extremely tender, and their long legs present the ready means of stripping them from the hook : but they are capital baits. I seldom use them ; for the above objection proves, at times, pregnant with trouble and vexation ! The fishes do not take them so well when the legs are cut off. If, however, you do give one a trial, or cannot readily obtain any other bait, be careful to allow the fish full time to swallow it ; or you may find that he had only hold of a limb.

I have experienced that two flies put on the same hook, in such manner as to imitate their junction, at particular seasons, is extremely alluring : this is done by threading the upper fly entirely through its whole length, inserting
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the hook at its forehead, and bringing it out at its other end. Slip it up on the shank, and let the point enter the second fly at the heart ; leaving the lower end unpierced, so that the hook is completely concealed. Your tackle must be very fine !

Practice will convince the angler, that large *natural* baits cannot be thrown to any distance with advantage ; the fact is, that they are far more appropriate to situations close under the land, where the large fishes frequently lay, especially in ponds, waiting for what the wind may tender to them.

Where waters are covered with film, or weeds, on the lee side, the fishes will never lay in that quarter ; for they are fond of seeing the surface ; from which all the round bodied kinds chiefly receive their subsistence.

Having said as much as I conceive to be necessary on the foregoing topic, I shall proceed to instruct the learner in what relates to

The Artificial Fly.

This is a very important branch no doubt, but the several authors who have at all discussed it, seem to have been very industrious to burthen it with difficulties. The numberless forms and colours described, would fill an ample volume : yet it is a fact (which I trust my description will prove), that the whole may be reduced within a very small compass.

There are only four kinds of the artificial fly necessary, viz.

1. The *large fly with wings*, either expanded or closed, so as to stand over the back.

2. The

2. The *double winged fly*, expanded.
3. The *single winged hackle*, expanded with, or without, a body.
4. The *palmer hackle*; which has no wings, but should resemble the *hairy caterpillar*.

I make no particular mention of *moths*, as a separate kind, because they are all of the second class, and differ only in being made of yellowish, mealy-looking feathers; such as are taken from the white owl, &c.

FIRST CLASS. THE LARGE FLY WITH WINGS—Is made, by first lapping a few turns on the butt of your hook with *well-waxed silk*, which should correspond in colour with the body of the fly; then taking a bunch of such feathers as you mean for the wings (cut from the stem, or centre rib, of the feather); lay them pointing forwards, and very even at their butts, and fix them with two or three turns of your silk: now take some *mohair*, or if that be not attainable, some very fine *lambs' wool*, or *rabbit fleece*, or any other soft substance of the colour you wish the body to be, and laying it very thinly all around your silk, twist them a little together, so that they may lay tolerably smooth. Now proceed to lap the silk so prepared round your hook, very light and close; making it thicker or thinner in various parts, according to the shape of the fly you imitate.

When you have made it of a due length down the shank of the hook, make two *half-hitches* (or half-knots, as some call them); then having stripped off one side of the plumage from such a feather as will answer for legs, and leaving a little on both sides at the point to be tied in, wet such tip, that it may be compact, and with your
silk,

silk, now stripped of mohair, &c. beyond what is already done, tie the end of the hackle down close behind where it is feathered on both sides : now, making a half-hitch, carry the silk close under the butts of the wings, with one or two turns round the body, and let it lay out of your way.

Next, take the hackle, and carry it round the body of the fly, at first at some little distance, but closer as you approach the wings, where the hackle should be thickly set on : tie down the butt of the hackle, cutting away all superfluities with a pair of very sharp, fine-pointed scissors ; then turning back the wing-feathers, which should reach the whole length of the shank when thus inverted, whip them down well, either altogether, if you intend to have a standing closed wing ; or equally divided and spread, so as to form two separate parcels, if you mean to spread wings.

Having secured the wings, carry your silk forward, well waxed, and again covered with the mohair ; take two or three turns round the butt of the hook, as tight as you can draw the silk with safety, and finish the bend by two *half-hitches* well drawn, and close above the wings.

In making the fly, you should observe to take as few laps of your silk as may appear indispensably requisite ; for you cannot make a fly too light : you will also have occasion to make more *half-hitches* than I have described above, which your own judgment will guide in. When you have at any time put down a feather, &c. always cut away the superfluous ends before you begin to lap or tie any thing over ; because you will else have a heavy, awkward, ill-finished fly.

Further, so soon as you have completed the form of your

your fly, it will be necessary to draw many of the fibres of feathers into their proper directions; thus, the legs must be formed by pulling down such fibres as stand on the back of the fly, either *out altogether*, or *into places below*: their *length* must also be regulated as well as their *quantity*, taking care to have more legs under the breast than under the body; the latter should be picked with a needle, &c. so as to make the *mohair* appear a little between the foldings of the hackle. The wings should be carefully equalized, both in length, and thickness, and in direction from the body.

Do not be afraid of making your wings stand rather wide; for, when you draw the fly through the water, they will collapse considerably; especially after being a little time in use.

When you have occasion to use the hackles of common poultry, ever select such as grow on the necks (near the heads), and on the loins of *game cocks*: those from barn-door fowls, especially hen's feathers, though seemingly good, do not answer; they are too pliant, and neither shew nor swim well. Always get the feathers you want, such as *wood-cocks*, *partridges*, *starlings*, &c. from the *cock* birds, for the above reason.

In putting on hackles, &c. be careful to keep the glossy, or outer side of the feather, in such position, that when the fly is made, it will be exteriorly brilliant: for this reason, when you whip on a hackle, advert to which side of the plumage was stripped off; and carry it round, either with or against the sun, accordingly; so that the upper side of the feather, which is always the highest coloured, may be next to the head.

When you have occasion to use a *very* large hackle,

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you will find it best not to take that part which remains on the stem, but that which is stripped off; as it will be more pliant, and less bulky. Sometimes two hackles will be required to furnish one fly.

If you think it proper to add feelers, which project from the heads of many flies, or to have single, or double forked tails, they are easily added, by whipping in dog's bristles, or those from over the eyes, or under the chins of horses; or, which is in general more appropriate, you can use single fibres, from that plumage of which the wings of your fly are made.

The flies of this class are as follow; they are rarely used but for *salmon*.

1. Wings.—Of the reddish brown feather on the turkey cock's wing, cut from the stem.

Body.—Straw, or-auburn coloured mohair; yellow silk; hook No. 2, or 3.

Legs.—A grizzle, or ginger hackle, from a game cock.

2. Wings.—From a grey gander's broad rump feather, cut from the stem.

Body.—Grey, or light brown mohair; light brown silk; hook No. 1, or 2.

Legs.—A dirty grizzle hackle from a game cock; or a bittern's hackle.

3. Wings.—The rich brown part of a heron's wing, cut off from the stem; or the speckled feather from a peacock's wing; or that from a guinea fowl's back.

Body.—Drab coloured, or olive-coloured mohair; pale olive silk; hook No. 3, or 4.

Legs.

- Legs.—A small bittern's hackle, lapped only near the wings ; forked tail.
4. Wings.—From the eye of a peacock's tail, cut from the stem.
- Body.—Deep green mohair ; light green silk ; hook No. 2, or 3.
- Legs.—A white cock's hackle, dyed pale dirty green ; or jay's striped blue and white.
5. Wings.—A rich dark brown speckled feather from a bittern's wing.
- Body.—Coffee-coloured mohair, or the fur from a hare ; coffee-coloured silk ; hook No. 1.
- Legs.—A bittern's hackle ; or a ginger game cock's ; tail forked.
6. Wings.—The greenish dark shining feather from a drake's wing, cut off.
- Body.—Bottle-coloured mohair, silk deep chocolate ; hook No. 3.
- Legs.—A black cock's hackle ; or a deep copper coloured one ; tail forked.

The above six flies are all *killing* : a thousand others may be made for the purpose ; which, however, will not excel when put to use, but have one great fault, viz. that of requiring very scarce articles. No. 1, 2, and 5, are all in common use in the Highlands, where they kill "*many a bra' saumon*."

The others are more appropriate to warmer waters, and to brighter weather, when shewy flies are every where abundant. Towards the hottest part of the summer, all the above flies may be made rather more gaudy than if the directions were implicitly followed ; and as

the year closes in, the angler will do well to *busk* his flies with darker silks, and to choose more *sombre*, or deeper shades of mohair, than above directed; making the bodies, at the same time, appear more woolly, but not to such a degree as to be rough or harsh; for then they would be unnatural, and no fishes would take them.

SECOND CLASS. THE DOUBLE WINGED FLY—Is generally made with either a very slender, or a very full body: the former resembling that of a *gnat*, the latter that of a *moth*. It is also made on hooks of every size, from No. 4, to No. 10, both inclusive. I shall enumerate the varieties, with the most appropriate hooks; first describing the formation of the fly.

1. Set on your *gut* in the manner before described, with the best silk well waxed; then take a feather properly stripped, and wetted, as explained regarding the hackle for legs in the fly No. 1, and after laying it on its back, that is, the bright side next the hook, and the stem pointing forward along your *gut* line, whip it down firmly, and make a half hitch: then wind your feathers round the hook for about four times; keeping them as close as possible to each other, and fastening down with a half hitch, cut off the surplus stem.

Now take another feather trimmed in the same way, and put it on in the very same manner, as close as possible to the first feather: cut off the superfluities, as before, and make fast with a half hitch, or two; if you mean to have a body of any substance, wax your silk again, and put on some of the proper coloured mohair: take a few turns down the shank; or, if the body is to be thick, as in a *moth*, you may lap back again, so as to double the
thick-

thickness : in some the bodies are rather thicker towards the tails, in others towards the head ; to this you will pay due attention : fasten off after you have doubled the body as far back as the last feather will allow.

Such flies as are to be thin bodied, are to be finished by lapping only the bare silk down to a proper length (generally opposite to the end of the barb), and then to fasten off ; but where the fly is to have a moderate thickness, you may, after lapping down with mohair on your silk, make two half hitches with the bare silk, and return with it ; winding at rather open intervals, but very tight, so as to give the body an *annular*, or ring-like appearance ; fasten off at the back of the last feather.

These flies should not have any legs ; nor does the head want much finish.

You are now to trim the two feathers ; dividing each into two equal parts, and drawing them gently, right and left, with your fore-finger and thumb, so that they may extend themselves flat and even, on each side of the hook, like wings.

The first feather you put on, is intended to represent the upper shells, or wings of the fly ; the other feather serves for the inner or backward wings. Hence you will generally find, that dark feathers are best suited for the upper, and slightly specked, or light coloured feathers, more fit for the under or back wings.

I should before have cautioned the learner, to let the *gut* line whereto he fastens the hook, while forming the fly, come down to the shank until it is opposite to the point of the hook, or perhaps a little lower, where a thick bodied fly is making ; taking care to whip sufficiently tight to secure the hook properly.

He will also find, that by having the *gut* to which he attaches the hook, selected from the longest fibres he may possess (not forgetting to be equally cautious as to its roundness, clearness, and hardness), he will probably reap considerable advantage ; for, however well the loop at its upper end may be tied down, it will be more or less seen ; or may cause some little ripple as he draws it in : therefore he should take the above means to remove it, as far as possible, from the fish's eye.

The flies of this second class are extremely various ; for there are immense numbers of *natural* flies that have double wings : the following imitations are, however, by far the best ; and if adapted to proper sized hooks, according as the fishes run large, or small, will rarely fail of success.

1. The Upper Wings.—Of the red feather from a cock partridge's tail, slipt off the stem.

The Lower Wings.—The light-coloured feather from a starling's wing.

Hook.—No. 5, 6, 7, or 8 ; use dark clay-coloured silk ; body moderate.

2. The Upper Wings.—A mottled grouse's hackle.

The Under Wings.—The light clear feather under a swallow's wing.

Hook.—No. 5, 6, 7, or 8. Use nankeen-coloured silk ; the body rather thin.

3. The Upper Wings.—The speckled feather from a grouse's back.

The Under Wings.—The light-coloured starling's wing.

Hook.—Nos. 5, 6, 7, 8. Use deep clay-coloured silk ; the body somewhat full.

4. The

4. The Upper Wings.—The long wing feather of a purple pigeon, stripped off the stem.

The Under Wings.—The same, but of two or three shades lighter.

Hook.—Nos. 6, 7, 8. Use deep purple silk ; a thin, but rather long body.

5. The Upper Wings.—The greenish-cast feather from a pheasant's wing, slipped off the stem.

The Under Wings.—The brown feather from a swallow's wing, with a slight cast of bluish green.

Hook.—No. 4, 5, 6, 7, or 8. Use dark green silk, the body of one of the long fibres on the great tail-feathers of the peacock, lapped round, and back again.

6. The Upper Wings.—A small raven's feather from the wing.

The Lower Wings.—The dark red feather from the partridge's tail, stript off.

Hook.—No. 4, or 5, or 6. Use deep chocolate silk ; or you may use black, making the body, of the fibre of a black ostrich feather, but not too thick.

The *moth-fly* properly belongs to this class ; and should, in general, have a heavy body.

1. The Upper Wings.—Of a red duck's wing.

The Under Wings.—From the yellow feathers on a dun owl.

Hook.—Nos. 6, 7, 8. Use silk two shades deeper than the lower wings, and dun mohair for the body.

2. The Upper Wings.—The soft feather from the back, or rump of a speckled dun fowl.

The Under Wings.—The same, but of a shade lighter, and very soft.

Hook.—No. 5, or 6. Body of dun mohair, use reddish dun-coloured silk.

3. The Upper Wings.—The yellow feather of an owl.

The Under Wings.—The lighter ditto of the same.

Hook.—No. 6, 7, or 8. Use cream-coloured mohair, and nankeen-coloured silk.

4. The Upper Wings.—The clear-coloured feather from under a swallow's wing.

The Under Wings.—Ditto, but whiter and smaller, from the same.

Hook.—No. 7, 8, or 9. Use white rabbit's hair, and pearl-coloured silk, but little waxed.

The learner will observe, that *moth-flies* are only to be used towards dusk, and during the night; if his enthusiasm should lead him to sacrifice his rest, &c. to the pursuit of pleasure. Some folks boast of having had great sport by night-fishing; but I cannot say such ever fell to my lot: I caught more *colds* than *fishes*!!!

I have before spoken of *dipping* by means of a lantern; which is by far preferable.

THIRD CLASS. THE SINGLE-WINGED HACKLE—Is made, by lapping one feather, as before described, then whipping on with or without mohair, or other body, till
you

you come opposite to the point of the hook, or to the barb for some long-bodied flies; then lapping in a hackle from the bottom of your body, and bringing it up to where the feather was ended, taking care to make the turns of the hackle sit closer as you approach the wing feather, at which you finish, and fasten off with two half-hitches.

1. Wings.—The grey feather from a drake (or a *mallard*, if to be had), tinged with a dash of clay, or reddish yellow: it is rather scarce; but you will find a feather on some hens very like it, and which may serve, though not so well.

Body.—Of gold plating, carried spirally round your hook three times; this is tied in before you begin to lap your *gut* down after finishing the wings, and is fastened by a half-hitch or two, at the bottom of your whipping, opposite the barb.

Legs.—A fine red hackle from a game cock, very bright, and taken from about the middle of the neck; it should be rather small, and very stiff.

Hook.—Nos. 6, 7, 8: silk of a maroon colour, but well waxed.

N. B. This fly is called the *red-spinner*, and is an excellent one.

2. Wings.—The reddish feather on a woodcock's wing, rather mottled.

Body.—Very small and neat, of a reddish yellow mohair.

Legs.—A red cock's hackle, very small and brilliant.

- Hook.—Nos. 7, 8, 9, 10; silk of reddish yellow, well waxed.
3. Wings.—The grey speckled feather on a mallard's breast.
- Body.—Amber-coloured mohair, very thinly put on, but long: two tail-forks of the same as the wings, only a little shortened.
- Legs.—A grizzle cock's hackle.
- Hook.—No. 4, or 5; amber-coloured silk.
- N. B. The mallard's feather may be steeped in turmeric-water for half an hour, which will give it a bright but durable yellow: use both varieties. This is called the *May-fly*.
4. Wings.—From a partridge's tail, the red feather stripped off.
- Body.—Only of maroon-coloured silk.
- Legs.—A dingy brownish-red hackle.
- Hook.—No. 5, 6, or 7; maroon silk.
5. Wings.—The brown part stripped off from a snipe's wing (one of the longer feathers).
- Body.—Coffee-coloured mohair, very thinly put on. Use the same coloured silk.
- Legs.—A black cock's hackle, very small and brilliant.
- Hook.—No. 6, 7, or 8.
6. Wings.—A grouse's hackle.
- Body.—Deep reddish-brown silk.
- Legs.—A red cock's hackle.
- Hook.—No. 5, 6, or 7.

The following are of this class, but are called *ant-flies*.

7. *The red ant-fly.*

Wings.—The feather from a starling's wing.

Body.—Amber-coloured mohair; thin near the wings, but thick at the end.

Legs.—Very nice red cock's hackle, only twice round, close to the wings.

Hook.—No. 8, or 10. Use amber-coloured silk.

8. *The black ant-fly.*

Wings.—A fine sky-blue feather from the gull's, pigeon's, or other bird's wing, very small fibred, and with a rich gloss.

Body.—A fibre of black ostrich feather, thickest at the bottom.

Legs.—A very small black cock's hackle, taken from near the head; only put on two turns, very close to the wings.

Hook.—No. 8, or 10. Black silk.

9. *The blue-bottle.*

Wings.—Any small dark brown feather, stripped off the stem.

Body.—A fibre from the long tail-feather of the peacock, and head of the same.

Legs.—A black cock's hackle, very fine.

Hook.—No. 7, or 8. Black silk.

10. *The pale blue-fly.*

Wings.—The light blue feather of a gull, or of a swallow.

Body.—Rabbits' wool, slightly dyed in a weak solution of indigo, mixed with the same slightly dyed in turmeric-water.

Legs.—A small white hackle, dyed of a very clear pale blue.

Hook.—No. 7, or 8. Straw-coloured silk.

I consider the grouse's hackle, No. 6, to be an admirable fly for almost all seasons, and for all waters; and next to that the following:

11. The *red hackle*.

Wings.—A middle-sized red hackle, lapped very closely together, beginning with the thickest end, and working downwards with the smaller end, or point, of the feather, contrary to the usual practice.

Body.—Is only a continuation of the silk, very thinly laid on, till opposite the point of the hook.

Legs.—None.

Hook.—Nos. 6, 7, 8, 9, 10. The silk deep orange, or strong sulphur colour, as you may find the fishes take; but wax well.

12. The *black hackle*.

Wings.—As above, only substituting a *black* for a *red* hackle.

Body.—As above, only *black* instead of *red* silk (or it may be *bottle-colour*).

Legs.—None.

Hook.—Nos. 6, 7, 8, 9, 10.

N. B. When this last fly is made with a very small black, or very deep brown, feather, for wings, and an equally minute black hackle, worked with the thinnest black silk that can be had, for legs, it is called the *gnat-fly*, and is extremely killing: hook No. 10.

FOURTH CLASS. THE PALMER-HACKLE—Is made generally on a hook about No. 4, or 5, by first whipping the hook on for a few laps, and lapping in the ends of

of a long fibre, and of a hackle, at the same place ; then, lapping down the whole length as far as the shank is straight, and in making the half-hitches at bottom, a small piece of plating is lapped in. This done, carry the fibre round the hook very close, adding a second, or more fibres, if requisite, to complete down to the end of the whipping.

When it is completed thereto, lap it in under the plating, which is now to be carried round from the bottom to the top, leaving a very small interval between each round. When the plating is brought up completely, let the hackle be passed round progressively downwards, so as nearly to fill up the intervals left by the plating ; fasten off at the bottom with two half-hitches.

In this way, all the materials will be seen ; and if the hackle have very long stiff fibres, the palmer will bear a close resemblance to those small hairy caterpillars which abound at various seasons.

1. The *red palmer*.

Body.—Of the long fibre from a peacock's tail-feather.

The plating to be yellow, *i. e.* gilt.

The hackle to be red, from the lower part of a game cock's neck.

Hook.—No. 4, or 5 ; work it with red silk.

2. The *black palmer*.

Body.—To be the fibres of a black ostrich feather.

The plating to be white, *i. e.* silver.

The hackle to be black, worked with black silk.

Hook.—No. 4, or 5.

Having

Having now detailed the several classes, the forms, and the construction of artificial flies in general, I must inform the learner, that he cannot do better than preserve such feathers as chance may throw in his way, when they appear well calculated for making flies.

He should strip away the down, and one side of the plumage, as shewn in *Fig. 4, Plate V.*; so that they may occupy but little space in his fly-fishing pocket-book.

Each kind of feather should be superscribed, to indicate *what bird*, and *what part*, it was taken from; so that if the angler should find it a *killing* feather, he might know how to supply himself with more.

Although I have described those feathers, and arrangements, which are most generally useful, it is not to be supposed that *those only* will answer his purpose: on the contrary, in some waters the fishes will take only the local insects, which the angler must catch, and endeavour to imitate.

By following the foregoing method, and by keeping a few of the necessary articles always at hand, such as mohair, and silks of various colours, trimmed feathers, &c. he will never be at a loss; but will speedily be distinguished as a clever angler!

I hold the common practice of swelling a volume, by the insertion of what is called "a description of the several waters passing through the various counties," to be completely unnecessary. I have seen many gentlemen grievously disappointed when they have been informed, and indeed convinced, on arriving at a stream of which the highest character was given in print, to find, that
even

even the fishes allotted thereto had never been seen within scores of miles.

I confess my diversion has been ample on such occasions, especially when I have seen the pocket *Mentor* pulled out, and read with such attention, and with such emphasis, as strongly marked the chagrin that pervaded the reader's mind. And then the suspicion, that the town-folks are all jealous of the strangers who come to cast a line in their waters ; together with many an indignant, or at least a significant, look at all who did not, right or wrong, fall in with the author's assertions !

Before a gentleman leaves his home in search of sport, he ought to inquire, among those who visit the town, or county, he may be intent on journeying to, what the *real* character of the waters may be ; for, if he blindly follows the *cant*, not to say the *chicanery*, with which some volumes abound, he will generally find both his time and his money very much mis-spent ! ! !

Withholding, therefore, from such a practice as I have reprobated, I shall conclude my labours on this subject, with recommending to the learner a careful perusal of the *game laws*, so far as they relate to fishing ; for which purpose I have annexed them to this volume ; at the same time apologizing to him for any want of perspicuity, or of sound information ; and trusting to his liberality for such errors of the press as will, even under the greatest vigilance, sometimes be found in works of the utmost importance, and produced by the most able authors !

He who has not patience enough to overlook trifles, will never have sufficient of that quality (which is excellent on all occasions) to qualify him for an angler !

APPENDIX.

GENERIC DESCRIPTION OF VARIOUS FISHES.

THE SALMON.—Scales not very large, and rather round—no scales on the head—large mouth, thin lips, the upper jaw generally protruding a little—very sharp teeth in the jaw, on the tongue, and in the throat. Coverings of the gills, three bony laminæ—the back round, with little arch on the back—the lateral line nearly straight, the sides not much flattened, and silvery. 13 rays in the anal fin, 14 in each pectoral fin, 10 in each ventral fin, 21 in the tail, and 14 in the dorsal; also 12 rays in the gills. The forehead black, as also the back—black pupils, silvery iris, and cornea of the eyes yellowish. When in season, the flesh is of a fine rose colour; and when fresh from the sea, many black spots are seen on the sides. The males have a *nail*, or stud, of a horny substance at the tip of the lower jaw, and usually some reddish spots on the sides; their tails are also more forked, and their heads more bluff, than those of the females. Every species of this genus has a small fleshy fin between the dorsal and the tail, called the adipous fin.

The SALMON-TROUT—Has six dots on each pectoral fin. The rays are as follow: in the gills, 12 rays; in the pectoral, 14; in the dorsal, 14; in the ventrals and anal,

anal, 14; and in the tail, 20. The head is small and wedge-shaped—the jaws of equal length, sharp teeth, locking into each other; also on the tongue, and in the roof of the mouth. The nose and front black—small eye, black pupil, silvery iris, mixed with yellow—cheeks, yellow and violet; sometimes spotted. The back a little arched and black—sides black, inclining to violet—belly white; small scales. The dorsal and adipous fins, and the body, ornamented with round or angular black spots; sometimes with red and black mixed.

The WHITE TROUT, or WHITLING.—Short bluff head—red spots in white rings on the body, which is longer and thinner than in other trouts—large mouth; jaws, and roof of the mouth, armed with sharp teeth—eyes large; pupil black, with silvery iris. The cheeks, sides, belly, and gill-covers, silvery—aperture of the gills very large. The back, front, tail, and fins, brownish; dorsal fin spotted with brown; the tail forked. 10 rays in the gills, 15 in the pectoral fin, 10 in the ventral, 11 in the anal, 18 in the tail, and 12 in the dorsal. The adipous fin on the back, a dirty brown.

The BLACK TROUT.—Large head, which, as well as the back, is of a blackish brown—upper jaw longest; sharp teeth in jaws, tongue, and palate. The eyes full sized, with blue iris, and black pupil, edged with red. Back round—back and head spotted with violet—sides yellowish, or reddish white; and have reddish spots on a coffee-coloured ground, circled with white. Belly white, and large. The fins generally have a yellow cast. 10 rays in the gills, 14 in the dorsal and pectoral fins, 10 in the ventral

ventral and anal, and 24 in the tail, which is broad. The adipous fin, deep brownish yellow.

The COMMON TROUT.—Large head, large teeth, bent inwards on the jaws; under jaw longest—the mouth full of teeth—nose and front deep brown—cheeks yellow, with green tinge—eye, moderate-sized; black pupil with red edge; iris white, with a black crescent border. Body rather narrow, round back, ornamented with black spots; sides yellowish green; sometimes rich yellow, or of a light rose colour. Scales very small. Sides, spotted red on blue ground. Pectoral fins, clear brown, with 14 rays; ventrals, red, with 10 rays; anal, purple in part, afterward yellowish grey, and with 10 rays; tail, deep greenish brown, with a furrow, rounded tips, and 20 rays; 10 rays in the gills; the adipous fin yellow, bordered with brown; and the dorsal grey, with purple spots, and 14 rays. In Wales, some trouts are marked with red and black spots as large as sixpences.

The CHARR.—Black back—sides pale blue—belly orange-red—tail truncate. 10 rays in gills, 14 in pectorals, 8 in ventrals, 12 in the anal, 24 in the tail, and 13 in the dorsal. Head very blunt—eye moderate, with black pupil; silver iris in a gold circle. Scales very minute. Dorsal fin yellow, with black spots—back greenish—belly white. Anus very near the tail; all the other fins reddish; the adipous fin brightest.

The GRAYLING, or UMBER.—Under jaw longest—head, small and rounded; brown above, with black dots; at its sides, bluish white. Teeth in jaws, gullet, and
palate,

palate, but not on the tongue. Pupil black; iris yellow, with black dots. Body long, with large hard scales—back darkish green and round—sides rather flat, and of a bluish grey. A straight line runs over each row of scales from head to tail; that in the middle marked with small black dots. The belly is white, and larger than in other trouts. The pectoral fins white, with 16 rays: all the other fins red; the dorsal fin violet, with brown spots on a greenish ground; 5 first rays single, the others divide into 8 branches near their end. 10 rays in the gills, 12 in the ventral, 14 in the anal, and 18 in the tail. The flesh white, and smells like thyme.

The PIKE, JACK, or LUCE.—Canine teeth—no adipous fins—large mouth; upper jaw concaved, and somewhat duck-billed; under jaw rather longest—tongue large, and armed with teeth—palate smooth, large throat—nostrils double, and near the eyes, which are large, round, with bluish-black pupils; the irides of a gold yellow. The mouth very large, and the lowest jaw the broadest. Gills, 15 rays; pectoral fins, 14; ventrals, 10; anal, 17; in the tail and dorsal, each 20—the dorsal far back, over the anal fin. Scales very minute, and covering the gill-covers—back and front dark greenish brown—sides mottled, clay and bluish—fins of a yellow tinge, with deep purple edges—belly white. The colours grow brighter at spawning time.

The PERCH.—Anal fin 11 rays, of which the first is hard; 7 in the gills, 14 in the pectoral, 5 in the ventral, 15 hard rays in the anterior, and 16 soft ones in the posterior, dorsal; 25 in the tail. Wide mouth; jaws of nearly

nearly equal length, with teeth, as also in the gullet. Tongue short and smooth—nostrils double, and near to the eyes; in front of the nostrils, two small apertures—eyes large, pupils black; iris bluish, edged with yellow. Coverts of the gills furnished with very small scales; those on the body larger, but all of them peculiarly rough and hard—the belly broad and white; the anus rather near the tail. The pectorals are of a reddish colour; the ventral, anal, and tail, deep red, the dorsals violet, and the first has a large black spot among the shorter rays. In the back, just under the anterior dorsal, there is a peculiar bend, to be seen in only one point of view. The perch, when in the water, appears to be striped deep brown and white; but when taken out, appears of a greenish cast, with golden bars or spots, which give it a beautiful appearance.

The RUFF—Is a species of the perch; it has several indentions in the head; has 15 or 27 spines in the dorsal fin, 17 rays in the tail, 6 in the ventral, and 14 in the pectoral fins; also 7 in the gills, of which the covers are marked with deep blackish-green crescents. The body is long and shiny—the head large, and, as well as the back, of a blackish colour. Eyes large; pupil blue; iris brown with a yellow spot—jaws of equal length, and armed, as are the throat and palate, with small sharp teeth. Sides yellow, inclining to green and brown; some are all over of a gold colour. The sides, the pectoral, and dorsal fins, and the tail, are marked with small black spots—broad belly, anus rather forward, fins yellow, and the tail bifurcated.

The **CARP**.—Has a flat, broad body, covered with large scales; 25 rays in the anal fin, 15 in the pectoral, 6 in the ventral, 12 in the dorsal, and 22 in the tail. The head is small and pointed; the mouth extremely small. The eye moderate, with black pupil, iris yellow, spotted with black; hind part of the head blue, as is the back, which is sharp above, and round below—neck rises rather suddenly from the back of the head—lateral line marked with yellow dots, belly bluish. Pectoral and dorsal fins red, anal and dorsal fins edged with blue, tail blue and forked, the under part longest.

The **BREAM**.—A species of *carp*; has blackish fins, 27 or 29 rays in the anal fin, 17 in the pectoral, 9 in the ventral, 12 in the dorsal, and 19 in the tail; blunt snout, front dark blue, cheeks rather yellow. Black pupil, iris pale yellow, and above it a crescent shaped black spot—the old ones broad and thick—young ones narrow and thin. Scales large, back black, sharp and much arched: lateral line curved, and has about 50 black spots. Sides yellow, white, and black, mixed; pectoral fins yellow below, violet above, and blackish towards their ends. Ventrals have a violet ground, with appendages; anal fin, grey in the middle, and blackish at the edges; the tail bifurcated, longest at bottom, and of a deep blue, as is the dorsal, which lays far back.

The **ROACH**.—A species of *carp*; red fins and lips, pupil blackish brown, iris red; in the anal fin 12 rays, in the pectoral 15, in the tail 20, in the dorsal 12, and in the ventrals 9. Large scales, which are of a greenish black hue, on the back; the sides and belly silvery; the lateral

lateral line curved, and has 36 minute prickles: the back is round and highly arched, the sides rather flat; the tail forked. Teeth in the jaws, but not in front.

The RUD.—A species of *carp*: small head, rounded at the end, wide nostrils, and large scales; back sharp between the front and the dorsal; afterwards round, and of a deep green; the pectorals are of a deep brownish red, the dorsal reddish green; the sides white, inclining to yellow. Irides orange colour, fins of the anus, belly and tail, vermillion; pectoral 16 rays, ventrals 10, dorsal 12, anal 15, and in the tail 20.

The DACE.—A species of *carp*: small head—bluffer than the roach; body longer and rounder; also sides brighter; back rather brownish, and rounded. Pupil black, iris yellowish; mouth not very small; all the fins white; 10 rays in the anal, 9 in the dorsal, 11 in the pectoral, 9 in the ventral, 18 in the tail. The tail forked.

The BLEAK.—A species of *carp*: under jaw protrudes, head pointed, forehead flat; transparent and olive-coloured, with little black dots, cheeks blue, large eyes, blue pupils, and silver iris. Very small scales, which easily rub off, and are used in making false pearls. Back nearly straight, of an olive colour; sides brilliant white; sprat shaped, pectorals red and white, with 14 rays; anal, grey, with 21 rays, dorsal and tail, greenish, the former 10 rays, the latter 18; ventral 9 rays.

The MINNOW.—A diminutive species of *carp*. Ven-
tral,

tral, 8 rays, dorsal 8, anal 8, pectoral 15, tail 19; body semi-pellucid: in some waters spotted with red, and then called **PINKS**; back, black in general, but in some clear blue; striped longitudinally; some are diversified with yellow, blue, and other colours; fins generally bluish, marked each with a red spot. The head wedge-shaped, and dark-green above; the gill-covers yellow; red lips; small eyes, black pupil, golden iris, body long and round, thick at the shoulders, and small at the tail, which is forked.

LOACH.—Four barbs on the upper lip, and four on the lower; a small forked spine over each eye; 4 rays in the gills, 11 in the pectoral, 8 in the ventral, 8 in the anal, 7 in the dorsal, and 14 in the tail. Pointed head, broad mouth, 12 teeth in each jaw, pupil black, iris gold; cheeks and gills, yellow with brown spots; broad neck; the body round, and generally black, but mixed with yellow and brown, in dots and stripes; belly orange-coloured, with black dots; the scales very minute, but covered with slime. Fins generally yellow, with black spots or streaks; tail rounded off.

The **EEL.**—Under jaw protrudes; body of a bluish black, or of a very deep blackish green; very long, smooth, rather flat towards the tail, but round behind the shoulders, mouth broad, forehead flat and wide, jaws and mouth full of small teeth, the eyes small, and covered with a membrane, pupil black, iris gold colour. No gill-covers, but two small apertures of a crescent shape, close to the pectorals: lateral line straight, with small white dots. The colour various, as particularised
under

under their several kinds' pages. The skin very slippery, scales long and soft, but only visible in a dry state. The pectorals are small and flabby, with 19 rays. The dorsal fin begins a little way from the neck, and unites with the tail, including which there are 1000 rays, in the anal 100, commencing at the anus, but joining the tail below. In the back 116 vertebræ.

The BARBEL—So called from its four barbs, two on each side of the mouth, is a species of *carp*: it is hog-mouthed: very broad shoulders, body rather long; the head oblong, and olive-coloured. The pectoral, 17 rays, ventral, 9; anal, 8; tail, 19; dorsal, 12: in the last the second ray is very stiff and serrated. Lips thick, and rather red, protruding at pleasure; black pupil; iris, light brown; scales of a middle size, and dentated; body olive-coloured, sides inclining to blue, belly white, inclining to green; lateral line straight, with black dots; tail forked, and edged with black; but as well as the pectorals, ventrals, and anal, red; the dorsal bluish. Roe poisonous; though *Bloch* denies it.

The TENCH.—A species of *carp*: scales minute, dullish brown colour, gill covers greenish; fins extremely large, pliant, and of a violet colour. The colours of this fish vary much, according to the nature of the waters. The body mucous. Pectorals, 18 rays; ventrals, 9; anal, 25; tail, 19; dorsal, 12; head pointed and broad, of a deep green; eye rather small, black pupil, iris, golden colour; breast white; jaws of equal length, strong lips; back curved like a slack bow; the tail rounded at the corners: four short broad teeth in each jaw: some

breeds of tench have a small barb at each corner of the mouth; others are deficient in this particular.

The GUDGEON.—A species of *carp*: back dark greenish brown, which soon gives place to a silvery white: the scales small; round body; mouth flat with small barbs; pectorals, 16 rays; anal, 10; ventral, 9; tail, 10; dorsal, 9. The fins are red or green, some are dotted with black, and some gudgeons have dotted backs, with bellies inclining to yellow. Near the eyes two large nostrils; no teeth in the jaws.

The CHUB.—A species of *carp*: in the anal, 11 rays; dorsal, 11; pectoral, 16; ventral, 9; tail, 17. The body nearly cylindrical; head flat; back dusky green; sides and belly silvery; the old ones rather of a gold colour when in season. Scales extremely large and angular; mouth moderate; no teeth; tail rather forked. Eye moderate, pupil deep brown, with silver iris; or black with gold iris, according to age.

BRIEF HINTS

RELATIVE TO

*THE LAWS REGARDING ANGLING,
NETTING, &c. &c.*

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1. No salmon can be netted, and sold as the produce of a fishery, that may weigh less than six pounds; penalty 5*l.* to be levied on any party concerned.
 2. No salmon under eighteen inches in length, from the eye to the middle of the tail, shall be taken out of any water, by any device; penalty 5*l.*
 3. No net to be used for salmon fisheries of less than two inches and a half in the mesh; penalty, net forfeited, and 5*l.*
 4. Salmon fisheries open July 31st, and last to November 12th; in the Ribble, from January 1st to September 15th. But this is very partial; many parts having other regulations. From September 8th to November 11th, *i. e.* five weeks, no salmon ought to be taken any where, on account of the spawning; though that is a very uncertain point.
 5. No person to use any device whereby the spawn of fish may be destroyed. Penalty, imprisonment for one year.
 6. Bargemen and others, catching fish in nets in canals, passing through the property of persons, not being free waters, are subject to heavy fines, and to imprisonment: and the same penalties attend the poisoning, or wilfully destroying fishes in all waters.

7. Laying

7. Laying night-lines, snares, or devices of any kind, for catching fish, without leave from the owner, subjects to heavy fines : if done at night, subjects to transportation.
8. In the Thames, and wherever the waters are under the controul of Corporations, no person is allowed to use a *bottom-line* before the first day of June, under penalty of 20*l.* and forfeiting his rod, &c. The season properly concludes on the 15th of November, but is not much noticed ; though few persons chuse to angle later. The fly may be used all the year round.
9. The following sizes are laid down as standards ; below which no fishes are allowed to be taken by net.
No salmon or trouts, when out of season. (The query is, who shall determine this point) ?
No pike under ten inches from eye to tail.
No smelt under five inches.
No barbel under twelve inches.

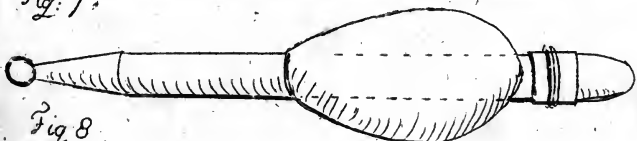
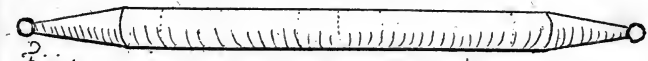
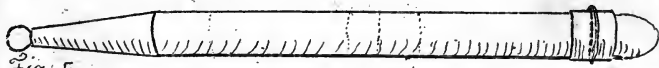
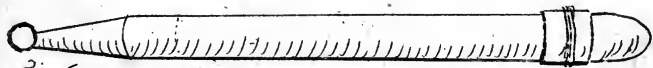
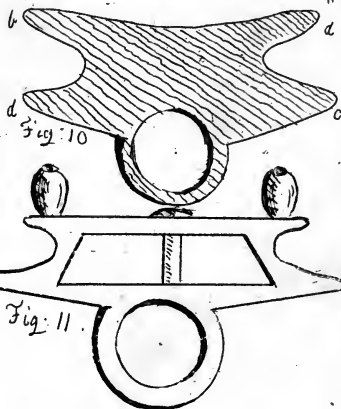
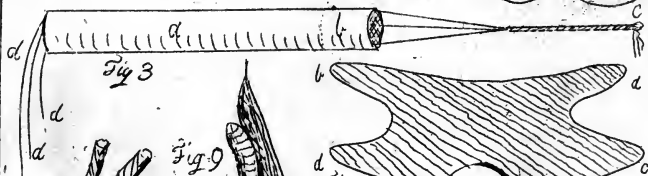
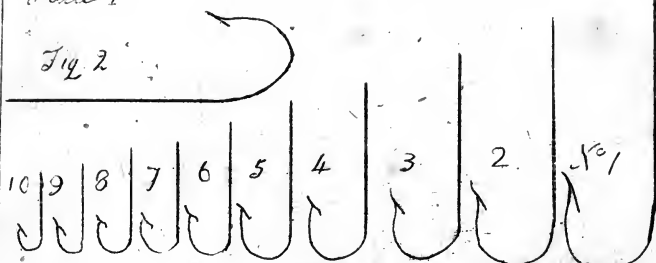
N B. It is curious to observe that the legislature have been very careful of *smelts* and *barbel*, but have omitted *carp*, *perch*, *tench*, &c. from the protection thus afforded. We may perhaps reasonably infer, that those who drew up this incoherent code, were not much given to angling.

10. All persons, fishing in private waters, armed, or any way disguised, or committing any waste on the said property, thus armed or disguised, are deemed felons, without benefit of clergy.

THE END.

Plate I

Fig. 2



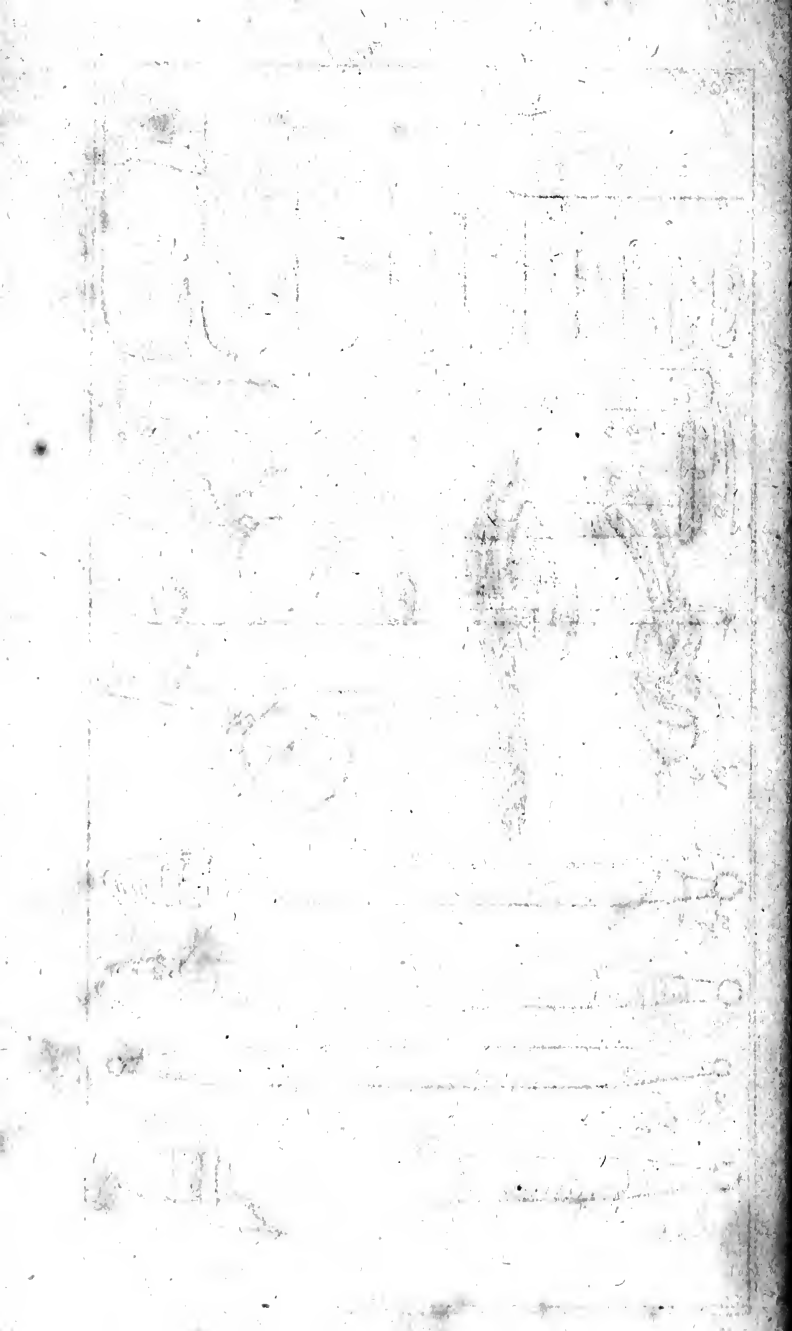


Fig. 2

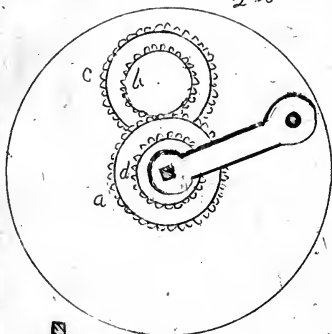
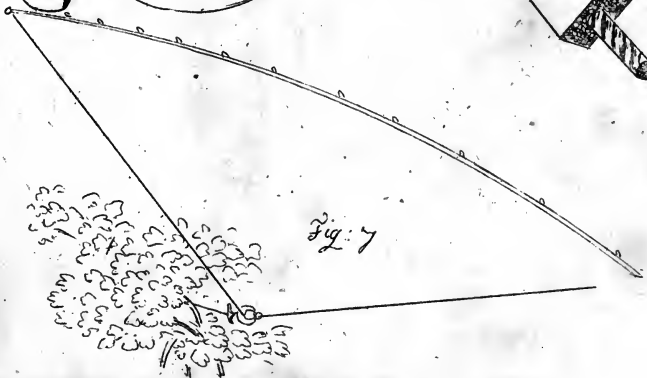
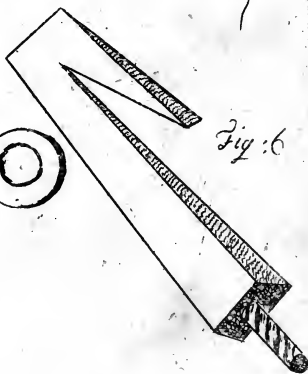
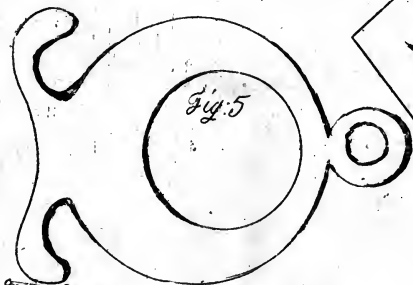
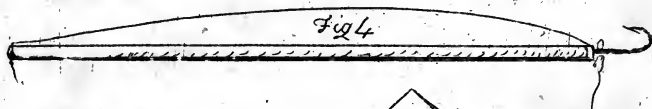
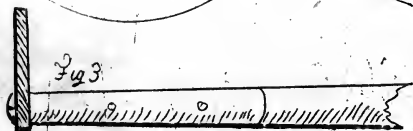
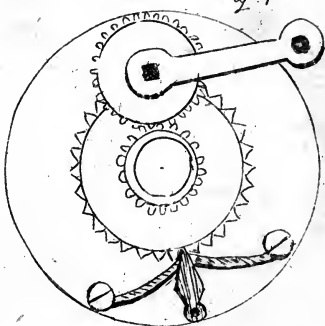


Fig. 1



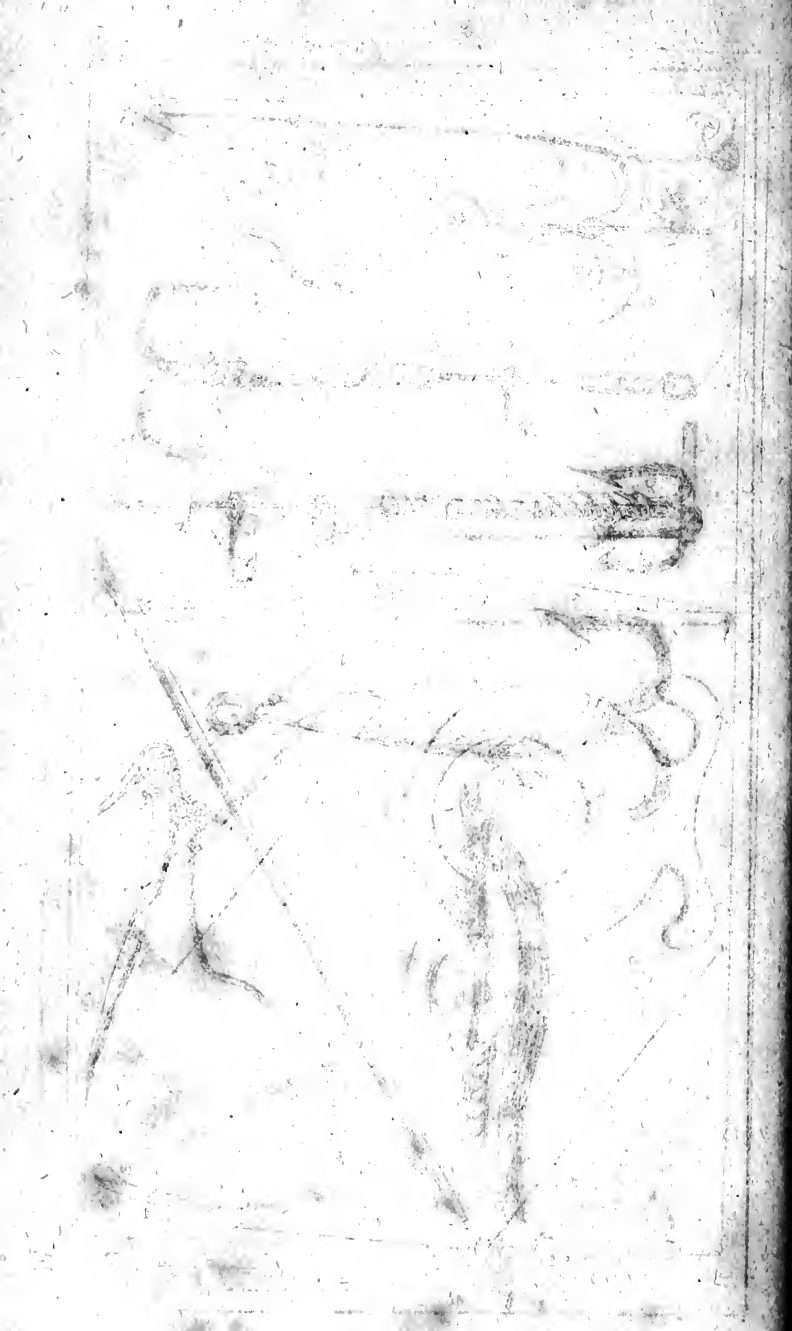


Fig. 1

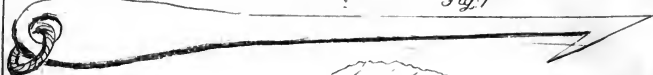


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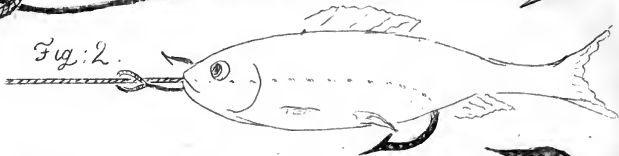


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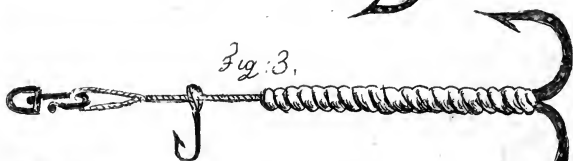


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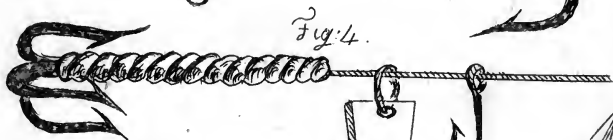


Fig. 6.



Fig. 5

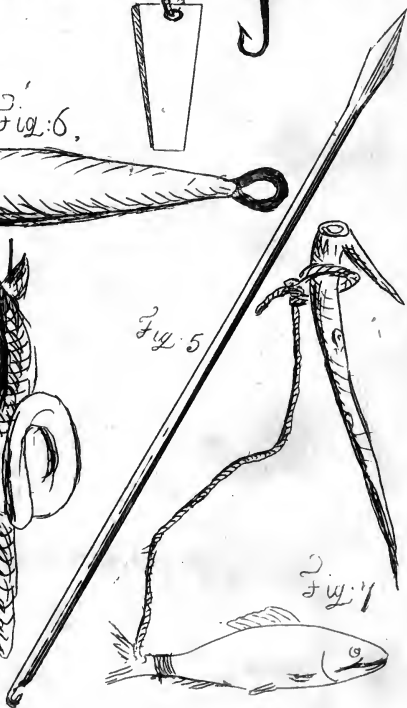


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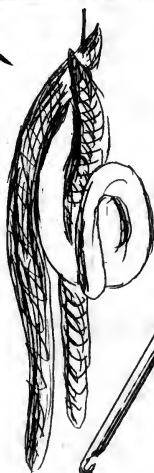


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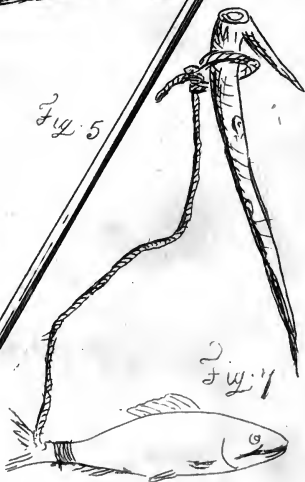




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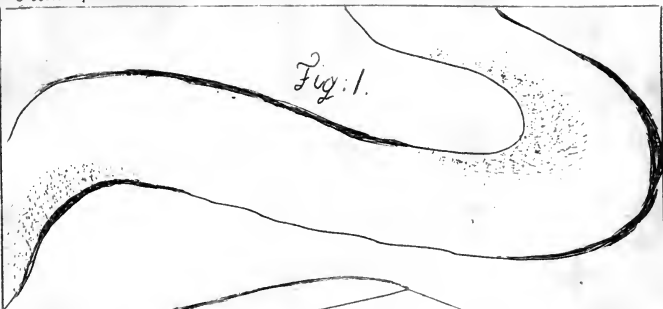


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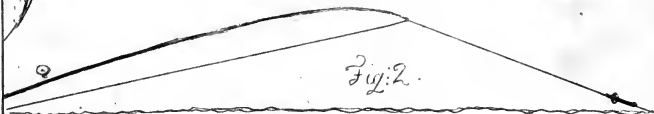


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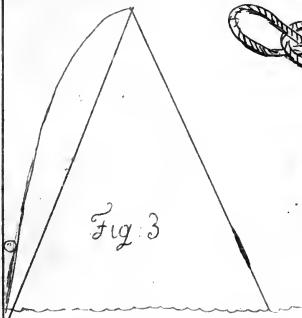


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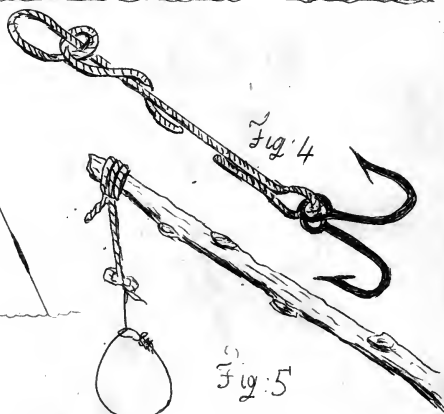
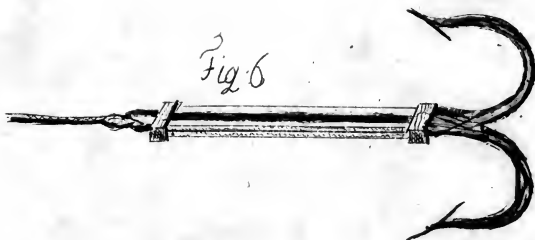


Fig:5

Fig:6



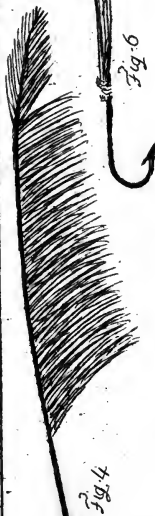
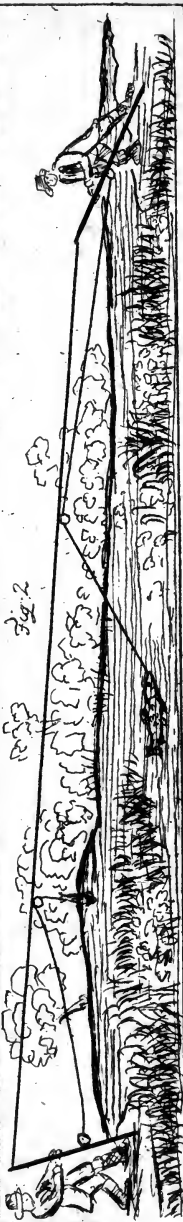
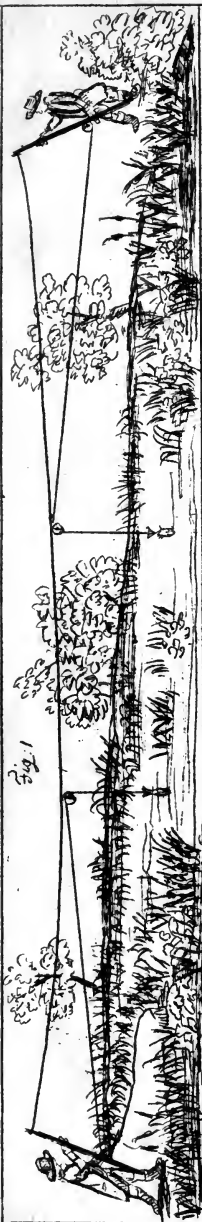
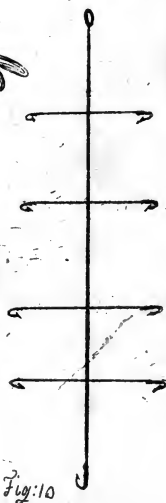
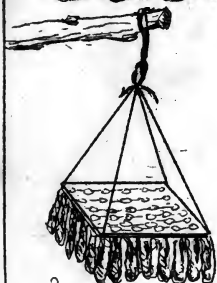
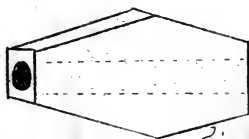
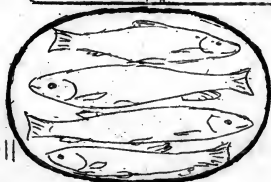
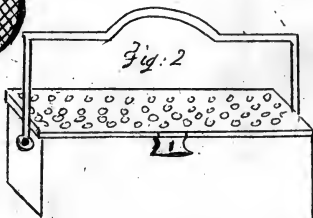
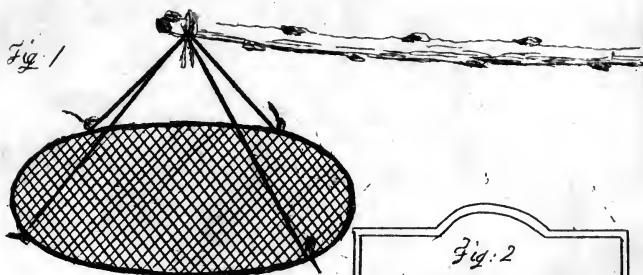
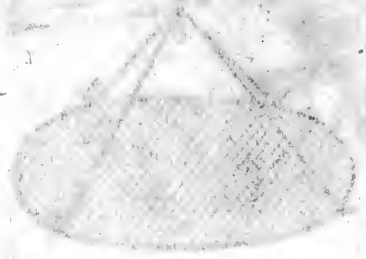




Plate 6





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Portrait of Mr. Francis Buckle, the celebrated and much esteemed Jockey, from an original taken at Newmarket, by A. Cooper, Esq. R. A. in the possession of Mr. T. Gosden, and engraved by an eminent artist. Proofs on India paper, 2s. 6d. Prints, 1s. 6d. and in Colours, 3s.

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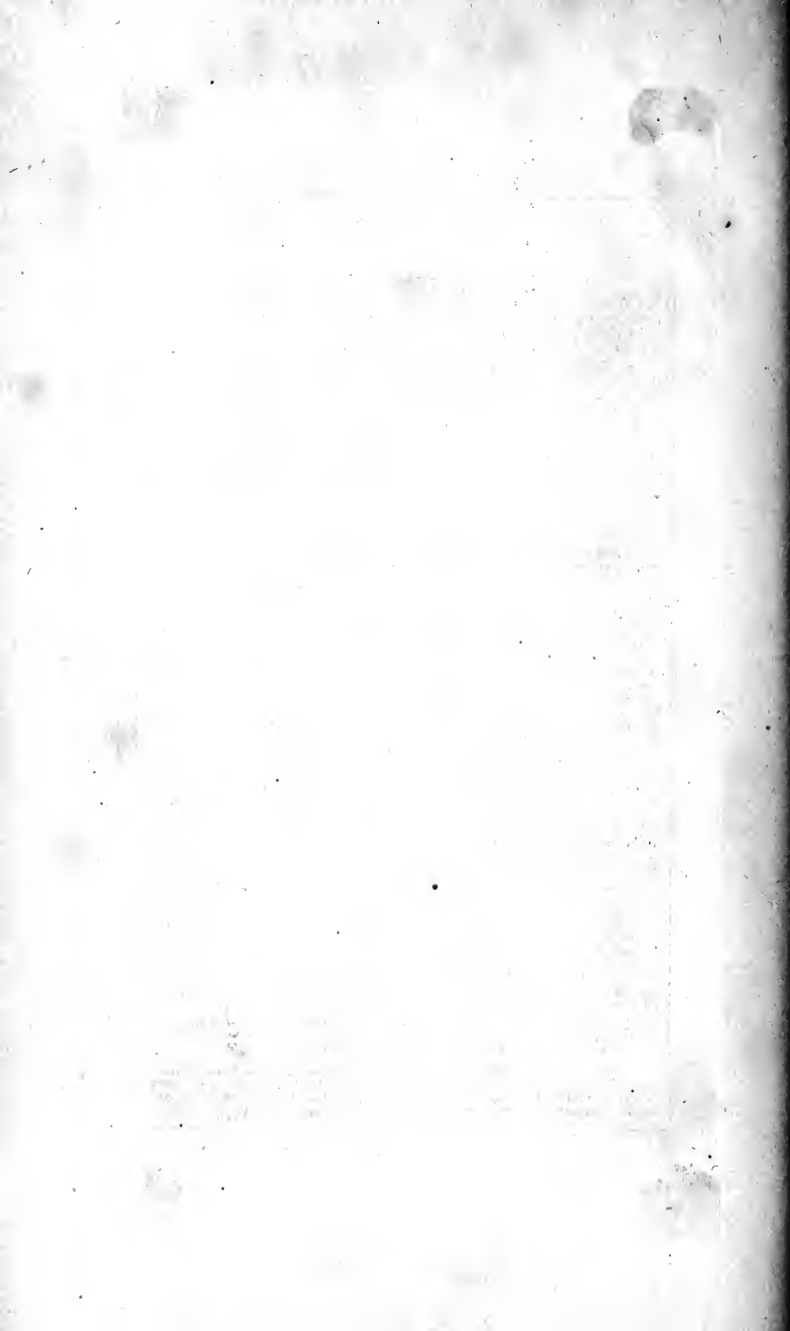
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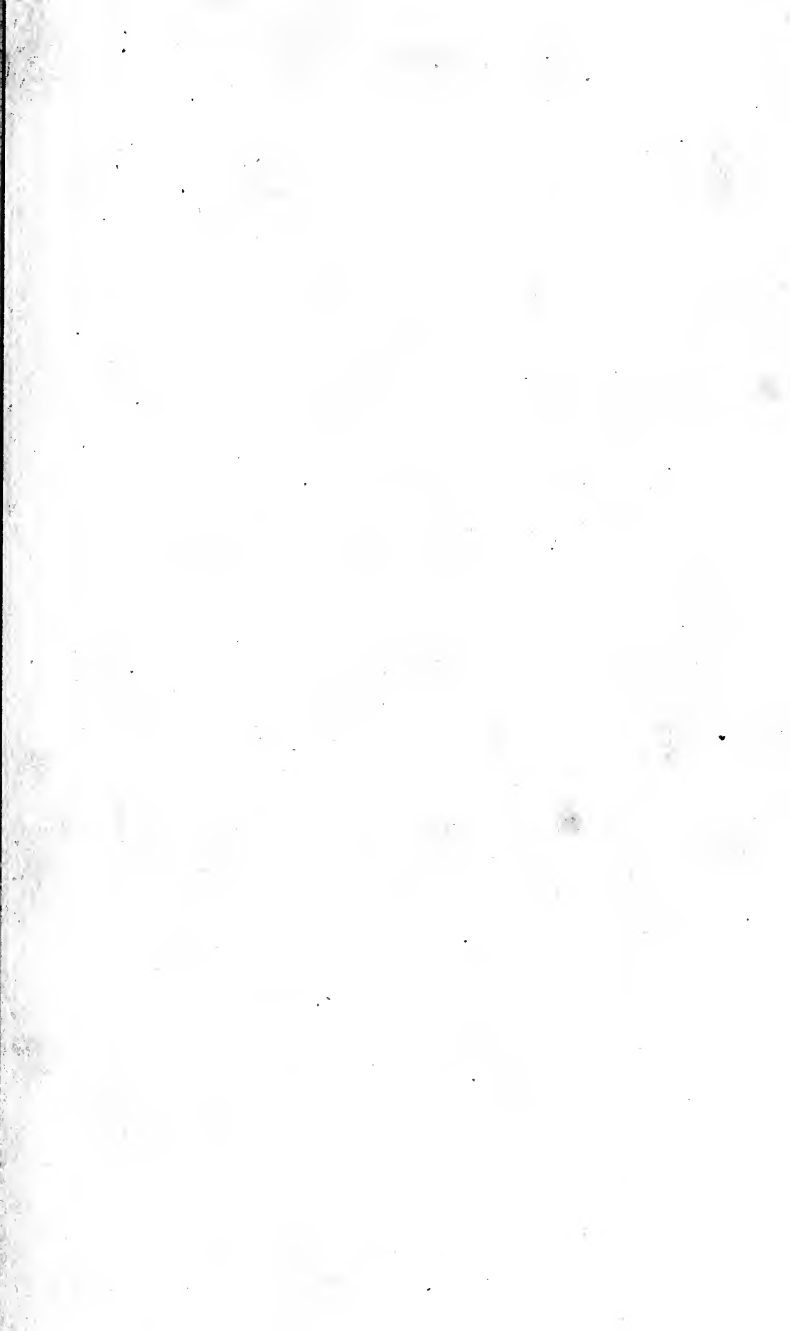
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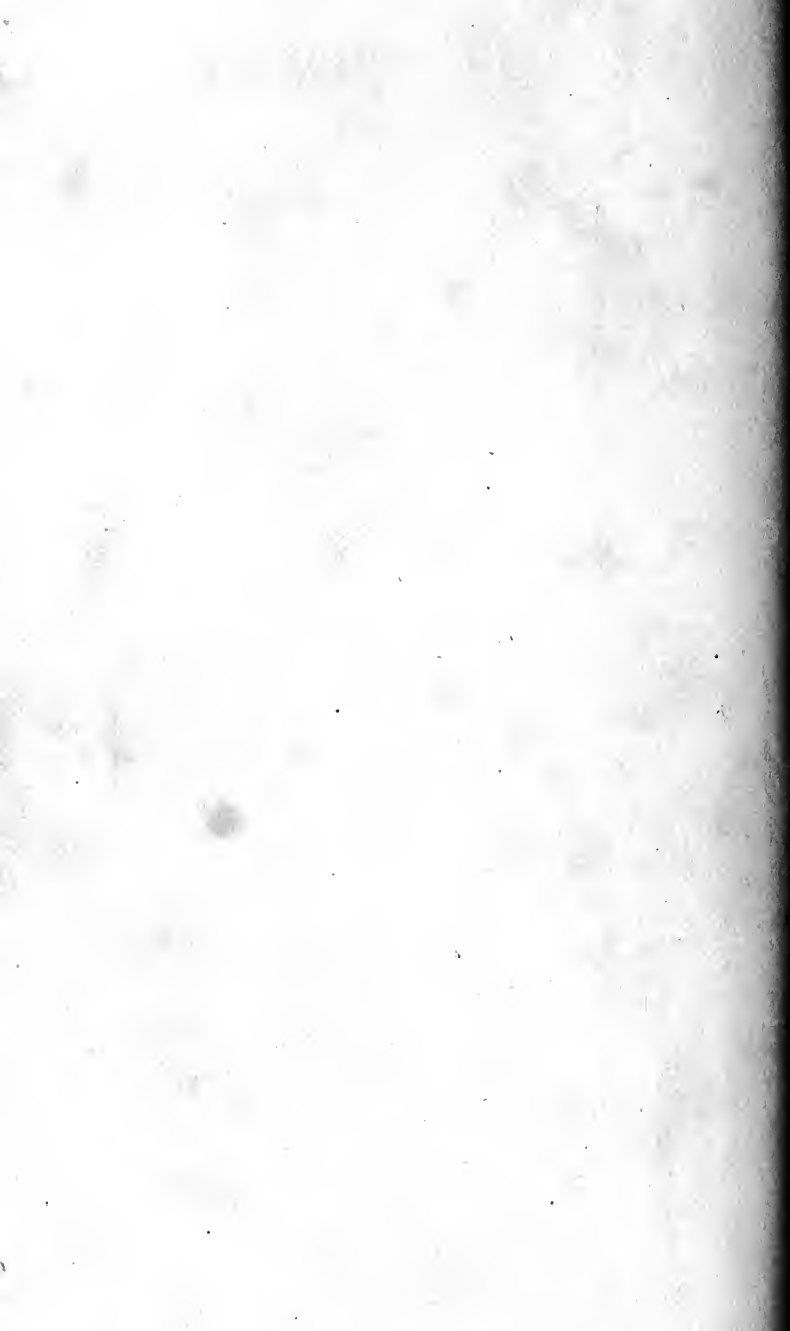
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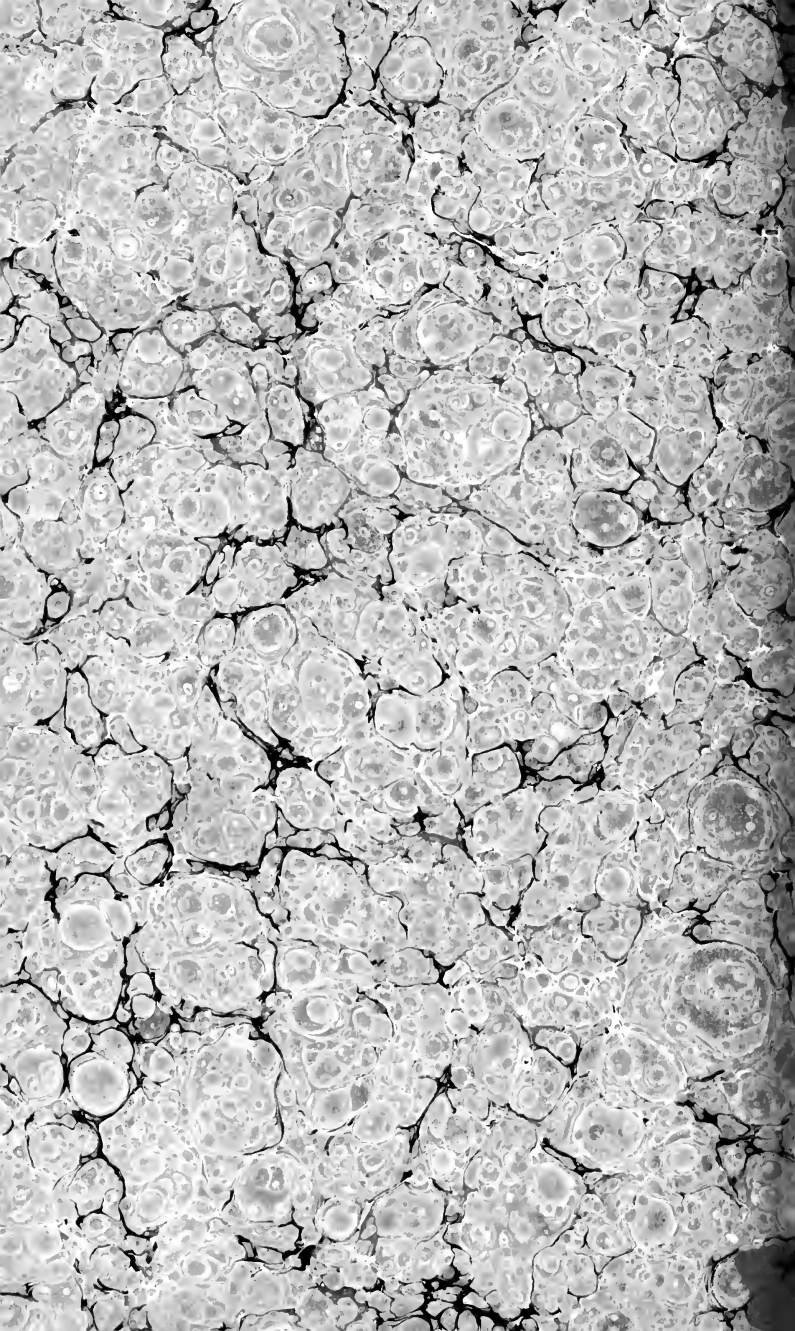




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