

THE HALFORD DRY FLY SERIES

Nº1.

DRY-FLY FISHING

F. M. HALFORD

Wm. M. J. Martin

2587

DRY-FLY FISHING.



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THE HALFORD DRY-FLY SERIES
VOLUME I.

DRY-FLY FISHING

IN THEORY AND PRACTICE

BY

FREDERIC M. HALFORD

(*"DETACHED BADGER" OF "THE FIELD"*)

AUTHOR OF

"FLOATING FLIES AND HOW TO DRESS THEM"

"MAKING A FISHERY"

AND

"DRY-FLY ENTOMOLOGY"

IN MEMORIAM

GEORGE SELWYN MARRYAT

FOURTH EDITION REVISED

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DEDICATION OF FIRST EDITION.

TO

GEORGE SELWYN MARRYAT.

In the last chapter of "Floating Flies and How to Dress Them," entitled "Hints to Dry-Fly Fishermen," the production of this work is foreshadowed.

If these pages meet with the approval of our brother anglers ; if they contain anything that is likely to be useful, anything that is new, anything that is instructive, or anything that is to make dry-fly fishing a more charming or more engrossing pursuit than it now is, the novelty, the instruction, and the charm are due to the innumerable hints you have been good enough to convey to me at different times during the many days of many years which we have spent together on the banks of the Test.

As a faint acknowledgment of all these obligations, and as a mark of high esteem and deep affection, this humble effort to perpetuate your teachings is dedicated to you by

Your grateful Pupil,

FREDERIC M. HALFORD.

November, 1888.

PREFACE TO THE THIRD (REVISED)
EDITION.

IN MEMORIAM GEORGE SELWYN MARRYAT.

ON the 14th of February, 1896, George Selwyn Marryat died at The Close, Salisbury, aged 56. To his many friends and acquaintances, even to those who had only heard of his skill as a fisherman and his conspicuous unselfishness on the river bank, such an announcement was a source of the deepest regret not unmingled with astonishment that one so young in his ways, so active, strong and vigorous, should have been thus rapidly and suddenly struck down. For fifteen consecutive years we had spent a great proportion of the fishing season together, and scarcely a day passed without my acquiring some knowledge, or learning something new from him. During the close seasons we were frequently staying at one another's houses, and when apart were in daily correspondence on some point connected with the sport, the life history of the insects on which the fish feed, and the best methods of imitating them. Hence it may not be deemed an exaggeration for me to say that

his untimely decease was as severe a shock as if I had lost one of my dearest and nearest relations.

“Red Spinner,” in an obituary notice in the *Field* of February 22nd, 1896, showed such appreciation of his character and conveyed these impressions in such feeling terms that I am tempted to quote two paragraphs:—

“Naturally, with his fame and popularity, he had the run of the choicest streams, but he seldom cared to fill his basket, and I never met an enthusiastic angler—as he was—who so much denied himself the pleasure of fishing at the waterside. But a fish rising in an apparently impossible position would always tempt him, and I have seen him, when an angler had tried his best at a rising fish, and given it over in despair, quietly wait until the said angler had moved out of sight, and then address himself to the rising trout until he had it in the landing net. Wherever Marryat had been fishing, you would always meet someone—keeper, or proprietor, or visiting angler—who before he had been conversing with you for ten minutes about fishing would introduce the name of Marryat as a model for imitation. The days with him by the river were always pleasant and always instructive. If he saw that you really appreciated the knowledge he had obtained, he would take endless trouble to impart it. To the man, however, who

fancied himself above everybody else, and who was far above accepting a hint from any living creature, the master was silent, interposing, maybe, a humorous remark sometimes that ought to have made the self-conceited listener feel very small."

"The evenings after the fishing, when dinner being over and the tobacco burning, the discussions turned upon not fishing alone, but a variety of subjects, were, if possible, more delightful than the days, for in the course of a busy and, in the early days, adventurous life, Marryat had picked up an astounding mass of information on all manner of topics. Natural history, even abstruser questions of science, he had attacked with the thoroughness which characterised all he did, and there are four or five men still living who probably will never forget a great night at the dear old mill at Houghton, when we led Marryat on to a series of speeches and contentions upon what he called the 'teleology of the infinite.' A more agreeable companion, in short, there never was than George Selwyn Marryat, and it was during those Houghton days that Mr. Halford was introduced to him by Francis Francis. This was about the time when Marryat, who was as full of spirits and harmless jokes as a boy, seized the opportunity of Francis being late at breakfast to place empty egg shells, with the unbroken ends

upwards, before Francis's plate. Loud was the explosion of laughter when the latter discovered the little trick that had been played upon him. He knew at once who was the author, and with a 'what a confounded child you are, Marryat!' joined in the merriment."

Naturally gifted with a keen sight developed by continual use, possessed of marvellous powers of perception and the faculty of bringing these powers to bear rapidly on any subject, it was not surprising that he should have been full of resource and able without a moment's hesitation to decide how a fish rising in an awkward position should be attacked. At a glance he could see the point from which the cast should be made, and the precise spot where his fly should land to avoid drag. His knowledge of the life history of all common and rare insects, whether bred in the waters or on the land, whether in the larval, pupal, sub-imago, or imago stages, was so great as to render him certain of the class of artificial likely to tempt the fish. His tall, lithe, active figure, a mass of muscle and sinew, enabled him to keep his fly working backwards and forwards in the air. Grasping his rod with a grip like a vice, he put forth all his skill in casting, so as— to use his own expression— to "combine delicacy and accuracy in the first chuck." Ready at any time to impart knowledge to a true sportsman, or to find

a feeding fish for him, he sacrificed his own chance of sport to crouch at his side, applaud a good attempt, and correct if necessary the faults of an indifferent one, rejoicing more than the tyro himself to see his efforts crowned with success. Full of trite sayings, and brimming over with exuberant spirits like a child, it was "*mens sana in corpore sano.*" Such was the man to whom the first edition of this book was dedicated, and in whose memory this revised one is offered to the angling public.

The probability of a new edition of "Dry-Fly Fishing" being published was often discussed between us, and the late Mr. Marryat impressed upon me most strenuously the desirability of making copious notes of errors requiring correction, or amendments tending to keep the general matter thoroughly up to date. This advice was followed, and as lately as January, 1895, he carefully read all my notes with the book and sent me a list of a few points which he thought might advantageously be added to them. His words enclosing them were:—"I enclose notes of revise for 'Dry-Fly Fishing.' I don't think there is anything else, and I have read it all over again carefully."

After his death, and when the production of this edition was decided, I consulted two of the best dry-fly fishermen of the day, Mr. N.

Lloyd and Mr. W. H. Pope. These good friends each undertook the arduous task of reading through the book and making full notes of any points on which they could suggest improvements on the text of the older editions. My warmest thanks are due to both of them, not only for the time they have devoted to this labour of love, but also for the valuable hints which I have not failed to incorporate in the present work.

A comparison of this with the original edition will show that, although the alterations in the general scheme have been few, the revision of minor points and matters of detail has been most comprehensive. After all, success or non-success in dry-fly fishing is greatly dependent on matters of detail, and my chief aim and object have been to give the modern angler the benefit of any experience acquired during the last ten years so as to bring this edition thoroughly up to date.

Thus any real improvements in the manufacture of rods and tackle have been exhaustively treated, including the Lloyd ferrule as well as the valuable and practical suggestions of Mr. Hawksley in reference to *testing rods*. The chapters respectively on *How, Where and When to Cast, Studies of Fish Feeding, Circumstances affecting Sport and Evening Fishing* have been carefully and thoroughly revised. The early part of the chapter on *Selection of Fly*

has, in view of experiments on the colour question, been entirely re-written, and in the later part it has been improved by the addition of a number of new patterns which have been tried and found successful. The principles of *playing a hooked fish in weedy places* have been considered in the light of the experiments conducted in the first instance by Mr. Lloyd, and checked by further experiments on the part of the author and many friends; and the chapter on *Autopsy* has been corrected and improved in details.

The last chapter, entitled "The Management of a Fishery," has been eliminated because the subject has been worked out—I trust exhaustively—in "Making a Fishery," published in 1895* by Mr. Horace Cox.

The hand-coloured steel engravings of the eggs, larvæ, nymphs, sub-imago and imago of the May-fly and of the nymphs of the smaller Ephemeridæ, Caddis and Shrimp, life-size, are included, but the lithographed plates of these insects and crustaceans magnified have been omitted. This course has been adopted for two reasons:—Firstly, because the life history, description and illustrations of the insects and their metamorphoses have been more fully treated in "Dry-Fly Entomology," published

* Republished in 1902 by Messrs. Vinton & Co. (Ld.) as Volume III. of "The Halford Dry-Fly Series."

in 1897* by Messrs. Vinton & Co.; secondly, because it has been deemed desirable to produce this edition at a lower price than the original, with the view of bringing it within the means of the whole angling fraternity. The lithographic stones of the plates illustrating "Casting," and the section of a trout in the chapter on "Autopsy," were unfortunately destroyed by a fire, and these have been reproduced from the original drawings by a photographic process.

It only remains for me to express my gratitude to my friends for the invaluable assistance they have rendered—to Mr. N. Lloyd and Mr. W. H. Pope, to whose work I have already alluded; to Mr. B. W. Smurthwaite for his admirable contribution on the colour question; and last, but certainly not least, to "Red Spinner," who has read the proofs of this and my other books, corrected numerous errors of style and composition, besides generally improving and polishing the work. It would be base ingratitude to omit the names of the publishers, Messrs. Vinton & Co., with whom I can only say it is a pleasure and a gratification to be associated.

FREDERIC M. HALFORD.

April 1st, 1899.

* A revised edition published in 1902 as Volume II. of "The Halford Dry-Fly Series."

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DRY-FLY FISHING.

CHAPTER I.

THE DRY-FLY FISHERMAN'S GEAR.

BEFORE attempting to teach a novice how to fish with the floating fly, it may be desirable, as a preliminary step, to give him some detailed information about the implements with which he is expected to work.

The intention of this chapter is to discuss calmly and without prejudice the pros and cons of each branch of the subject, in the hopes of inducing the rising generation of anglers to commence their study with the aid of the best devised and most suitable gear. In some instances even experienced anglers may be induced to abandon what they have used for years, and substitute improvements which will tend to render the pursuit of their sport at once easier and more fascinating.

One paramount difficulty occurs to the author, and this is to avoid making himself the means of puffing the wares of any one or

more makers to the detriment of others who, although unknown to him, may be as capable of producing first-rate work, and as honest in supplying it. If names are mentioned here, it is only because it is barely possible to describe the improvements made in various portions of the angler's gear without in some instances referring to those who have made these particular improvements their specialities. Although the word "dry" is used as a qualifying adjective to the expression "fly fisherman" in the title of this chapter, it will, I hope, be found that most, if not all, of the various kinds of rods and tackle, as well as the reasons for and against using them, will apply with equal force to the votary of the sunk or wet-fly style as to the disciple of the floating fly.

Single- and
double-
handed rods.

The first and most important factor to be considered is the choice of a rod; and on this question the angling fraternity is divided into two schools, viz., those who advise the use of a double-handed and those who prefer a single-handed one for dry-fly fishing. The advocates of the double-handed rod allege that with it they can throw a longer line, and that at the same time the fly is laid as lightly on the water as with the single-handed. They also lay stress on having more power over a fish while playing it, and being better able to keep a hooked trout from plunging

headlong into the nearest bed of weeds. On the other hand the votaries of the single-handed rod deny that a longer line can be thrown with a double-handed. They also urge that any fancied advantage due to greater power over the hooked fish is more than out-balanced by the disadvantage of having to carry and wield a heavier implement. Above all, they defend their preference on the ground of being able to cast with greater delicacy and accuracy, of being less liable to break the fine gut in the act of striking, and of casting with ease against a stronger adverse wind than is possible with the best balanced double-handed rod.

Personally I am, and have always been, in accord with those who swear by the single-handed rod, and have freely expressed this opinion at different times. Some friends have criticised and some utterly condemned this opinion. Those who have condemned it have quoted as a strong authority against me one of my best friends, now, alas! no more, the late Francis Francis. His name and his opinions have carried and ever must carry great weight with all fly fishermen, whether they have known him personally, or whether they have merely read his charming and ever fresh writings. He frequently discussed this question with the late Mr. Marryat and my-

self after a hard day's fishing together. On this one subject we never could agree. At the same time Mr. Marryat and I, albeit strong advocates of our own idea, admitted that his contention might be right as to the two points of casting further through being able to hold up a longer line, and not being so liable to catch the long grass behind the angler; and, in consequence of the greater power of the double-handed rod, having more command over a hooked fish.

The late Mr. Francis, however, in that spirit of tolerance and justice which ever characterised him and endeared him to all who came in contact with him, conceded the point that for delicate or accurate casting *with* the wind, and in a far greater degree *against* the wind, the double-handed rod never had a chance with the single. In the last published edition of "A Book on Angling" (the sixth), he inserted the following footnote on page 160: "I have seen 26 yards cast with a single-handed rod,* and I also cast that length at the same time with the same line and rod. It was on the Old Barge river at Winchester

* It must be noted too that this was effected with an ordinary 10ft. 6in. glued cane rod used season after season, and not with a pole built specially to get out a long line anyhow, such as are used for making what are called record casts at tournaments.

that that was done, my friend Mr. Marryat being the other operator, and it was with his rod and line. I have heard of even longer casts than this."

This admission as to distance cast, coupled with the fact that he frequently carried a spare single-handed 10-foot rod for casting a comparatively short line to fish rising under his own bank, I think very much diminishes the strength of his arguments. As I said before, however, we never could agree on this subject, and the conclusion of our argument invariably was the same, "Quot homines, tot sententiæ;" and on this angling subject we had to agree to differ.

Having determined to select a single-handed Materials for rod-making. rod, the points for consideration are, firstly, the material from which the rod should be made; secondly, its length; and thirdly, the style of action to be preferred. With regard to materials, it may not be deemed too positive an assertion to say that there are only three open to the would-be purchaser, namely, split cane, whole cane, and greenheart. The action of a whole cane rod is to my mind far inferior to that of a good greenheart.

The greenheart is less expensive, and not Greenheart rods. much heavier than the glued cane. It casts well, and a satisfactory feature about it is that it stands well after continual whipping.

Occasionally it has a knack of breaking off short in a somewhat surprising way. The fracture usually takes place in the lower or stiffer portion of the rod. As an example, in a three-joint rod it may be predicted that this accident will happen either just below or just above the ferrule at the upper end of the butt. Sometimes a flaw will be found in the timber to account for it, and, with much of the cheap rubbish sold to the unwary, another probable cause of fracture at this part of the rod is the weakness produced by ignorance, or negligence, when boring the butt to receive the tongue of the lower ferrule of the middle joint, or what the rod-maker calls *the joint*. This boring should never be carried as low as the end of the female ferrule on the butt, otherwise a weak place is left. A small practical experiment in measuring will enable a purchaser to make sure of this point when selecting his rod. Very often, however, a greenheart rod broken in this way reflects no discredit on the manufacturer. There is no flaw, the boring is not carried below the ferrule, and there is apparently no cause to account for the accident. In such a case it may be asserted that the angler himself is to blame.

He has smashed his rod by neglect of a primary desideratum for anyone who wishes

to become a fisherman, namely, patience. He has returned his fly from the water and sent it swinging out behind him, but instead of waiting until his rod is released from the strain of the backward motion, has prematurely forced it forward again in the mistaken notion that such action will enable him to cast further. No timber can stand this double strain, and hence the smash.

For those who only fish occasionally, and do not care to go to the expense of the glued cane rod, greenheart is pre-eminently *the* timber to select. It is not safe to buy even this at too low a price, as the timber should be thoroughly seasoned; the lengths intended to form each joint rent, not sawn; and the ferrules made of hard metal, properly fitted—all and each of which matters of detail add to the cost slightly, but far more to the efficiency of the rod.

For the fisherman to whom the difference in price is not important, glued cane can be most strongly recommended. It is superior in every way, and well worth the difference in cost. It casts better and casts further, and does the work with less labour both to the angler and to the rod. In fact, there is precisely the same difference between a split cane and a greenheart rod as between a thoroughbred and an underbred horse. One answers when called upon for an extra effort, the other

The split
cane rod.

shuts up. There seems to be no limit to the responsive power of a first-class glued cane rod in efficient hands, so long as the line can be kept off the ground behind the fisherman.

The action of a properly constructed split cane rod is true; it bends equally from point to butt. When returning, it recovers quickly from the forward strain of lifting the line, and, instead of quivering as the weight of line commences to bend it in a backward direction, seems to stiffen itself at once, as if to be sooner prepared to withstand the strain of casting. The longer the line used the more apparent is this characteristic. The section of the built cane rod, whether pentagonal, hexagonal, octagonal, or what is styled double built, is mechanically one of the strongest possible.

In the method of manufacture the outside bark, which is the hardest, the most waterproof, and the most elastic portion of the material, is used, while the interior of the cane, which is soft, brittle, friable sometimes, and worthless for purposes of rod-making, is to a great degree discarded. Not many English anglers will probably be inclined to make their own rods; but if they do, I can only advise them to read, and read carefully, Mr. Henry P. Wells' book, entitled "Fly Rods and Fly Tackle," published by Messrs. Sampson Low, Marston,

Searle & Rivington. The author of this admirable work has studied and carried out himself every part of the process of rod-making in his own country, the United States. He has probably seen much of the American method of manufacture, and evidently he is well able to appreciate the good and the bad points of it. In fact, nearly all his advice is as good as possible for the practical work of the rod-maker; excepting, perhaps, the question of ferrules, with which I will deal later. It must, however, be remembered that to buy here or in America a glued cane rod at a low figure must of necessity cause disappointment to the angler when he attempts to use it. It is impossible to make a good rod of this description excepting at a comparatively high price.

Just consider successively the details of manufacture. First there is the cane. It has to be selected, it has to be purchased, it has to be seasoned, and seasoning is an operation which takes time. On the question of selection the judgment of a thoroughly experienced workman and expert in this class of timber is required—an experience which can only be secured at some cost. Having selected your cane, and having seasoned it, the pieces fit for making the sections of the rod have to be rent out of it (rent, not sawn). Many

of the cheap inferior rods sold here are made of sawn sections; and it must be remembered that, whereas the whole of the cane can be sawn into the requisite pieces, comparatively only a few sections fit for use can be split out of each cane. The sections have to be planed true on two sides to an angle of 60 degrees. Six of these sections have to be accurately fitted and glued together to make each joint. They are securely bound with string and left until the glue is set absolutely hard, and it takes many months for the glue in the interior of the built sections to set. When it is set, the action of each joint has to be tried, and the whole of the joints have to be put together with temporary ferrules in order to judge what the action of the rod will be.

Some of our friends may say that with a wooden rod this same experiment has to be tried. It must, however, be remembered that if a solid wood rod is too rigid, it is only necessary for the rod-maker to mark the places where it is too stiff and pare these portions of the joint or joints down. But with the glued-up rod this is impossible, because paring down the exterior of the rod will remove from it the bark, the only portion which is of value for rod-making; hence if either of the joints be too stiff, it must be promptly condemned as far as that particular rod is

concerned. Of course if it is too limber he has a chance, and his chance is to shorten the defective joint slightly. If the result of this shortening is to render the joints of unequal length, the sale value of the rod is, owing to a somewhat absurd prejudice on the part of English sportsmen, much impaired. If any of my amateur friends should try making glued-up rods, they would probably be astonished to find how great an effect on the action of the rod is produced by cutting a very short piece off any one of the joints, and he can thus judge how easily, in attempting to remedy the above-mentioned fault, the rod can be made so stiff as to be utterly useless.

Having tried the rod, and made action of ^{Whipping} _{rods.} it true from end to end, and seen that the butt is strong and well set up; having also removed any superfluous glue from the surface, a considerable amount of time and labour has to be expended by the maker in whipping the rod with waxed silk at frequent intervals.

On this point I do not agree with our American friends, who space their whippings too far apart. For years I have had all glued-up rods armed with whippings at intervals of about half an inch at the point to three-quarters of an inch at the butt. This is to my mind a great improvement, as tending not only to increase the steely quality of the rod, but to

save it from a probable smash when it is imperative to kill or cure by putting an undue strain on a hooked fish. Besides, it is an assistance to the rod on the occasions when an extra long cast has to be made. It is an admirable plan to whip greenheart rods in the same way, as it increases the stiffness but little and the spring very considerably.

Varnish for
split cane
rods.

English makers were formerly less successful than the Americans in the varnish they used, but of late years the manufacturers of the best English glued cane rods have remedied this fault by abandoning the brittle quick-drying shellac varnishes previously used, and adopting more suitable, and I am told far more expensive, preparations. After a season or so, inferior varnish usually cracks on the surface from the action of the rod; damp gradually works under the varnish, which then peels off in flakes, not only exposing the exterior portion of the cane (which perhaps is not very important, as it is almost watertight), but also exposing the glue uniting the sections of cane, which must in time suffer from the action of continual moisture.

In Mr. Wells' book full instructions are given on every other detail of the manufacture of glued-up rods, but strange to relate he is to a small extent reticent as to the particular form of varnish used. He calls it *coach-body*

varnish, and further on says, "I use 'Valentine's Quick Levelling Varnish.'" I am told that different carriage builders use different varnishes for this purpose. I suspect that he means copal, and this is one of the best varnishes for the purpose. If English rod-makers adopt it their customers must, however, give more time for carrying out repairs if they include revarnishing, as it takes several days to dry, and weeks to become really hard.

Some anglers prefer spliced to jointed rods, ^{Spliced and jointed rods.} urging as their reason for this preference that the action of a spliced rod is more uniform throughout than that of an equally well-made rod in which the joints are connected by metal ferrules. Before the use of thin hard metal for ferrules, when they were made of heavy soft brass tubing, there might have been grounds for this, but with the modern form of metal ferrules the action with a properly balanced and well-finished rod is uniform throughout.

Besides the trouble of splicing each time the rod is taken down, an important objection to the principle is that the splice is never thoroughly firm and sound unless the two taper ends of the joint are cemented or glued together, and then the rod is practically in one piece. There is always more or less tendency

in a splice to work loose, and a very small degree of *give* in it utterly ruins the action of the rod. For the underhanded or horizontal cast, which is the most usual one with the modern dry-fly fisherman, a spliced rod is most ineffective, as no possible binding can secure the spliced ends when the rod is worked in this position. Mr. Wells has in his book, entitled "The American Salmon Fisherman," exhaustively argued out the mechanical and practical disadvantages of the splice, and to those who disagree with me I would commend the study of pages 33 to 37 in his valuable work.

Ferrules.

Having determined to use ferrules, I must confess myself unable on this point to agree with Mr. Wells, who is an advocate for the simple parallel fitting as against the tongued method followed in this country. Nevertheless I speak with great diffidence, believing that he *may possibly* be right, and that the unpleasant experience I have had when using rods fitted with the simple ferrule has been due to imperfections in the manufacture—to imperfections of accurately fitting the male to the female ferrule. But mechanically his argument may be sound. If the ferrules are circular in section and a perfect fit through the entire length, there may be no tendency in one joint to become separated from the other in the act

of casting; but rods of such character have not in my experience been seen in this country.

Honestly, however, I doubt the correctness of his theory. It seems clear that any action producing a tendency in the line to fly forward must have a similar effect on the fittings of the joints by the friction of the line in the rings. This, though slight at each cast, is cumulative, and must in time slacken, and if not remedied, sooner or later tend to propel, the joint from the ferrule. Until some marked improvement is made in this detail, I must recommend our English anglers to select the tongued ferrule, and to tie the joints together with the ordinary hitcher arrangement. If this precaution is neglected the joints will in use gradually work out of the fitting, until at last the entire strain is thrown on the tongue, which, becoming loose in the socket, gets broken off.

If, however, anglers are willing to go to some expense to save themselves the trouble of tying the joints together, they can do so by using the screw fitting made by Messrs. Hardy Brothers, of Alnwick. Even with this fitting, joints will at times show a tendency to turn and unscrew when in use, and my friend, Mr. N. Lloyd, has devised what he aptly styles a "treble-grip rod ferrule," which seems to fulfil all the conditions required.

The "Lloyd,"
treble-grip
ferrule.

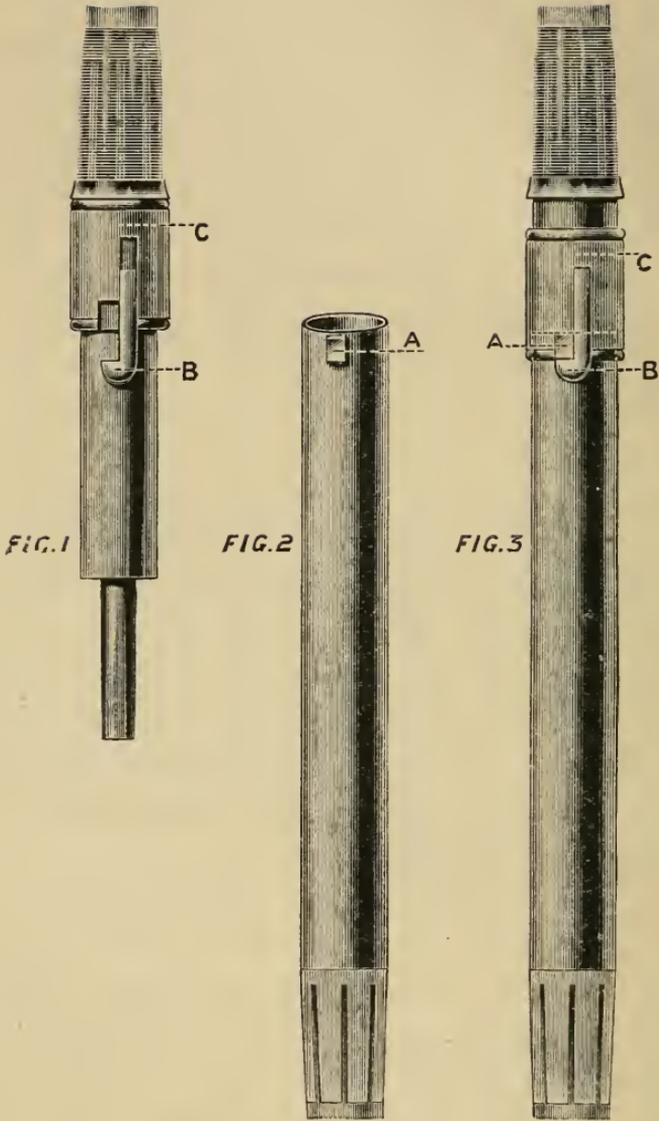
I cannot do better than quote his own words in explanation, as published in *The Field* of September 25th, 1897:—

“Probably the splice was the earliest method of uniting the portions of a jointed rod, and by many it is still regarded as superior to any ferrule. It is not, however, well suited to dry-fly work, and the majority of fishermen prefer some form of ferrule. It is not the purpose of this article to deal with materials or with methods of attaching the metal to the wood or cane, but to consider the question of suitable fastenings to prevent the joints twisting round or coming apart. Americans maintain that plain ferrules (without dowels), if perfectly fitted, will not come apart, but it is doubtful whether ‘suction’ fittings would stand the severe test of dry-fly work. It is also questionable whether the ‘perfect fit’ would not vanish under such severe wear. The old-fashioned ferrule consisted of a slightly conical upper ferrule, which fitted the hollow one only at the top, the idea being that, as the parts wore, the former would still fit if pushed further into the latter. These ferrules only fitted each other for about a sixteenth of an inch of their length, which not only threw an excessive strain on these parts, but necessitated tying them together with thread or wire, wound round wire loops affixed to

each joint. The security of such an attachment was always doubtful, and the manipulation of the thread not a little troublesome.

“To meet these difficulties, much ingenuity has been exercised in devising metal fittings, which could be locked and unlocked at will, and should at the same time absolutely prevent the joints coming apart. The Irish ferrule had a screw inside the bottom of the hollow ferrule, into which the other screwed, but as there was nothing to fix the joints when screwed up, the tendency was for them to gradually turn in use. The same objection existed in the bayonet fitting; and in the lock-fast fitting, which consisted of a projecting claw, or sometimes a collar with a notch or screw, which turned on a worm on the lower ferrule. Many other fittings have also been devised, which depend upon slots or holes cut in the hollow ferrule, but these only weakened the whole, and cannot be considered desirable.

“What is required is a fitting which shall not weaken the ferrules, which shall be light and compact, but not liable to damage; which shall lie closely, and shall be so simple as to be easily fixed or released in the dark. It must also be absolutely immovable from the time it is put together until it is released at the end of a day's fishing. To test certain



ideas formed with the above objects in view, a rough ferrule was constructed. This, after some slight modifications, eventually took the form of the illustration, which may be explained as follows: Fig. 1 is the solid ferrule or socket: fig. 2, the hollow ferrule; fig. 3, the complete joint; A, a brass stud; B, a steel hook to engage with A; C, a sliding sleeve which holds A and B together. Figs. 1 and 2 show the joint before fixing. Fig. 3 shows the joint fixed.

“As to the mode of fixing, fig. 1 is pushed well home in fig. 2, when a slight turn causes A and B to engage. The joint cannot turn further in the one direction, and cannot draw out. Like other lock fittings, it may, however, turn back sufficiently to disengage A and B, when the joint would work out. To prevent this the sleeve C is drawn down, and effectually holds A and B in position. Nothing can move until C is drawn up. To release the fitting this must first be done, when a backward, or left-handed, turn and draw separates the joints again.”

Messrs. Hardy Brothers, of Alnwick, are the patentees and manufacturers of this ferrule, and I can add that having used it and seen it in use by Mr. Lloyd and other friends for the last five years, I think it is the best fitting in the market.

If the male ferrules are smeared with old curd soap, clean mutton suet or tallow (but not vaseline), before putting the rod together, the joints will very seldom get jammed. If they should, however, get so firmly fixed that they cannot easily be taken apart, a few drops of paraffin placed on the top of the female ferrule will in time find its way into the fitting and remedy the fault.

Rod rings.

Rod rings may be either upright, for those who prefer them (and of all upright forms that known as the *bridge* is the best), or they may be of the ordinary loose pattern. The line is by some anglers said to pass more freely through upright rings, although of late years many of our best dry-fly fishermen have recanted on this point, and reverted to the old-fashioned loose ring. One of its advantages is that when packed in the case there is less likelihood of rings becoming broken or injured. In either case they should be made of hard German silver. The point ring should be of steel, revolving in an eye made of the same wire as the rings.

Winch fittings.

The winch fittings should be of the ordinary description, and nothing further would require to be said on this subject if tackle-makers had realised what other trades have been compelled to do, namely, the necessity of uniformity. Every little maker, however, seems to imagine

that he has achieved some distinction in making the scoop of his winch either extraordinarily large or particularly small, so that the ordinary winch fitting as fixed on the rod in the one case will not admit of the reel being put in place, and in the other will not hold it steadily without the trouble of packing with paper or some such substance. Hence, probably, Herr Emil Weeger's invention, adopted by Messrs. Hardy, of a conical fitting at the lower end to take the scoop, and a ring with considerable range to secure the forward end of it.

Some makers and some anglers are very ^{Spear.} wroth at the idea of having a spear at the end of the rod. Its disadvantage is that when playing the fish it is uncomfortable, and if made too pointed or sharp might possibly injure the fisherman or his waterproof. But if it is blunt and round at the end there is the immense advantage of being able to stand your rod up in the ground, so that there is no likelihood of its being trampled on either by yourself, your fellow-fishermen, or cattle on the meadow. When spearing the rod, never jam it into the ground with a jerk, as this sets the ferrules tight, shakes the rod, and especially, if it happens to strike a stone, is likely to break the winch. Take the butt of the rod with both hands just above the reel, and press the spear steadily into the ground.

The old-fashioned loose spear in the rod bag usually gets lost or mislaid, and Messrs. Hardy's Combined Spear and Butt-cap obviates this, as the spear is securely packed in the butt when the rod is not in use.

Length of rod.

At the time when Mr. Francis published the first edition of his Book on Angling, dry-fly fishing was comparatively unknown; and as the angler had only occasionally to make a cast, and never to keep his fly working backwards and forwards in the air to dry it, the exertion of wielding a comparatively long rod was slight. Hence we find that of the four single-handed rods spoken of by him the shortest was 11 ft. 7 in., and the longest 12 ft. 8 in.; and he himself says that a single-handed rod "should not be less than 10 ft. or more than 13 ft. in length." I do not think that the argument that men in those days were more muscular or more hardy than we are at present is worth serious consideration; and I prefer to impute this advice to the fact that the principles of dry-fly fishing were then in their infancy. In the present day no trout-fisher can require a rod anything longer than 11 ft., and from this to 9 ft. 6 in. are the dimensions every practical rod-maker or angler would recommend.

With an 11-foot rod past masters in the art can cover a fish at from 26 to 30 yards,

and with a short rod of 9 ft. 6 in., one who knows how to use it can put a fly in the teeth of anything short of a positive hurricane. In connection with this question of length, further remarks as to the reel line must later on be considered. If the angler will not use the modern heavy class of line, he must, to make a long throw, have a somewhat longer rod.

The action of a rod must be true and even Action of rod in every direction from point to handle. There must be no weak place in it, and at the same time no part which is unduly stiff. It should return quickly. The meaning of this is, that when trying the rod, by imitating the action of casting and forcing the point forwards, thus bending the rod, the point should recover and spring rapidly back to a straight line, and when there it should not vibrate, but quickly regain its point of rest, and remain rigid. This means that the elasticity of the whole rod is uniform and smart, the material of which it is built thoroughly good, and the tapering proportionately carried throughout its length. For dry-fly fishing it certainly should of the two be rather stiff than limber; but at the same time it is not recommended to use a thing like a barge pole, which cannot by any possibility cast lightly or with ease.

American rods, judging from what one sees here, are too whippy for our insular ideas, and

seem generally to lack backbone. They are also rather light in the point, the effect of which is to render it difficult if not impossible to recover a long line with them. The fashion of the present day is to use a rod that is slightly top heavy, and although this is more trying to the wrist, yet, considering all points, it is a fault the right way.

Steel-centred
rods.

There have been from time to time, in the sporting press, controversies as to who can claim to be the original inventor of the steel-centred rod. This may rouse the curiosity of readers ; but if the point is considered as to the possibility of the invention being of practical use to the angling world, the conclusion to be arrived at probably is that it is waste of ink and paper. The idea is to build the sections of the cane on a central core of steel, I believe it is also suggested to treat the wood rods in the same way. Now the word *steel* suggests itself to the casual reader as giving the idea of just what should be in a rod.

Mr. Wells, in his book, prophesied that the rod of the future would be of steel. He is, however, two well versed in mechanics to suggest the union of two materials having such totally different action as steel and timber. One must naturally bend and naturally recover itself far more quickly than the other. For a moment consider the effect of rigidly fastening

the two materials together. The one with the quicker action must of necessity tend to hurry the slower material, and the one with the slower action must equally of necessity tend to retard the action of the quicker material. What must be the effect? A tendency to disintegrate their union, and some inconvenience to the hand attempting to use it. So far, my remarks on steel-centred rods have been based upon theory.

As for practice, I cannot personally say much. I have handled experimentally some ten or twelve made by one of the best rod-makers in the United Kingdom. The price has in each case been considerably in excess of that of a glued cane rod, and my verdict has invariably been most unfavourable. They have not cast better; they have not cast more easily; they have not cast more accurately, than the ordinary split cane by the same maker. They are certainly more tiring to the wrist, and when killing a fish I do not think that they give any real accession of power. One of the best of modern dry-fly fishermen wrote me lately on the subject: "With regard to the utility of steel in rods, although it may be mechanically wrong, yet I have handled some useful split cane weapons with steel centres which are capable of good work. I think, however, that steel-centred rods do

not wear as well as the ordinary glued cane. The former cast well into the wind, but after handling yours and L——'s I do not think I shall hanker after steel in the future."

Model rods
and their
copies.

Every fly-fisherman either has a pet rod, or has handled one belonging to a friend which he thinks more nearly perfect than any he possesses. When ordering a new one he is naturally desirous of getting as nearly as possible a facsimile, and either sends his favourite rod or gets the loan of his friend's to serve as a pattern. If the rod-maker is an exceptionally good judge, if the workman's skill is equal to his master's judgment, and if every care is taken by both, a fairly good replica is produced. In due course the angler receives it, and if a rough preliminary trial in his room or garden gives a result which seems satisfactory, he will, at the earliest opportunity, take it to the riverside and put it to the practical test of casting to, and possibly killing, a rising fish—in which case it is safe to predict that henceforth it will rank as his best rod.

If by any chance, however, the first impression is unfavourable, he will try and describe to the rod-maker the respects in which it appears to differ from the pattern. Whether it is so similar that even a first-rate judge could not distinguish the copy from the original with his eyes shut, or

whether the new rod does not bear the smallest resemblance to the pattern; whether it is as good a fly rod as can be made, or whether it has every possible fault in material or workmanship, the result is equally unsatisfactory, and all concerned are disappointed. The maker must take it back, and, if the angler will wait, make another attempt, unless he is so bad a man of business as to prefer disobliging, or, perhaps, losing his customer altogether. The fisherman, if not too self-satisfied to conceive such a possibility, will have a glimmering of doubt as to his own power of discrimination; and if, after all, he decides to keep the rod, will never like it nor use it with pleasure or confidence.

The comparison of two rods by what is called practical trial is entirely dependent on the degree to which the manipulator is gifted with the power of detecting minute differences in weight, balance, stiffness, and speed, and probably not one in a hundred rod-makers or anglers could persuade himself that he could speak with certainty on such a question.

It has long been felt that some definite data should be laid down as to the points constituting a good fly-rod, and as a first step the necessity arises for determining the nature or combination of materials best fitted for rod making. Manufacturers have had re-

Comparing
rods.

course to the advice of engineers, and have presumably laid down the lines on which the experiments should be made. In some instances the relative strength and weight of the materials have been deemed the all-important factors. Now, an engineer's test of the strength of a material is rightly based on the breaking strain, and it would not be out of place to warn those experimenting on this basis that the result must be to prove once more what is already perfectly well known, viz., that hollow steel is, in proportion to its weight, the strongest substance known. Hence, if mere strength is to be the crucial quality to be considered, the best form and material for the construction of fly rods must be a hollow steel tube. In America many types of tubular steel rods have been made, but these have not so far found favour with anglers, either on this or the other side of the Atlantic.

Messrs.
Hardy's rod
testing ex-
periments.

In 1889 Messrs. Hardy Brothers had a report made by an eminent engineer on specimen lengths of rods of different construction and materials. The specimens were uniformly 24 inches in length, and .32 inches in diameter for the round rods; in the case of the glued-up hexagonal rods, the length of each side of the triangular sections being .16 inches. Resilience, deflection, number of vibrations before coming to rest with various

weights, as well as the specific gravity and breaking weight, were duly considered. The conclusions arrived at were that double built glued cane, with steel centre, gave the best result, closely followed by double built glued cane without steel, single built glued cane with and without steel centre. Then followed, with much lower figures of merit, greenheart built, hickory built, round greenheart and lancewood. Hollow steel was condemned as giving too much spring back, and continuing the vibration too long. It is, however, doubtful, looking at the figures, whether the presence of the steel centre in the glued cane rods was of any great advantage beyond raising the breaking weight. It may, at least, be taken as proved that built cane is the best material known, and that there is considerable difference of opinion as to the policy of working a steel centre through the rod.

Mr. Hawksley, whose practical knowledge of mechanics adds much to the weight of his opinion as a fly fisherman, has from the first insisted that, for satisfactory testing or comparison of rods, means must be adopted by which the results obtained are in no way dependent on the *personal equation*, or capacity of the individual to differentiate. He originally suggested the idea, and, after a number of experiments, devised certain tests,

Mr. Hawksley's tests for rods.

which will, it is hoped, serve as a starting point, and lead to further study and development of the subject. It will be noted that each condition is determined by some accurate means of measurement, weight, or time.

The points by which rods of the same materials and construction can be compared are length, weight, balance, stiffness or pliability, and speed. Length and weight require no definition, and can be easily ascertained. Balance is best shown by finding the position of the centre of gravity, or point at which the rod will balance, and for convenience the distance of this point from the butt should be measured. For the purpose of arriving at the stiffness and speed of the rod, it must be firmly held in a horizontal position, with its butt in a vice, and the length of the portion projecting beyond the vice should be measured—this being styled the *length used*.

To measure stiffness, the rod in the vice must be supported at the tip and at intermediate places in a horizontal position, and the height of the rod point from the ground exactly marked on an upright staff. The supports being then removed throughout the length used, the butt being still in the jaws of the vice, the measurement of the height of the rod point from the ground will show the deflection of the rod free, *i.e.*, with-

out any weight suspended from the top ring. A weight of 1 oz. is then hung on the point, and the deflection again measured, and, as a final test of deflection, the measurement is once more taken with a weight of 2 ozs.

When an experienced fly fisherman tries a rod, he usually advances the opinion that it is too slow or too quick for his own use. Generally the complaint is that it is too slow, because the tendency of everyone using a fly rod is to cast and return more rapidly than the natural pace of the rod. This is a point on which considerable difference of opinion may well occur between the manufacturer and the proposing purchaser, and both should welcome the simple and practical test of speed as devised by Mr. Hawksley.

The rod is still held horizontally, and the operator stands with watch in hand close to the place at which the butt is fixed in the vice. Placing his forefinger on the rod a short distance from the vice, he presses down on it so as to set the projecting portion vibrating. After a short time it will be found that the pressure of the hand can be relaxed until it is only sufficient to feel the vibrations, which will then continue at a fairly uniform rate. The number of vibrations in one minute are then counted and registered. It is perhaps as well, certainly for a beginner, to take the

Slow and
quick action
of rods.

average of, say, three separate experiments. After the number of vibrations free have been ascertained, those with weights of 1 oz. and 2 ozs. respectively are also taken.

It may be of interest to readers to have the opportunity of seeing the recorded results of trials conducted under these conditions with two nearly identical rods made by different makers. Some years since the late Mr. Deller devoted considerable time to building a rod for me, which was so much admired by the late Mr. Marryat that he called it "the Priceless." In 1896 the rod was lent to a friend who obtained permission for Messrs. Hardy to copy it, and after exhaustive experiments, they have succeeded in making imitations, which are, in the opinion of experts, as nearly as possible identical. The original "Priceless" and one of the copies sent to me have been tried by the Hawksley tests, and the results are as tabulated below:—

Rod	Length	Weight	Position or Centre of Gravity	Length used	Deflections			Vibrations per minute.		
					free	1 oz.	2 oz.	free	1 oz.	2 oz.
	ft. in.	oz.	in.	ft. in.	in.	in.	in.			
Original "Priceless"	10 3	11 $\frac{1}{4}$	24	9 0	8 $\frac{1}{16}$	21 $\frac{5}{16}$	31 $\frac{3}{8}$	92	49	39
The copied "Priceless"	10 3	11 $\frac{1}{4}$	23 $\frac{1}{2}$	9 0	8 $\frac{7}{8}$	22 $\frac{3}{8}$	33 $\frac{1}{8}$	93 $\frac{1}{2}$	47	38

N.B.—The weight is taken without the spear, and the position of the centre of gravity measured from the butt.

Some consideration has been given to another test, viz., the number of vibrations of a rod before coming to a state of rest. Evidently the less the number of vibrations the greater the resilience of the rod; but the difficulty of ascertaining by observation the exact moment when the vibrations cease is so great as to render the experiment difficult for a rod-maker, and practically impossible for an amateur. The foregoing should serve as a foundation for further consideration, which would, in the opinion of many thinking followers of the sport, tend to be of advantage to manufacturers whose aim it is to improve the quality of the rods they make, and thereby give greater satisfaction to the anglers who use them.

The old pattern of reel has been superseded ^{Reels.} by the modern type with the handle on the revolving plate, and has been further improved by enlarging the diameter of the drum and decreasing the distance between the side plates. This enables a fisherman to reel in more rapidly, and is of especial service to those who are nervous of the effects of slacking a hooked fish. There must be a check. Some anglers lay stress on having a silent

one, but, with no particular reason for it, I prefer the old-fashioned noisy one, which gives forth to the ears agreeable music on the first rush of a three-pounder.

In connection with the check, tackle-makers should pay more attention to strength, or in other words, the resistance which it offers to line being taken off. As a rule the check is too strong; therefore, when striking from the reel (and no other style of striking can be considered satisfactory), one does occasionally leave a fly in a fish which lighter action in the reel would have saved. As the result of a rough-and-ready experiment the late Mr. Marryat was of opinion that when casting about 15 yards of the modern heavy line, if the hand is kept off the reel line, at each cast or recovery of the rod just one single click should be heard as the line is drawn off. Of the size of the scoop I have already spoken under "Rods," and only revert to the subject to again urge all successful tackle-makers in the United Kingdom to agree among themselves as to one uniform length, thickness, and curve.

Materials for
reels.

The materials of which reels are usually made in this country are brass, ebonite, or aluminium. The only point to be advanced in favour of brass is its comparative cheapness. The old-fashioned rod makers used to say

that a heavy reel at the butt of the rod served to balance it, but most of them have at last realised that in effect their argument only amounted to an admission that they suggested correcting their blunders in balancing the rod by loading its butt with a lump of metal to the inconvenience and fatigue of the angler.

On the other hand, many first-rate anglers differ with me on this point, and prefer the heavy metal reel, thinking that it gives an impression of lightness in the point and steadiness in the hand when casting. Ebonite is not much lighter than aluminium and is certainly more brittle ; on this account probably the reel of the future will be made of aluminium or one of its alloys.

A reel line should be made of pure silk. Reel lines.
 This sounds like an axiom, and it is one ; but unfortunately, in the present age, owing to the mania for cheapness, adulteration is so much the rule, that to find a pure silk line is not altogether an easy matter. Then it should be plaited solid.

There are three methods of plaiting lines : Methods of plaiting reel lines.
 plaiting them hollow ; plaiting on a core ; plaiting solid. In the first they are worked on a wire which is withdrawn as the plaiting proceeds. If a piece is cut off the end of a line made on this principle, it can be de-

tected with the naked eye, and the maker, knowing this, has attempted to substitute the second, a class of manufacture which produces a line not to any extent stronger than the first, but one which will at a casual glance pass muster for a solid line—that is to say, he takes a core of *silk* occasionally, but far more often of *jute*, and on this core he plaits a thin tube of pure silk. This class of line is most unreliable and in every way to be avoided; and if only anglers would insist upon having solid pure silk lines, one of their troubles, especially when far from home, would be avoided. I am told that all solid plaited lines are square in section, and that it is only possible to plait round ones either hollow or on a core.

Dressing reel
lines.

Having your silk line, it must be dressed or waterproofed; and here again the manufacturer, in his desire to produce a cheap article, and to produce it quickly, has gone out of his way to use a most unsatisfactory class of preparation. He coats it with some substance consisting chiefly of varnish or shellac, or gold size, any one of which soon becomes brittle, and therefore unfit for the purpose required. Then, again, he soaks the line for a short time in this preparation, and it takes up on the external surface only a small quantity of the dressing; when the dressing cracks,

the water gets in and the line very soon becomes utterly rotten.

Such being the case, many years ago I consulted one of the most practical tackle-makers with whom I have ever been acquainted, one who understood his business thoroughly and was willing to discuss, experiment, and improve any point brought to his notice. This was the late Mr. Deller, of Messrs. Eaton & Deller. He agreed with me as to the unsatisfactory nature of the lines sold, and the first hint he gave me was a most valuable one. He told me that some years ago lines were dressed under the air-pump, and the moment he used that word it was a revelation to me. He further told me that a certain number of lines had ever since been dressed in this way, and that he was prepared to try any necessary experiments on the subject.

After trying various substances for dressing, we arrived at the conclusion that nothing but pure boiled oil could be used; that by soaking the line in the boiled oil under the air-pump, it could be dressed perfectly throughout. The effect of soaking the lines in the boiled oil under the exhausted receiver of the air-pump is to draw all the air *out*, and force the oil *into* every interstice of the line. When our experiments had reached a certain pitch,

Boiled oil for
line dressing.

he made and sold a considerable number of lines dressed in this way. Unfortunately, to my great regret, he died before the conclusion of our experiments. He was pre-eminently one who believed in the necessity of putting thoroughly good material and thoroughly good work into everything he turned out.

After his death I consulted my good friend Mr. Hawksley, and he was able within a very short time to effect considerable improvements in the details of line-dressing.

The lines that he has dressed are to my mind so successful, so thoroughly smooth throughout, so perfectly waterproof, and at the same time so supple, that I cannot help feeling that to the angler himself or to the tackle-maker I shall be doing a considerable service in publishing in his own words the exact process he uses. He says:—

Mr. Hawks-
ley's recipe for
line dressing.

“Immerse the line in a glass jar or vessel containing what is called double boiled oil;* place the vessel under the receiver of an air-pump; exhaust until all air-bubbles are drawn to the surface; do not remove the line until all the bubbles have broken and vanished. Take the line out of the oil; draw it through your fingers or a piece of flannel or felt

* It can be procured from Messrs. Naylor Brothers and Quick, 12 and 14, James Street, Oxford Street, W. They usually call it “Hawksley’s Line-Dressing Oil.”

lightly, so as to remove all superfluous oil. Then wind the line on a frame, as sketched on fig. 4. The frame, which should be about 18 inches long, is made of two side-pieces of wood, with two pieces of thick iron wire across the ends. There are saw-gates cut obliquely on one of the wooden sides of the frame. One end of the line when covered with the first coat of oil is fastened in the saw-gate marked No. 1. and the line wound



FIG. 4.

on in coils $\frac{1}{4}$ -inch apart. The frame and line are then placed in an oven, heated to a temperature of 150° Fahrenheit, and baked for about ten hours. The line is taken out of the oven, and when cold, all irregularities rubbed off thoroughly with very fine glass-paper, care being taken not to abrade any of the silky fibres. After all the irregularities are rubbed off and the line made as equal in size as possible, it is again put into the oil, under the air-pump, and the air again ex-

hausted. The line, when all the air-bubbles have broken, is taken out, and again wound on the frame, being fastened at the saw-gate No. 2, and so on; so that the line should have a different point of contact with the iron wires after each coat. The line on the frame is again heated for about ten hours in the oven, repeating the operation as described ten times, rubbing down after each coat is baked and cold. When the fifth coat is reached, use finely-powdered pumice, dry, on a piece of hard felt or flannel, instead of the glass-paper used previously. The pumice powder will leave a smooth dull surface. The last two coats will not require to be rubbed down, and will give the line a finished, glazed appearance."

Use of red-deer fat.

A line thus dressed only requires to be thoroughly rubbed over with red-deer fat, and the process to be occasionally repeated in the course of a season's use, to be, to my thinking, as near perfect as possible. If deer fat cannot be procured, mutton fat or vaseline may be substituted, but neither of these will last as well as deer fat. Two lines thus dressed for me by Mr. Hawksley have been in constant use for the last twelve years, and will, I trust serve me for many more seasons. There can therefore be no doubt as to their durability; but they have received every care and have invariably been drawn off the reels and dried

at night, and are coiled loosely and stored away in a dry place during the winter.

The substance of the line must be rather heavy in the middle part ; for a fairly stiff rod, as heavy as shown (exact size) on fig. 5. It

Substance of line.



FIG. 5.

must then taper to as fine a point as the angler dare use.

The length of the taper is an important point, and if I had to fix upon an absolute measurement, I should say that from thickest to finest it should be five yards. However, the lines are usually made with a six-yard taper, to allow a small amount to be cut off as it becomes weak from use. As a matter of economy, it is well to have a taper worked on either end. When the tapered point has been too much reduced in length, the whole of the original taper can be cut off, and a new tapered point spliced to the central parallel portion of the line with waxed silk. It is impossible to cast against the wind with a light line, and it is even easier to cast downwind with the heavy than with the light. One of the reasons, perhaps, why glued cane rods cast into the wind better than wooden ones is that, other things being equal, they carry a heavier line.

Length of taper.

Gut collars.

Gut collars should be made of the best gut procurable, but it is not always easy to find it. Even a high price will not always

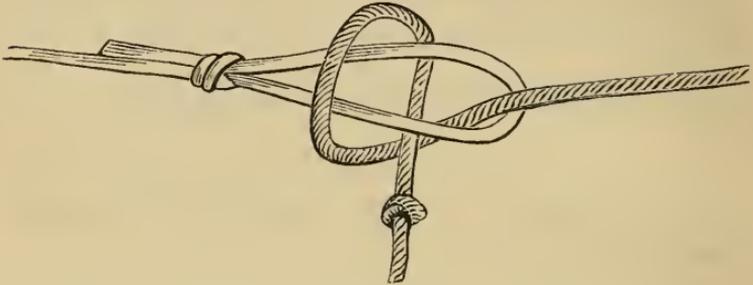


FIG. 6.

command it, and some of the veriest rubbish ever produced has been offered to me at almost prohibitive figures. Safe knots to be

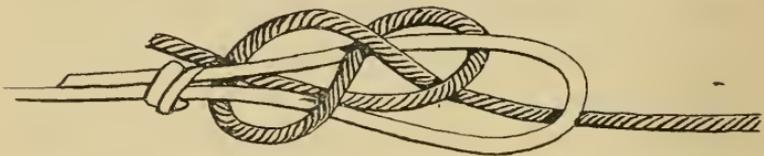


FIG. 7.

used in attaching the collar to the reel-line are here shown—that on fig. 6 being the sailor's "bend;" that on fig. 7 a figure-of-eight



FIG. 8.

knot, shown to me by Sir Ford North; and fig. 8, "Hi Regan's" knot. With all these

knots, however, it is necessary to break off a short length of the reel-line almost each time the cast is removed. To obviate this I have of late years adopted the plan of whipping a strand of stout gut to the end of the line, tying the end of the strand of gut into a loop and looping on the cast.

The length of the cast should vary from, ^{Length of cast.} say, four to three, or in very rough weather, as little as two-and-a-half yards, the variation in length being necessary for variations in the direction and strength of the wind. Glued cane rods carry rather longer casts than those of greenheart, and in moderate weather it may be taken that the cast should be approximately the length of the rod. A good plan, and one I myself adopt, is to knot up, say, three yards of gut tapered from stout to the finest procurable undrawn, and also to keep a few points made of three fairly long strands of the fine undrawn gut. A few of these points and a few lengths of gut, and possibly a spare cast, should be kept in a wet box between two layers of felt or flannel, to enable the angler to make his repairs on the spot; as, if a break takes place, it is almost invariably in the fine point, which is the weakest place, and with the wet box the angler has always reserve gut soft and ready to tie.

A convenient and portable form of wet ^{Wet box for gut.}

box was suggested by Mr. Hawksley, and is, I believe, kept in stock by G. Holland, of Winchester. It is illustrated on fig. 9. It is, however, well to avoid leaving the gut too long in the wet box, as in time it certainly rots. It is said that gut immersed in glycerine

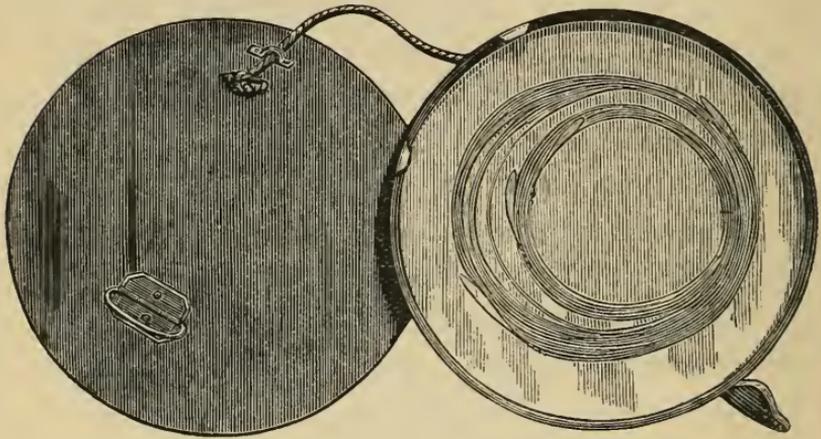


FIG. 9.

in a well-stoppered bottle will keep for years without losing any of its strength.

After a fish has weeded, you should make it a rule to examine the gut; it will probably be frayed. If so, test its strength, and if necessary break off and tie on a fresh point. Dry gut should be soaked in lukewarm water until quite soft before attempting to tie the strands together; and I think that the double knot illustrated on fig. 10 is the safest to use. Although not quite so neat in appearance as a

single one tied the same way, it is far more reliable.

As to the colour of the gut, I do not like ^{Staining gut.} it too white, and, from the experience of all the streams I have fished, do not care about the colour that some tackle-makers affect, which I think must have been designed

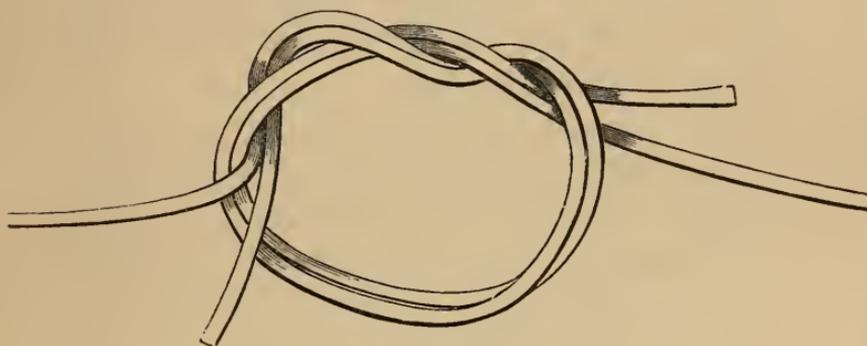


FIG. 10.

with the idea that the angler intended to pay a visit to the *Styx*. A slight blue-grey dye can be given to gut by immersing in a decoction of logwood with a very small portion of copperas; or it can be dyed in the "slate" dye made by Messrs. Crawshaw. It is said that the quality of the gut is much impaired by the bleaching treatment it meets with in Spain; but I fear that anglers have not sufficient influence with the trade to work any improvement on this point.

I have no intention of boring my readers ^{Eyed hooks.} with much theorising on the subject of hooks,

as it has been ventilated times out of number both in the angling press and in various books published on the subject. I have in "Floating Flies and How to Dress Them" given all the arguments I can advance in favour of the use of eyed-hooks, and if I have not succeeded in convincing my readers, I fear the case is hopeless. In a word, I can find no possible advantage in the use of the old-fashioned hook whipped to a piece of gut.

Turned-up
and turned-
down eyes.

I cannot close my eyes to the fact that a diversity of opinion prevails as to the comparative merits of the turned-down and the turned-up eye. Mr. Cholmondeley - Pennell has argued the point from his own particular view, and has not altogether had the worst of the argument. He asked me to give the turned-down hooks a fair trial. Knowing that up to that time I had been an advocate for the turned-up in preference to his favourite turned-down eye, he sent me a number of hooks selected by himself. He asked me to dress my own flies on them, and to see whether I should not agree with him, that the turned-down eye was less likely to miss a rising fish, and more likely to hold it when once hooked, than the turned-up.

I tried these experiments as carefully as I could in the spring of 1886. I dressed the same patterns on turned-up and turned-down

hooks. I placed them side by side in a box, and when the fish were rising used them alternately. The result was that I could find no difference either in hooking fish or holding them when hooked. Both were as successful as usual and failed about as often as usual; and I think that I may say that where these hooks were used alternately, they killed precisely the same number of fish. I had, however, when dressing the flies, a grave complaint to make respecting the inferior manner in which the turned-down hooks had



FIG. 11.

been tempered. I think I broke more than one-half of those sent to me. This is no argument against the shape or form of the hook, but a condemnation of the manner in which the details of manufacture were carried out.

The original knot recommended by Mr. ^{Knots for} Hall for attaching flies on eye-hooks to the ^{eyed hooks.} cast is illustrated in fig. 11; and Major Turle's knot, which is certainly far easier to tie, and, practically speaking, as secure when once tied, is shown in figs. 12, 13, 14, 15, and 16.

Landing net. Where fish run large a landing-net is a necessity. One with a stout ring, either of wood, cane, metal, or whalebone, with a handle long enough to reach the fish in the

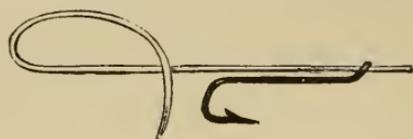


FIG. 12.



FIG. 13.



FIG. 14.

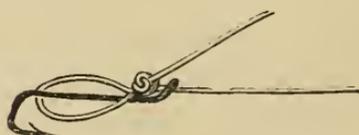


FIG. 15.

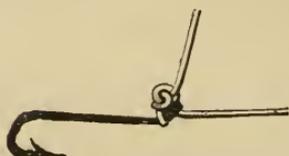


FIG. 16.

water and a turnover joint for the convenience of carrying, is to be preferred. Every maker has his own pattern, and many of them

have points in their favour. I think it is perhaps a convenience to carry the net on a separate sling hung on the right shoulder, so that it is under the left side.

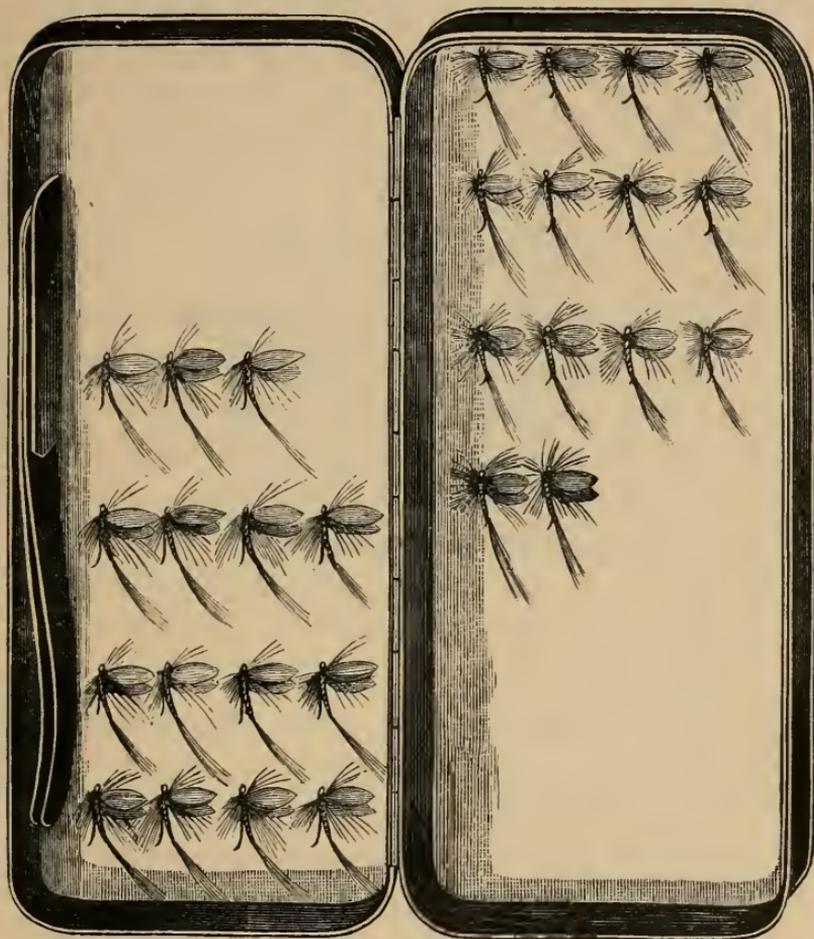


FIG. 17.

A basket or bag to contain the fish and tackle, &c., is a necessity. Bags, while not so comfortable as baskets, are in wet weather

Bags and baskets.

specially liable to strike damp and cold against the body of the angler carrying them. Fish also lose more in appearance when carried in a bag than in a basket, especially the under ones if there are many. A basket which will make a seat is more cumbersome and less sightly, but altogether, I think, a convenience.

Fly-boxes.

As to carrying flies, they may be packed in a book. I do not think, if carefully put away, the fact of flattening them is of much importance, as the first half-dozen whips through the air will, as a rule, restore them to their original shape. For the angler, however, who cares about the appearance of his flies when he first puts them on, a metal box in which the flies can be stood up, sticking into felt fastened to the bottom, is more convenient. A convenient form of box for the pocket, with space for a pair of pliers, is illustrated in fig. 17.

The opinion has been freely expressed that forcing the points of hooks into and out of felt or flannel is liable to blunt them, and sometimes even to break off the barbs. I have often thought that the eye of the hook seemed to lend itself to the purpose of fixing the flies in place in the box.

J. R. Eyed
Fly-box.

Lately Messrs. C. Farlow and Co (Limited) have submitted to me the patent "J. R. Eyed Fly-box," which is shown in fig 18.

One measuring $5\frac{1}{4}$ inches in length, $3\frac{1}{4}$ in width, and $\frac{5}{8}$ in depth, contains eight rows of thirteen flies each. There is a metal pin for each fly projecting upwards, which is sprung back by a covered spiral spring at the base, and a round hole in the side of each block receives the eye of the hook. To fix a fly in the

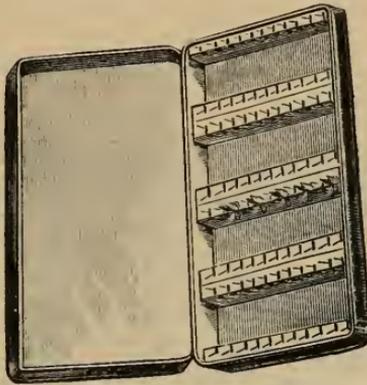


FIG. 18.

box, press the eye down on to the pin until it is opposite to the round hole, when the spring will force it back into the round hole, and secure the fly in an upright position.

To take a fly out, draw it away from the block, slipping it off the spring, and the pin will spring back into its place. The flies can be inserted or withdrawn from the box either by the fingers, or what is perhaps handier, by the use of a pair of forceps.

The "Club" eyed fly-boxes recently brought

“Club” Eyed
Fly-box. out by Messrs. Hardy Brothers, of Alnwick,
have given satisfaction to the majority of
dry-fly fishermen who have used them.

A set of these boxes is composed of three :—
one a large double reservoir box $9\frac{1}{2}$ inches
long, $3\frac{1}{2}$ inches wide by 2 inches deep, to hold
about seventy dozen flies ; one Mayfly box $5\frac{3}{4}$
inches long, $3\frac{1}{2}$ inches wide by $1\frac{1}{2}$ inches deep ;
and one small pocket fly box $5\frac{3}{4}$ inches long, $3\frac{1}{2}$
inches wide by 1 inch deep, as shown in fig. 19.

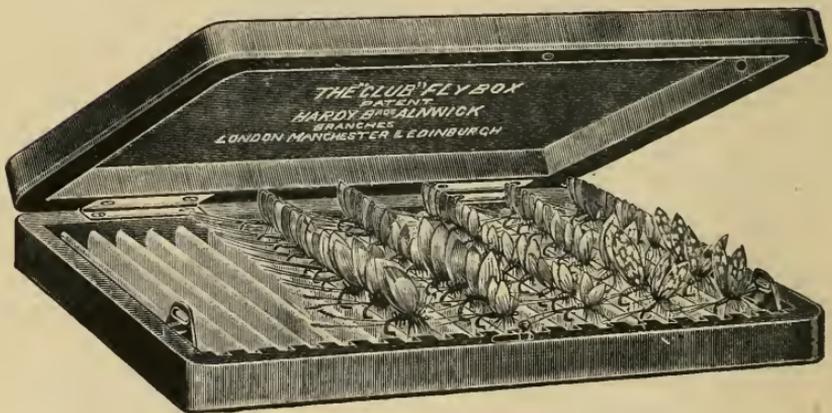


FIG. 19.

The essential feature of these boxes is the
arrangement of the flies on wood bars covered
with waterproofed paper. The paper is turned
over the top of the bar, so as to form, as it
were, a paper arch above the bar. The hook
of each fly is pulled beyond the barb through
the walls of the arch, and when a fly is required
for use it is simply torn from the paper. When

the paper covering is worn out, the bar is discarded and replaced by a spare bar, the cost of which is quite small. The bars are all of uniform length, depth, and thickness, and are thus interchangeable among the set of boxes.

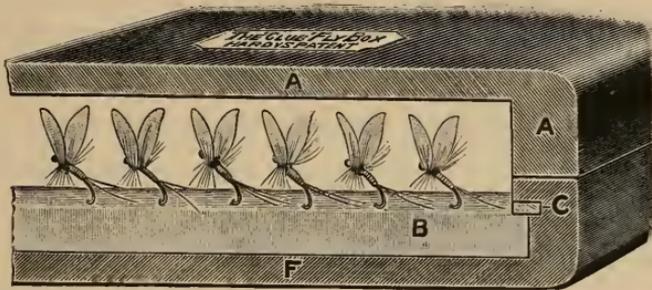


FIG. 20.

The illustration, fig. 20, is a cross section of the box closed with flies in position. A A is the top of the box, which is made of mahogany. B is the bar covered with waterproof paper,

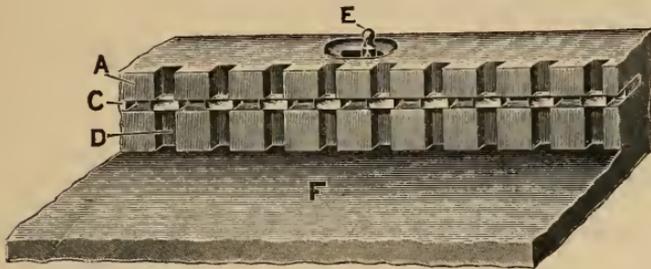


FIG. 21.

which carries the flies. As many or as few of them may be used as desired—that is, for larger flies the bars can be spaced further apart. C is the bolt which locks all the bars

in position. F is the bottom of the box. Fig. 21 is a side elevation of the interior, showing how the bars are received and held in position. C is the sliding bolt to which is attached the operating stud B. D are the grooves which receive the ends of the bars. As illustrated, the sliding bolt C is shown in position when locked. To remove a bar the stud E is pulled about an eighth of an inch to the other side of the slot. This of course moves the sliding bolt C from the top of the paper covered bars B, when they can be removed.

A pair of scissors and a spring-balance for weighing the fish are almost necessities, and a loop of string at the end of the spring-balance, to be passed under the gills, will be found more convenient, and not disfigure the fish as much as the hook usually placed there.

Waders.

As wading is often necessary, and persistency in attempting it without protection frequently leads in later middle life to rheumatism and other allied complaints, I am afraid that the inconvenience of *waders* must be borne. Stockings are lighter, but with them of course one cannot go in so deep as with trousers. In a gradually increasing depth of water, when nearly up to the top of your wading stockings, it is a good plan to hold up the inner edges with the fingers of the left hand. The water-level will be felt on

the fingers, and often save the angler from wading too far.

When wading, it is well to take short steps, planting the whole weight on the forward foot before advancing the other. Brogues should be fairly stout, and for wading on gravel should have nails in the soles, but for rock should have soles of felt. For fastening them, nothing is so comfortable as plain porpoise-hide laces, and nothing so objectionable as those straps and buckles which always sooner or later get out of order, and under which the line is liable to catch when fishing.

A short mackintosh must be carried in so variable a climate as this. A convenient method of carrying the waterproof is to fasten it on the top of the basket, folded a trifle longer than the breadth of the basket-lid. Straps may be used for this purpose, but two stout strings of about the substance of blind-cord are preferable to straps, as, after being thoroughly wetted the string will get dry in time, and not remain sodden and messy like leather. Besides, there are no buckles to come off and get lost, and if anything does go wrong with them they can be repaired or replaced easily and anywhere. Each string is passed through two openings in the lid of the creel, has a loop at one end and a knot at the other. They are tied in a single

Mackintosh
and method of
carrying.

bow, as shown in fig. 22, and one pull at the knotted end of each string releases the mackintosh.

Material, fit
and colour of
fishing suit.

As far as dress is concerned, woollen materials only should be worn. The form of costume should be such as to give the greatest possible freedom to the muscles, and should therefore be rather loose in fit and of elastic

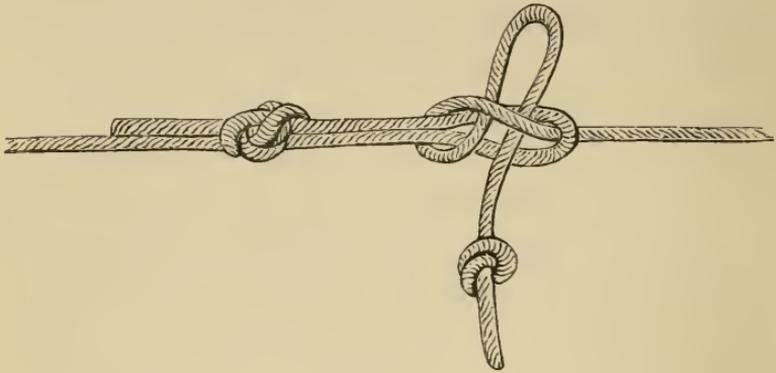


FIG. 22.

material. In colour it should be neither too dark nor too light, so as not to present too strong a contrast to the surroundings. Latterly I had a fishing suit made which so nearly approached the ideal that I am tempted to describe it. The material is hand-made, woven on a stocking frame and needles, entirely unmilled and unfelted, so that the fibre of the wool is unbroken and perfectly straight when the cloth is finished. It is similar in appearance to what is generally known

as "stockinette." The manufacturers call it "Haddington," and it is of a neutral grey green tint, not unlike the well-known "Lovat" tweeds in colour.

When returning from a day's fishing, every sensible man who wishes to preserve his health should change every particle of clothing which is in the slightest degree damp, whether from perspiration or rain, and, if such a luxury is available, a warm bath before changing will tend much to the comfort and enjoyment of the evening meal.

CHAPTER II.

FLOATING FLIES AND SUNK FLIES.

Definition of
floating and
sunk flies.

THE simplest definition of the term “floating fly” is—an artificial fly fished *on* the surface; and that of the term “sunk fly,” one fished *below* the surface of the water. To carry the definition a trifle further, a floating fly, whether it is *cocked*, *i.e.*, floating with the wings up, or *flat*, that is, lying on its side, is an imitation of a winged insect, either emerging or emerged from the nymph state, on the surface of the stream, while the sunk fly is said to be an imitation of the larva or nymph moving in the water, or of a winged insect when water-logged or drowned.

In principle the two methods of fishing are totally distinct. With the dry or floating fly the angler has in the first instance to find a rising fish, to note accurately the position of, or what is technically called *spot*, the rise, and to cast to this fish to the exclusion of any chance work in other parts of the stream. With the sunk or wet fly, on the other hand, he casts to a likely place, whether he has or has not

seen a rise there (more frequently he has not), and, in fact, his judgment should tend to tell him where, from his knowledge of the habits of the fish, they are most likely to be found in position or ready to feed. Thus wet-fly fishing is often termed "fishing the water," in contradistinction to the expression "fishing the rise," which is applied to the method of the dry-fly fisherman.

In treating of the advantages of dry-fly over wet-fly fishing, it is desirable to avoid any expression which should tend to depreciate the skill exhibited by the followers of the wet fly in rivers adapted to its use. They require not only judgment of the character of water frequented at various times of the day and season by feeding fish, not only knowledge of the different species and genera of insects forming the food of the fish, not only a perception of the advantages of fishing up-stream under one set of conditions and of fishing down-stream under others; but, in addition to all this, great skill in placing their flies accurately in the desired position, and allowing them to drift down in a natural manner, and without any drag or check, over the precise spot they wish to try. There is far too much presumption of superior scientific knowledge and skill on the part of the modern school of dry-fly fishermen, and I should be

Comparative
advantages of
dry fly and
wet fly.

the last to wish to write a line tending to encourage this erroneous assumption of superiority, or to depreciate in any way the patience and perseverance, coupled with an intuitive perception of the habits of the fish, requisite for a really first-rate performer with the wet fly. The late Francis Francis said that "the judicious and perfect application of dry, wet, and mid-water fly-fishing stamps the finished fly-fisher with the hall-mark of efficiency." This sentiment is to my mind pre-eminently characteristic of its author, and worthy of adoption by his admirers in later times.

Favourable
conditions for
the dry fly.

Under certain circumstances the dry fly has in every stream great advantages over the wet, and in rivers where it is not generally used has the further advantage that, from the fish being unaccustomed to see anything but the *natural* insect floating down cocked over them, they are unsuspecting of the artificial, and take it with such confidence as to render their being hooked, if not their capture, almost a certainty. To define the circumstances specially suited to the dry fly is not difficult. When a fish is seen to be feeding on the surface, when the angler can ascertain the species of insect on which the fish is feeding, when he can imitate it, when he can present this imitation to the fish in its natural

position and following the course taken by the natural insect, and when he can carry out all these conditions at the first cast, so as to delude the fish before it has any suspicion of being fished for, the rising and hooking of the most wary trout or grayling is almost a foregone conclusion.

It must be remembered that the only possible means of establishing a satisfactory connection between the fish and the fisherman is the medium of sight. A fish's sight is more highly developed than any other sense, it being questionable whether it has any hearing, or whether its power of smell with surface food is sufficient to guide it in discriminating between the natural and artificial fly. Hence keeping out of sight is a most essential point to study; in fact, as before said, the fish should be hooked before it has any suspicion of being fished for.

On the other hand, where no rising or bulging fish are to be seen, and it may therefore be inferred that the fish are not taking surface food, the conditions are favourable for the use of the sunk fly. Even under these conditions the floating fly is sometimes more efficacious than the wet.

Whatever advantages can be claimed for the sunk fly elsewhere, however, there are streams and conditions of weather in which it

Keeping out of sight.

Favourable conditions for wet fly.

Advantages of dry fly in still, bright weather.

cannot be considered as having the smallest chance against the floating fly. As to conditions of weather, on the stillest days, with the hottest sun and in the clearest water, when the wet-fly fisher would consider the conditions most unpropitious, the fish are generally on the surface. On such days to kill fish is gratifying to the angler's bump of self-esteem; the largest and most suspicious fish feeding under such conditions often seem guileless, fall victims to the art of the dry-fly fisherman, and nowhere so freely and so frequently as in rivers where the sunk fly is habitually used.

Chalk streams

As to the streams in which the dry fly is under all circumstances likely to be more successful than the wet, those which rise from springs filtered up through a substratum of chalk, and in which the water is usually of the clearest even after heavy rain; streams in which the current is only moderately rapid, and being usually in the summer months fully covered with weeds, are well stocked with larvæ of Ephemeridæ, Trichoptera, and other water-bred insects—these are pre-eminently fitted for the floating fly. They are usually styled "chalk streams," and it is said that there are days when even in the clearest of them the sunk fly is found more killing than the floating fly. This may pos-

sibly be true, but in many years' experience such days have not fallen to my lot, and I should be inclined to consider them as *happening ones*, or the rare exceptions which go to prove the rule. Perhaps the best proof of this rule may be deduced from the fact that every Hampshire fisherman who has persistently studied the subject has gradually become more fully convinced that the best policy to pursue is simply to imitate Nature, and present the imitation in the most natural position, *i.e.*, floating and *cocked*.

In Derbyshire, a few years back, every one used two, and many three, four, or even more flies; every one fished down-stream, and fished the water. Now hosts of anglers have invaded the districts, the trout and grayling are as shy and wary as any in the country, and what is the result? Day after day, and year after year, more of the successful anglers in the district fish up-stream with floating flies and over rising fish only, and it is only on an occasional blustering day that one of the old school succeeds in getting a moderate bag.

The same tale can be told of all parts of the country, where the local anglers, taught from childhood to fish with sunk fly, laugh at the possibility of a bag being made with dry fly. As an example of this. Many years ago, in Dorchester, one of the best dry-fly fishermen

of the day was seriously suspected, and even accused, of not fishing fair, because he succeeded in killing great numbers of the largest fish on days when the natives with wet fly could do no good at all. At length his proceedings were quietly but thoroughly watched by one of the local talent, with the result that he who went to discover a fraud found that he had been for years following a mistaken policy. He went openly to his talented brother angler and told him all the circumstances, persuaded him to enrol him among his pupils, to teach him the art of dry-fly fishing, and at length became himself a votary of this style and a proficient in it, and ever after forswore the wet fly, and was able in turn to teach and convert others to the more modern and more successful school of angling.

Spread of dry
fly fishing.

From north and south, from east and west, in later times fly-fishermen came to Winchester, and when there, *saw, learned and conquered* the use of the floating fly; and although they could very likely only succeed in killing their two or three trout daily, yet soon preferred these comparatively meagre results to heavier bags taken elsewhere with the sunk fly. They carried the information all over the country, until at length the spread of dry-fly fishing has become something dreadful to contemplate, because

in the rivers where it is practised the fish never get a rest, but day after day are continually tempted to their destruction, or worse still, perhaps, rendered more wary, more shy, and more suspicious.

It is urged that the bad features of this spread of dry-fly fishing do not end here, and that the perpetual danger of taking surface-food in time keeps the fish down, and even makes abstention from floating insects an hereditary instinct. The fact of the free-rising fish being gradually but surely killed off, and new generations being bred from those which habitually find their food on the bottom of the river, is advanced as an argument to demonstrate that each generation is less likely to rise than the one immediately preceding it.

The introduction of artificially fed trout into the rivers is credited by some with still further increasing their tendency to prefer the comparatively safe shrimps, caddis, snails, and larvæ to the perilous experiment of taking surface food. All these arguments, however, are based on the assumption that fish now-a-days feed more on the larvæ, Crustaceans, Mollusks, &c., which are found below surface, and less on the floating insects than they did in olden times. In the opinion of the most experienced modern authorities there is no conclusive evidence to bear out this assump-

tion. Whether the fish in a given river are free risers or not is mainly due to the comparative abundance or scarcity of fly, but in some streams it seems quite the exception for the larger trout to rise well at any of the duns, spinners, or other small floating insects, even when present in great numbers.

Dry-fly
purists.

The purists among dry-fly fishermen will not under any circumstances cast except over rising fish, and prefer to remain idle the entire day rather than attempt to persuade the wary inhabitants of the stream to rise at an artificial fly, unless they have previously seen a natural one taken in the same position. As far as club, subscription or other heavily fished waters are concerned, they are acting in the proper spirit of a sportsman, as flogging the stream, whether with floating or sunk flies, does beyond doubt add to the natural shyness of the fish. If, however, an angler on private or exceptionally well stocked water sees a trout or grayling in position for feeding in a likely place, he is perhaps justified in floating a cocked fly over it. By a likely place, such an one as a bare gravel patch between weeds on a shallow is meant, or a point under the bank to which every natural insect must be carried by the stream or wind, on either of which there is almost invariably a fish either feeding or ready to feed at the first hatch of fly.

A mistake sometimes indulged in by anglers of experience is to commiserate with the votary of the dry fly in blustering or rainy weather; and friends seeking to extenuate one's want of sport frequently express the opinion that it was "too rough or too wet for the dry fly." Why too rough or too wet? The natural duns bred in the water are seldom if ever drowned in their native element, however rough the weather may be. At times the delicate Ephemeriidæ are whirled over and over by sudden gusts, but they still float, and a rough day with a good curling ripple on the surface of the water is often *the* day when the floating fly, if quite dry, cocked, and accurately delivered, makes the greatest score, and utterly defeats the sunk fly. The true difficulty on a rough day is not to float the fly but to spot the rise and place it accurately, and on a rainy day, although it is undoubtedly hard work to dry the fly, yet, when once dried, it is undoubtedly far more deadly than the wet fly. The general use of paraffin for waterproofing artificial flies has to a great degree counteracted their tendency to absorb water, and thus minimised the exertion of drying the fly.

Dry-fly in
rough or wet
weather.

We are often told that Mr. ——, the great Scotch fly-fisher, can kill any number of trout in a south-country stream, fishing in his own style, and is prepared to make a match against

the best local man. Southron fly-fishers are not in the habit of fishing matches and weighing in catches at clubs, but occasionally one of these professors is invited to try his infallible system on one of their streams. The invariable result is, that if he is obstinate, and so firmly wedded to his opinions that the stern logic of facts cannot move him, he returns with the dictum that there are very few fish in the river, or that the wind is wrong, or the water too low, or some other plausible excuse. If, on the other hand, he is a true lover of the art and not above learning, he quickly discovers that his method is not successful with the dainty, over-fed fish of a chalk-stream, and before long he becomes a convert to the dry-fly, and, I shrewdly suspect, uses it in hot, bright weather to advantage in his native brooks.

A dry-fly fisher must expect to miss an abnormally large proportion of rises, owing to the small flies he uses, and some of our friends are apt to quote this as an argument against the Hampshire school, forgetting that, even if an unduly large proportion are missed, yet in places, and on days hot, bright, and calm, when the sunk fly is utterly hopeless, the chalk-stream fisher will rise fish after fish, and his excitement will be kept up by hopes of success from morning to night. On one

point all must agree, viz., that fishing upstream with fine gut and small floating flies, where every movement of the fish, its rise at any passing natural, and the turn and rise at the artificial, are plainly visible, is far more exciting, and requires in many respects more skill, than the *fishing of the water* as practised by the wet-fly fisherman.

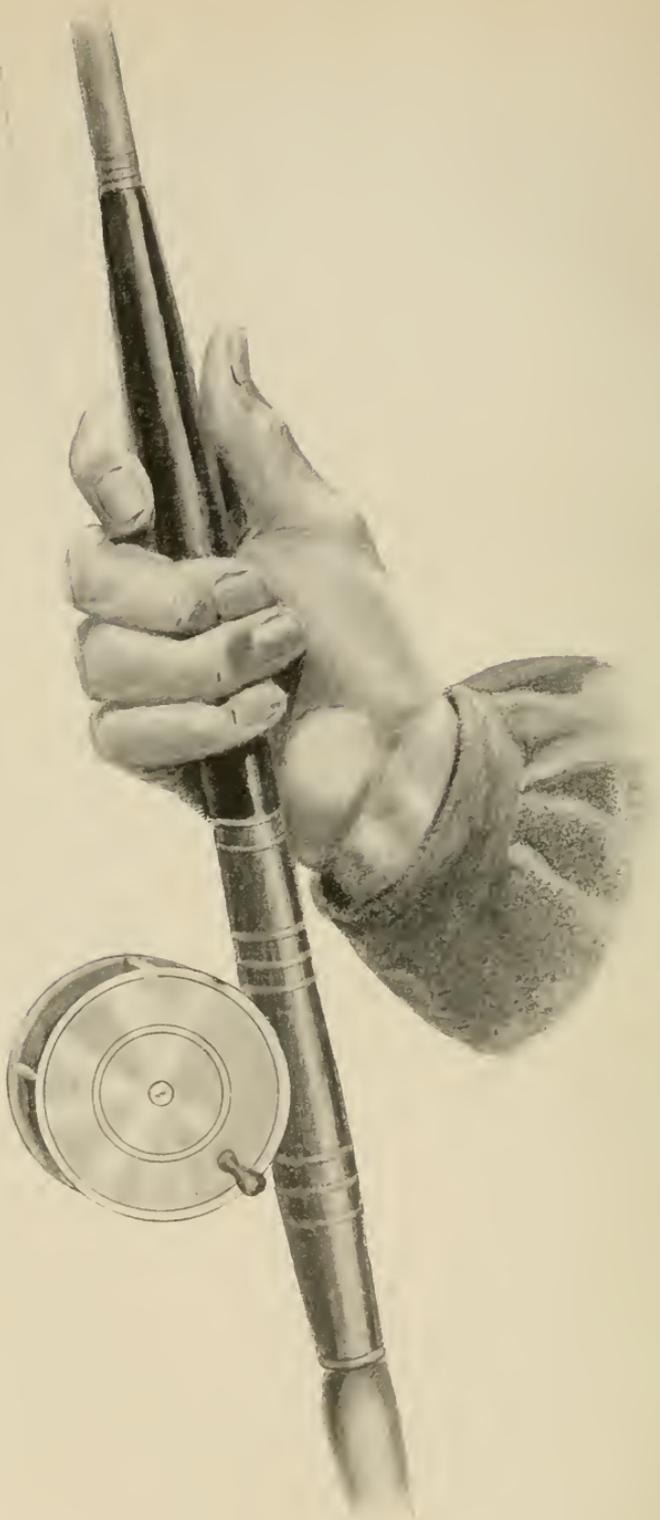
CHAPTER III.

HOW TO CAST.

CASTING may be defined as placing the fly, which is at the end of the collar, in a desired spot, in a desired manner, and at a desired moment.

Various
styles of
casting.

There are at least five distinct styles of casting, which should be understood by the dry-fly fisher. They are—firstly, the overhanded or ordinary cast; secondly, the downward cut; thirdly, the underhanded or horizontal cast; fourthly, the steeple cast; and fifthly, the dry switch. Every dry-fly fisherman should learn to cast in each of these styles with either hand. The importance of this cannot be over-rated, as there are many positions in which it is difficult, if not impossible, to cast right-handed. Besides, the advantage on a rough day of being able to rest one hand while fishing with the other is too manifest to require comment.



GRIP OF THE ROD.

F. Babbage, del.

The beginner must commence* by learning ^{Over-handed cast.} the first of these, the ordinary over-handed cast. Perhaps the easiest way for him to acquire it is to place his elbow on a gate, or even a table, so as to commence at once by using his wrist and fore-arm only. At the commencement he must content himself with a short length of line, and it is essential that he should thoroughly master the art of casting this short length before attempting anything longer. The rod should be grasped tightly in the right hand, with the thumb, or thumb and forefinger, extended up the butt. The more usual plan is to grip the rod with the thumb up the butt; but many experienced dry-fly fishermen, notably the late Mr. Marryat, have used the thumb and forefinger for this purpose, claiming some advantage for this grip, as enabling them to direct the fly with greater precision than with the more usual method, illustrated in Plate I.

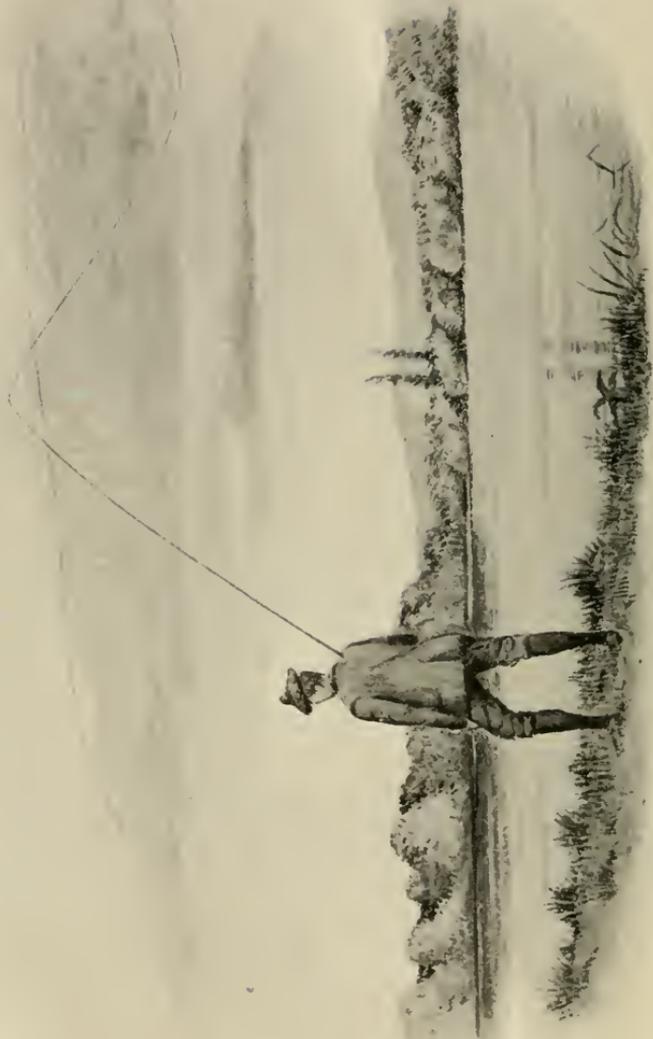
Holding the fly in the left hand, with a short

* Some writers in the sporting papers are in the habit of indulging in a mild form of chaff by alluding to "the days before the invention of the steeple or other fancy casts." It is well for the beginner to understand that the only style of casting in reference to which there is any foundation for these presumably funny remarks is the dry switch, as none of the others are in any way novel, but have been practised from the earliest times by wet as well as dry-fly fishermen.

length of line out, wave the rod back in a curve, shaped somewhat like a horse-shoe, at the same time feeling the weight of the line with the tip of the rod, and letting go the fly. Wait until the weight of the short line—say five yards—just commences to bend the top of the rod backwards before making the forward cast, noting, however, not to carry the hand much farther back than the perpendicular. In fact, this may be taken as a golden rule in all styles of casting. When the weight of the line behind is only just sufficient to bend the rod-top backwards, or in other words, when the line is just felt behind, return it forwards with a slightly increased velocity of swing. Lower the point of the rod as the line comes forward, see that it is extended at the level of about one yard over the water, and then check the forward motion. Carefully note the time of casting, like music, counting 1, 2, back—3 forward. It will be found that the time will vary but little for short or long casts; but the longer the cast the farther the line will extend backwards, and the loop turning over it forwards will also be larger.

Explanation
of the plates
on casting.

Plate II. shows the position and shape of the line when the hand has been carried back, and just before casting; Plate III. illustrates the appearance of the line when the hand has been brought part of the way forwards in the



OVERHANDED CAST—Backward Position.

D. Mond. del.

act of casting ; and Plate IV. the form of the line and position of the hand when the forward motion has been completed. To these plates of casting I would invite the careful attention of my readers, because they are not in any way fancied or fanciful illustrations of what any one wishing to prove his own particular theory may think he has seen, but are accurate drawings of instantaneous photographs taken for the purpose of illustrating this work ; and to the photographers, Messrs. Elliott & Fry, and to the talented artist, Mr. Moul, who made the drawings,* I must tender my hearty congratulations at the success of their work in this direction.

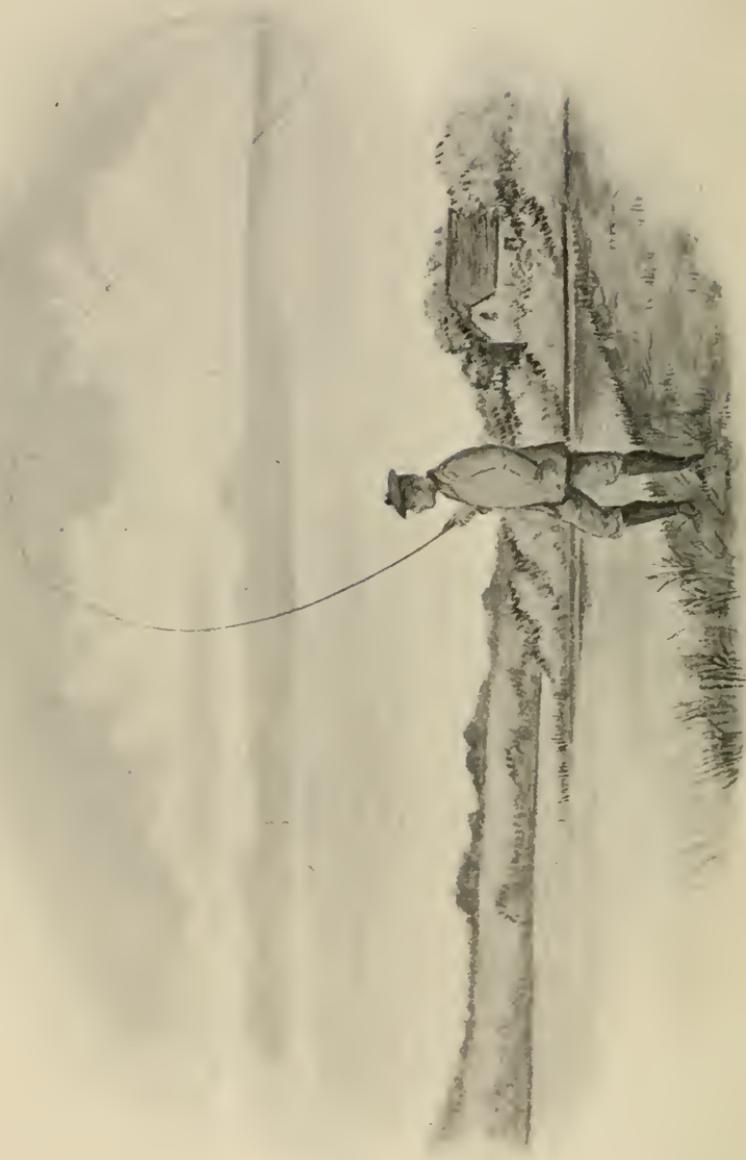
I would also particularly call the reader's attention to the fact that these plates, one and all, go to destroy the theories which have been written from time immemorial in all books on fly-fishing as to the form taken by the line behind the fisherman. Over and over again it has been written, *You must wait until the line is extended in a straight line behind you*

* It has been pointed out that I have unconsciously been unjust to Mr. Moul in the earlier editions of this book. From Messrs. Elliott & Fry's instantaneous photographs of the late Mr. Marryat casting, he accurately sketched the figure, rod and line, filling in backgrounds, the artistic merits of which are entirely due to him. In the present edition Mr. Moul's original drawings have been reproduced by a photographic process.

before attempting to return. This position cannot occur in any style of casting with a line of appreciable length, and it is only because in those early days there was no scientific means of reproducing an accurate view that this theory was started. Its continuation is due to the fact that, unfortunately, the majority of authors simply copy, from what they deem to be good authorities, theories which have been before enunciated, and give them a further stamp of veracity without taking the trouble to ascertain for themselves that they are anything but fiction.

In the *dry switch* the length of line from reel to fly was about 10 yards. In all the other casts about 12 to 15 yards were used, and in connection with these it should be noted that, from the transparent nature of the gut and the increased velocity of the end of the line, an exposure of even the 150th part of a second failed to leave a definite trace of the gut collar on the negatives. From a desire for accuracy I have forborne to supply this deficiency. It must also be remembered that the foreshortening of the curves conveys an impression of a shorter line than is actually being used.

With the ordinary overhanded cast, in throwing a long line the upper arm will come into use in addition to the wrist and fore-arm, as the angler will have to feel the line of the backward cast through the arc of a larger



OVERHANDED CAST—Coming Forward.

D. Mont, del.

circle. The force required to propel various lengths of line without over-casting or under-casting (the first of these terms meaning the use of too much, and the second too little, power to extend), and only just extending the line, varies directly with every yard of line used. This instructive adaptation of the power to cast, of cause to effect, constitutes the secret of how to cast well.

These fundamental principles apply with equal force not only to dry-fly fishing and to wet-fly fishing, but to all the various methods of casting enumerated in the foregoing pages. The essential points to study are, in fact, an exact appreciation of the force to be used, and correct timing, and these are the ethics of effective and elegant casting. It must always be remembered that hearing much sound proceed from a rod making a cast is an indication of unnecessary force being used. The late Mr. Marryat said, "A silent rod and a whistling line mean good casting,"* but he

* Mr. Lloyd remarks on this:—"The late Mr. Marryat used to say that the rod should be silent and the line sing. I find, however, that the rod always makes a noise if held so that the rings are in front. If, on the other hand, the rod is turned so that the rings lie above or underneath there is no sound from the rod, the line only being heard. Mr. Marryat often fished thus, which would account for his mistaken idea."

added that when throwing against the wind a slight "whoosh" of the rod is often heard. It may be laid down as an axiom that nine anglers out of ten put too much energy into their casting, and forget to allow the rod to do its fair share of the work. The constant strain to which a rod is subjected by such performers must tend to impair its forcing powers prematurely. In over-handed casting, note particularly that the hand should never be carried backwards far beyond the perpendicular. As a general rule, the fault in casting made by beginners is in not giving sufficient time behind.

Cultivation of
good style in
casting.

Many men who can cast a great distance and throw a *pretty fly*, do it in so awkward a manner as to detract from the pleasure experienced in seeing their performance. It is as easy to cultivate a good style from the commencement as it is difficult to cure an ugly style by lessons after having once acquired it. A tyro can do no better than get a friend, who can cast, to start him in the right road, which he can do at first by standing close behind the pupil; and, grasping the hand holding the rod, with his fore-arm lying close over his pupil's, guide the cast, counting at the same time "one, two, three," until his pupil appears to have acquired a good idea of the timing and motions. He should then stand clear of him on the left-hand side, criticising each cast, im-



OVERHANDED CAST—Forward Position.

D. Mont, del.

pressing upon him the necessity of giving plenty of time between the casts, and explaining to him what faults in the motion of the rod caused the corresponding defect in the fall of the line.

After a few days of this practice, which should, if possible, be made over water, or, if water is not available, over a lawn, the tyro can be left to his own devices for a few days, when he can practise until his wrist is tired, at which time, however, he should be cautioned always to stop and rest. After a few weeks' interval, the teacher may look at him, praise and encourage where possible, point out faults, whether of style or execution, and nip them in the bud. At the end of a fortnight an apt pupil should be sufficiently advanced to try his hand at an easy stream, where, if he has it in him, the killing of a fish or two will make him a life votary of the charming pursuit.

Drying the fly is merely a repetition of the Drying the fly. cast made in the afore-stated method, only that the fly, instead of being allowed to touch the water, is recovered in the air, and the action repeated five or six times. Note, too, that the longer the line, the farther the fly has to travel, and hence the more rapidly it is dried. Another point to remark is, that when thoroughly dried, the fly will not soak up water nearly so fast as a half-dried one.

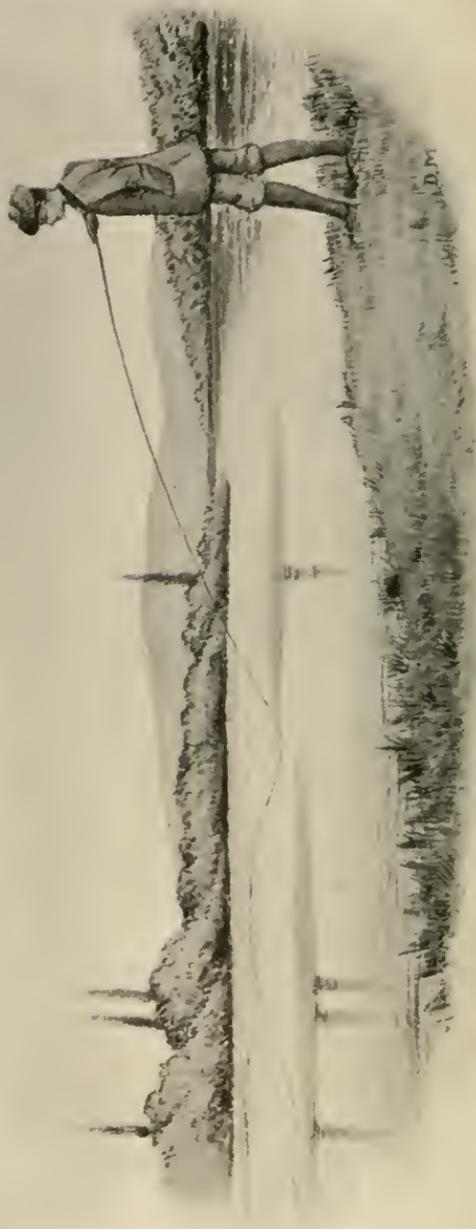
The fly should, therefore, not be allowed to get water-logged, as it takes a long time and considerable exertion under these circumstances to dry it perfectly.

Paraffin for
waterproofing
the fly.

A fly water-proofed by the application of paraffin never gets thoroughly water-logged, and hence requires but little drying. Some modern writers affect to despise the paraffin bottle, alleging that they derive increased pleasure from the increased labour of drying the fly. I find there is sufficient labour and sufficient difficulty in circumventing the present generation of trout and grayling, even with the advantage of a waterproofed fly. The over-handed cast, it may be noted, is chiefly useful for light or up-stream winds.

Casting
against or
across wind.

The downward cut and the under-handed cast are specially useful for casting into or across the wind. A fisherman who has mastered these two methods of casting can, after a little perseverance and attention to detail, render himself independent of the direction of the wind so long as it is blowing with only moderate force. If he finds himself unable to get the line out in either of these ways when casting against the wind, he should try less force and give more time behind. If still unsuccessful, he must shorten his gut collar by removing from it some few strands of the coarse end, and if the weather should



DOWNWARD CUT—Forward Position.

D. Mont, del.

be very rough, and he is still unable to force his fly into the wind, he may still further shorten the gut at the fine end. It is well to note that in very rough weather a slight set back of the line on the water is not so very important, so long as it does not curl over on itself.

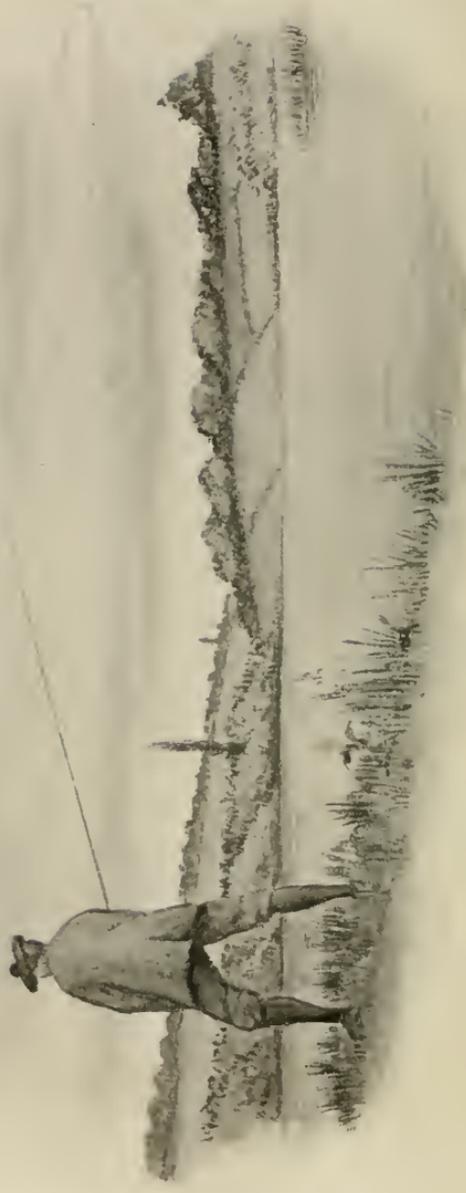
In the downward cut the fly is returned ^{Downward} by the ordinary over-handed motion. ^{cut.} In the act of throwing, when the arm attains the angle of 45 degrees with the level of the water, it is extended to full-length forwards, the knuckles turned downwards, and a drawing circular cut in towards the body made as the line is delivered, the elbow being slightly raised at the same moment, and the point of the rod brought down to the level of the water. This position is illustrated in Plate V. If a yard or so of line is pulled down by the left hand just above the reel as the rod point reaches the level of the water, this action of drawing back the slack will be found useful as tending to insure the delivery of a straight line.

If the downward cut is made too soon, the whole of the line is blown back in coils. If too late, a heavy splash on the water is the result. If time and force are quite right—and again remember no great force is required—the line extends itself in the teeth of the wind, the

fly going out nearly straight, and the back motion of the cut or action of the left hand on the reel line pulling the slack back. The result of the backward motion is not really more than the check used in the ordinary cast. The downward cut is a difficult cast to describe, and a difficult cast to attain, but it is an invaluable one when throwing against a strong wind, especially when the grass is high behind the angler, under which conditions it is, at times impossible to use the next method, which I will now describe.

Under-handed
cast.

The under-handed cast, as the second method of throwing against the wind is called, is only acquired after considerable practice and perseverance, but it is, as a general rule, to be preferred to the over-handed cast, and should be used wherever practicable. Although, at the first glance, in the case of one accustomed to the ordinary over-handed cast, it may appear difficult to accomplish the action of returning and throwing under-handed, yet when once acquired no other method of casting directly against a moderate wind or at right angles to a strong wind is to be compared to it, especially as the motion of the rod is far less visible to the fish. The secret consists in keeping the rod in a nearly horizontal position, and moving it, whether returning or throwing, in a line parallel to the surface of the water.



UNDERHAND CAST—Backward Position.

D. Mont, del.

If, while drying the fly, the hand holding the rod is raised when returning, the action of the wind is apt to force the line back too quickly, and the fly may be cracked off. If sufficient time is not given behind, or in other words, if the cast is made too soon, in this, as in every other style of casting, the fly is also cracked off. If in the act of casting the hand is raised, the force of the adverse wind on the line prevents the fly from going out in the desired direction, and it is curled back on the reel line, in which position no highly-educated fish is likely to look at the fly. If in the act of casting the hand is unduly lowered, the effect is a decided splash on the water. If in returning the hand is lowered—an almost impossible action—the fly is generally securely hooked to a blade of grass on the bank. Hence, to make this cast, the horizontal position of the rod moving parallel to the water is necessary.

The position of the line at the moment that the rod-point is carried to the farthest point back is illustrated in Plate VI.; in Plate VII. the moment when the rod-point has travelled halfway through the arc; and in Plate VIII. the forward position or finish of the cast. Continual practice, and the presence of a friend to correct faults which are frequently invisible to the fisherman himself, are

the best, nay, the only means, of learning the action. A fairly heavy reel line is always preferable to a light one when casting against a strong adverse wind.

Although naturally preferable, the river is not a necessity, as the cast can be practised in a field or on a lawn. It must be borne in mind that the primary difficulty consists in overcoming the natural tendency to raise the hand holding the rod; and the next point is to get over the severe cramp in the hand, wrist, and fore-arm, caused either by bringing a new set of muscles into play, or by straining in a different direction to the accustomed one those muscles which have been hitherto used in the ordinary mode of casting. This method is especially useful when casting across wind to a fish feeding under the opposite bank, or under overhanging boughs, if they are not too low. It may also be advantageously employed in fishing a place where the trees are growing on the angler's own bank. In this case it is necessary to remember that the rod-point should be, as far as possible, kept over the water while drying the fly, and that the line should be returned over and delivered under the rod-point. Above all, note where the bushes or trees are situated, and avoid them. A step to one side or the other will often save the fly from touching them; so, look



back at the line when drying the fly, see where it touches in the first false cast or two, and correct before putting the fly on the water. If it should be caught behind, it will invariably be low down within your reach, so that you can recover the fly and save a smash.

Accuracy of direction is, however, more difficult to attain in the under-handed than in any other style of cast. This is due to the rod-point, and consequently the fly, travelling in the arc of a circle or ellipse across the point to which the fly is directed, and not in a straight line down on it, as in the case of the over-handed cast. Having once mastered the difficulties, the angler will find that he has not only acquired the art of throwing a fairly long line in a manner which makes it unlikely for the waving of the rod to be visible to the fish, that he has not only at the same time practically rendered himself independent of the direction and of the force of the wind, so long as it is short of a gale, but, strange to relate, his fly will also in the majority of instances land on the water cocked or floating with its wings up in their natural position—a most important point when dealing with shy fish in clear streams. It is suggested that the probable cause of the fly being more often *cocked* with the under-handed cast is due to its falling the last few

Difficulty of attaining accuracy with under-handed cast.

inches by its own weight, and being steadied by the split wings, which act as a parachute.

Fine and far
off.

The majority of angling books impress on the fly-fisher the desirability of following Cotton's old maxim to fish "fine and far off." As to the first part there are considerable differences of opinion.

Some still use the finest of drawn gut for the lower end of the collar, and the late Mr. Marryat was to the end of his life a consistent advocate of this principle. There is, however, a large and ever-increasing school of dry-fly fishermen who consider the use of drawn gut altogether unnecessary, and hold that with the fine natural gut now procurable the best results are attained. Personally I have eschewed drawn gut for some years.

As originally intended, no better advice could be given than the latter part of Cotton's adage, viz., to fish "far off"; but the tendency of the present age is to give a wider signification to these words than their experienced author meant them to convey. To fish "far off" in the sense that you should, under all circumstances, keep yourself as much as possible out of the range of vision of a rising trout, by crouching, kneeling, or even lying down, is an axiom for the dry-fly fisher; but to fish "far off" in the sense that you should, for preference, fix yourself in a position where



UNDERHANDED CAST—Forward Position.

D. Mouté, del.

you have to keep on throwing an unnecessarily long line is an absurdity. The shorter the cast within reasonable limits, the greater is the probability of delivering the fly accurately and of rising and hooking the fish. Get as well within your distance as possible. By this is meant that particular length of line which the angler finds by experience he can manage to the greatest advantage, *i.e.*, not too long to cast with comfort, and not so short that drying becomes a heavy toil. This medium distance is *the* length of cast to select wherever practicable. To most people it is about ten to fifteen yards, and it is frequently possible to locate oneself at this distance from the fish.

Occasionally the position of a tree, bush, or other natural obstruction, or the shape of the river bank, will necessitate your being closer to your fish than you would desire, and making the cast a short one, possibly only just the length of the gut. In such a position the dry-fly fisherman is placed at some disadvantage—first, because it is difficult to make a clean short throw, owing to the invariable fault one makes of using too much power. To correct this excess of force, it is a good plan to put the left hand as well as the right to the rod (I am supposing the angler to be fishing single-handed), grasping the rod tightly in the

Difficulty of
very short
cast.

right hand, and, just holding the spear between the left thumb and forefinger, to make the cast with both hands in this position. The effect of the left hand is merely to check the forward action, and thus prevent the exertion of undue force in the act of throwing.

A second difficulty with the short throw is to direct the fly accurately, especially when casting against the wind, and using the taper form of line recommended in a previous chapter. Even with a short length of gut, the absence of weight in the fine end of the line increases the difficulty, and nothing but continual practice will enable the tyro to overcome this. One of the tests of a first-rate rod is its capacity to cast a short or a long line equally well.

Conditions under which a long cast is necessary.

There are, however, places in which one must either cast a long line or abandon one's chance of getting fish—places in which the river is perhaps twenty-four to twenty-six yards wide, the water deep and comparatively still under your own bank, and a strong stream under the opposite one. In such a place the greater run of water, and, consequently, the greater proportion of natural flies, float down near the farther bank, and, with the wind across or nearly across from behind the angler, every rising fish will be found there. The artificial fly, too, in such a posi-



STEEPLE CAST—Recovering the Line.

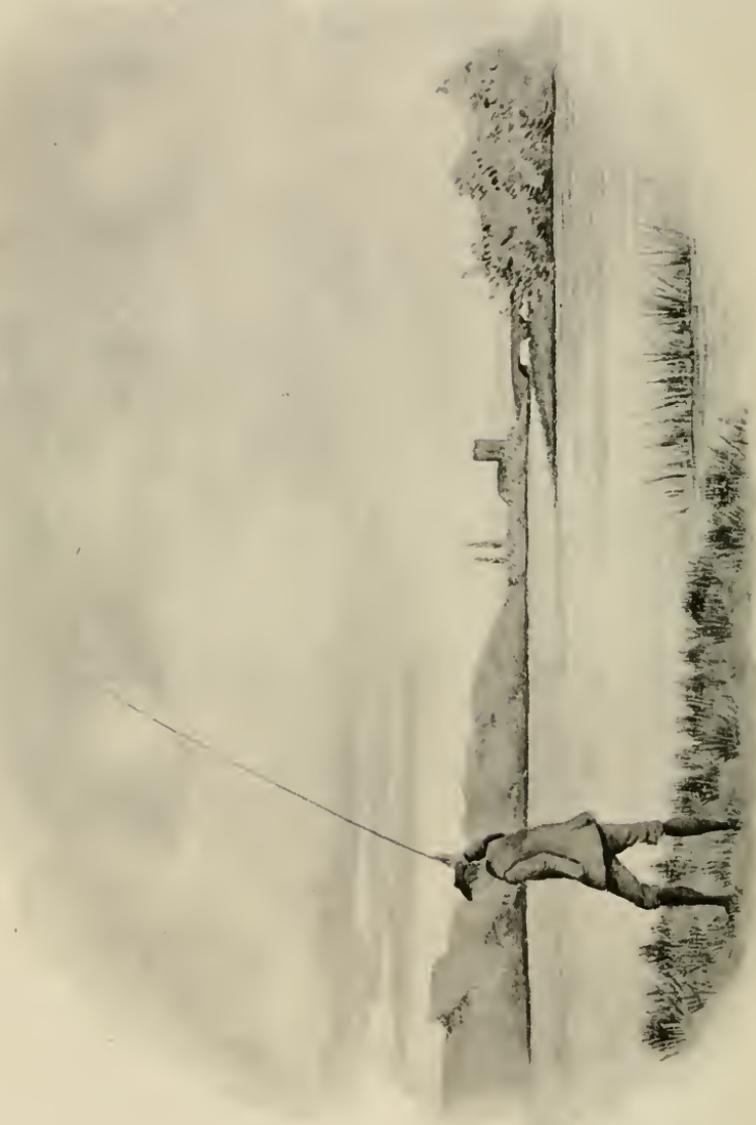
D. Moul, del.

tion fishes well, and without drag. The knack of making these extra long casts is one which can be acquired without any great difficulty, and is simply invaluable to those fishing on club or subscription waters, as enabling them to give a fly to rising fish which are passed by as impossible by the majority of their brother members.

This throw, which is called the "steeple Steeple cast. cast," has been frequently referred to; but writers on the subject have, I venture to submit, failed to convey accurately the principle of it. Commencing with quite a short line, the right hand holding the rod is extended nearly straight from the shoulder, and carried up almost perpendicularly so as to lift the fly well up into the air, as if trying to clear some high obstacle immediately behind the angler, and hence the name of the "steeple cast." While drying the fly backwards and forwards, the length of line required is gradually drawn off the reel with the left hand, and allowed to pass through the rings. Plenty of time must be given behind—in fact, it is barely possible to give too much. The action of throwing should be a steady swing without the slightest jerk, and little force should be exerted in making the cast, so as to allow the rod and weight of line to do the work. After the first cast has been made, the

line is gathered in with the left hand in loose coils, until short enough to return with ease. While drying the fly, the line is gradually liberated, a coil at each forward motion of the rod and paid out from the left hand, the action in front being so timed as to let go a coil as the rod is in the position where the cast would have been made, and thus allow the fly to travel out in the air to the full extent of the line, but not sufficiently to let it touch the surface of the water. By the time all the coils are out the fly is thoroughly dried. If it is a very long cast, keep two or three coils in hand, and let them go when casting.

Plate IX. illustrates the position when recovering the line, Plate X. shows the form of the line when the hand is at the maximum height, and Plate XI. as it is brought down and forwards. When throwing down-wind keep the point of the rod well up in the air; but when the direction of the wind is adverse, bring the rod point, when making the cast, quite close to the water with a sort of modified *downward cut*. It is astonishing, again, how little force is required to throw into wind with the *steeple cast*. The distance to be accomplished after a little practice, by means of this style of throwing, is quite astonishing to the fisherman himself, and my late friend Marryat, who was *facile princeps* in long



STEEPLE CAST—Backward Position.

D. Mont, del.

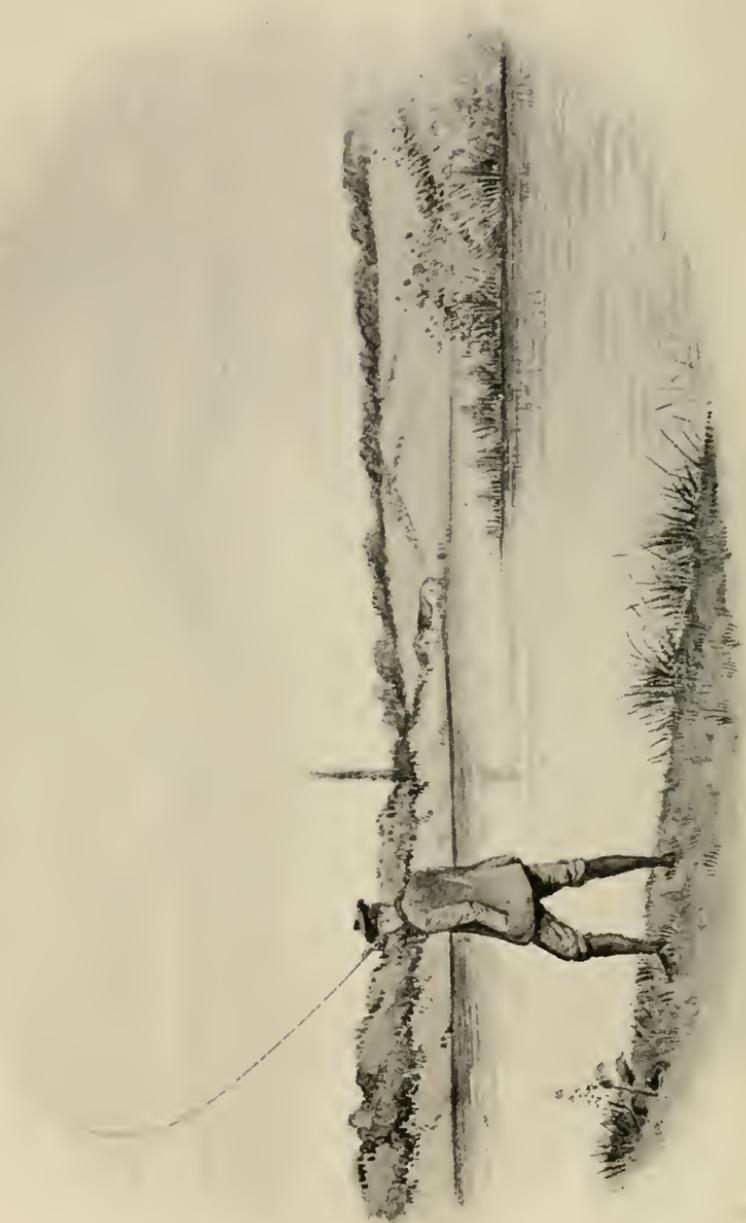
single-handed casts, on calm days often achieved the extraordinary feat of casting thirty yards with an eleven-foot rod.

The switch cast is one in general use Switch cast. amongst salmon and trout fishermen for wet-fly fishing, but there are cases in which it may be of service to the dry-fly fisherman. Say, for example, that there is a wall or a closely grown hedge, extending to a considerable height, a few yards behind the bank on which he is standing. On the opposite side of the river, fifteen yards off, or possibly in the middle of it, a fish is rising; and it may be most advantageous to give such a fish a well-dried fly, because it seldom sees such a thing as an artificial presented properly, and is consequently likely to be deluded by it. The ordinary switch, as used by the wet-fly fisher, is accomplished by drawing the line towards you on the water, and throwing the fly with a kind of roll outwards off the water—in fact, a sort of downward cut—the possibility of making the cast depending upon the fly being in the water at the moment that the rod point is brought down; hence it is evident that the ordinary switch-cast must be made with the fly wet.

The dry-fly fisherman can make a cast Dry switch. something like this, if there is room up and down the stream, by turning his face in that

direction and drying the fly in the air parallel to the course of the river. If it is impossible to dry the fly in a direction parallel to the course of the river, the task may be accomplished, especially when standing on a high bank, by shortening the line considerably and drying in a vertical direction, keeping it in front of the rod point. The angler then takes the dry fly between the finger and thumb, and turning his face towards the stream, makes a false cast or two with the point of the rod, describing a figure of 8, but still retaining the fly between the thumb and finger. At the forward position of the rod, when the cast would in the ordinary course of events have been made, the hold of the fly is let go, and the line travels out to the desired point. Care must be taken not to strike the obstacle behind with the point of the rod, or to entangle the line with it; and for this purpose the action of the rod should be somewhat steepled.

This cast is a difficult one, and whether you can accomplish it or not depends much on the nature and distance of the obstacle behind. The position of the hand and line at the commencement of the switch is illustrated in Plate XII., and the position of rod and line, just after letting go the fly, in Plate XIII. A slight wind behind, as in the ordinary switch, materially assists the angler, and it is



STEEPLE CAST—Coming Forward.

D. Mont, del.

not easy to switch a dry fly in the teeth of a strong adverse wind.

The following remarks from a first-rate performer are so apposite that I give his *ipsissima verba*:—"One of the most important features in the making of a good dry-fly fisherman is that he should stubbornly refuse to yield to difficulties in getting the fly to a rising fish, however adverse may be the conditions. So many men pass by fish without trying them because the wind is too rough, the drag impossible to negotiate, or the over-hanging bushes or trees offer a certain hang-up, &c., &c. Let him make up his mind to present his fly naturally to each rising fish regardless of all difficulties. Although his patience and care may often go unrewarded, yet he may occasionally have the satisfaction of killing a good fish in an awkward place, which should be specially gratifying to his self-esteem. Confidence in his own capabilities once established, he is on the royal road to attaining rank as a skilled fisherman.

"Talking about difficult casts, I killed a fish below the bridge at --- in a curious way. There was a high thick hedge and some rushes close to the left-hand bank looking downstream. A fish was rising under the opposite bank, and any attempt to get at it with the right hand was impossible by reason of the

obstructions. With my back nearly touching the hedge behind me I was not glaringly visible to the fish, so I got nearly opposite to it, and extending my left arm over the rushes, drew off line, and let the fly drift down-stream. When I thought I had enough line out to cover the fish (about 12 yards), I stiffened my arm, and with a quick under-hand turn of the wrist brought the rod point sharply forward. The fly came clean and dry off the water below, and pitched beautifully over the fish. I killed the trout at the second cast, and should think it never had seen an artificial before in that place. There was practically no wind for or against me."

Advantages of casting up-stream.

Wherever possible, the dry-fly fisherman should cast up-stream. This may be taken as the fundamental principle, and often applies with equal force to the sunk as to the floating fly. The reasons are so many and so obvious that it is only necessary to refer briefly to a few of them.

When throwing up-stream the angler is below his fish; and the position of the fish being with head up-stream, not only for the purpose of feeding, but for the mere mechanical process of breathing, as carried out by the action of the gills, the angler is in the most favourable position to keep himself out of sight, or what an old keeper I once knew

PLATE XII.



DRY SWITCH—Commencement.

D. Moul, del.

used to call "wery priwate like." Where the stream flows evenly, the artificial fly, when fished from below, sails down in its natural position without drag, following the direction of the current, and presenting itself to the view of the trout or grayling in much the same way as the natural insect. When the fish has risen and taken the fly into its mouth, the slightest raising of the hand, or better still the fore-arm, drives the barb of the hook firmly home in its jaw, or, to be precise, in my experience more frequently into the side of its lower jaw, which is what I should expect from the position of the hook in a floating fly when cocked.

When a large fish is hooked it is an advantage to the angler to be below it, and to be able at once to commence working it down-stream, which is the best and most expeditious way to tire it, and serves to take it farther from its home, a place where it has many more chances in its favour from its intimate daily knowledge of every weed, stone, post, or other impediment likely to assist it in cutting the connection. Where it is impossible to fish up-stream, the best direction to select is partly up and partly across. If this be impossible the cast must be made at right angles to the direction of the stream, and again, if this be impracticable, across and

slightly down. When throwing across the stream attention must be paid to counteracting the tendency to drag, in the manner pointed out in a subsequent chapter. Casting across and partially down is called the half-drift, and here, again, attention is requisite to prevent dragging by throwing a slack line, lowering the hand, or even walking along the bank as the fly floats down on the surface. Walking down over a rising fish is, however, only to be adopted as a *dernier ressort*, as it too frequently results in setting it down.

Sometimes an extra strong down-stream wind will be blowing with almost hurricane force, rendering it well-nigh impossible to cast up against the wind, even with the under-handed cast or downward cut. Occasionally, too, there are places where, owing to natural obstructions, such as trees, bushes, or a jutting promontory just in the range of the line behind the angler, there is no alternative but to drift or throw directly down-stream to a fish rising under the fisherman's own bank, or to pass it by altogether. Under such conditions, and such conditions only, is it advisable to drift to a feeding trout or grayling; although in gin-clear water, such as the Hampshire chalk-streams, a small modicum of success must at the best be anticipated; and no dry-fly fisherman, even the most



DRY SWITCH—Finish.

D. Mout, del.

experienced, need be astonished at finding himself setting down fish after fish, and perhaps not succeeding in rising a single one during the whole day.

In considering how to drift the floating fly ^{Drifting.} to the fish, it must be remembered that in this, as in any other style of casting, the dry fly should, as near as possible, imitate the position and motion of the natural insect carried down by the action of the current. The cast should be made with the length of line correctly judged, and the fly accurately placed, so that it shall float exactly over the fish's nose and travel well down below it. In the act of casting the hand should be well extended, so as to be able to draw it back. Just as the line is fully extended over the water and at a level of quite two yards above it, the hand holding the rod must be carried some distance back so as to check the cast and place the artificial—quite dry, cocked, and floating—well in front of the fish, with sufficient slack line on the water, so that by gradually lowering the hand and rod point the fly will float down until well past the fish, without the slightest stoppage or drag. It is well to remember, too, that a fish will at times drop or turn back and take the fly as much as two yards below where it previously rose. This is especially the case with the May-fly.

Having made the cast, and the fly having drifted down below the fish without any response in the form of a rise, it is evidently necessary to return the line, and the difficulty of accomplishing this in such a way as not to scare the fish is at best very great. In some places the whole length of line can be lifted sideways clean over the bank, quite out of its range of vision. But where this is not possible, the line must be gathered in very slowly with the left hand (supposing the rod to be held in the right), until the fly is well above the fish, when it can be slowly taken off the water, keeping the rod-point down so that the angle of contact of the line with the water will be very obtuse and not scare the fish. With the utmost caution, however, it is difficult to accomplish the return without rousing the suspicions of your wary quarry. In this style of casting, therefore, even more than in any other, precision and delicacy are necessary in the first throw.

In club waters, which are so generally overfished, it is not as a rule worth while to make a second drift over a trout until it has risen again. If not taken at the first attempt, and provided it does not rise again within say five minutes, it is generally as well to leave the fish and pass on to another, keeping wide, carefully *spotting* the position, and possibly

returning to give it a further trial later in the day. A grayling, however, will frequently allow a careful and light fisherman, using fine tackle, to make a second or even third cast over it, and then perhaps rise falsely, when, after a rest of a few minutes—especially if in the meantime it has taken a natural fly or two—another cast may be successful in securing it.

The half-drift, partly across and partly down-Half-drift. stream, if the fly is well checked as it is descending, and when on the water allowed to float down without drag, is efficacious, especially in rough, windy weather, the angler above the fish being less visible under such conditions. Both trout and grayling will, in such a case, often rise at and fasten to a somewhat large fly if quite dry and cocked. I do not think a particular pattern is of very great importance; but for what it is worth, my own experience gives the preference in such a case to the Wickham, or, better still, the landrail-winged variety of it, on a No. 1 or No. 2 hook. The half-drift is especially successful with grayling; in fact, many experienced fishermen prefer it to any other cast for them.

One of the reasons why drifting is not generally successful is that the horizontal cast is often impossible, as when throwing in this way it is necessary to cast directly down the line of the current, and as the fly descends, to

Reasons for general non-success of drifting.

check the cast in the same direction. But with the under-handed or horizontal cast it is manifestly difficult to effect this, as the fly must of necessity travel round a curve something in the shape of a semicircle or semi-ellipse. The ordinary over-handed cast then becomes the only practicable one. In addition to the grave defect in this style of cast—that the shadow of the upright rod and line are ever moving backwards and forwards immediately over the fish and in its direct line of vision, whilst the angler is above it and also sometimes well within sight—another and perhaps even more serious disadvantage is present, namely, that although a cocked fly is almost indispensable, it is, as shown before, only in a minority of cases possible to effect this when throwing over-hand. To sum up the position, it amounts to this: one throw, and one throw only, must be made; and although it may happen that the several remote contingencies of placing the fly accurately and lightly on the water; letting it drift down over the fish without drag, and floating in the vertical position or cocked; and at the same time succeeding in making the fish rise, may come off, yet in betting parlance it is any odds against landing the treble, or quadruple event.

Even if all the above difficulties have been

happily accomplished at the first attempt, and the fish rises and takes the fly as it reaches its nose, another difficulty occurs. The fish has just come open-mouthed at the fly; it is between its capacious jaws; to force the barb of the hook home it is necessary to strike promptly, and as the direction of the strike is coincident with the line of aperture of the fish's mouth, it must be achieved at the very moment that its lips are closed on the fly; or, discovering the fraud practised, it will to a certainty open its mouth and eject the very best and most natural imitation. Even if the angler does succeed in striking at the right moment, it is not easy to do so with just sufficient force and no more. Too little force and the fish is scratched. The least trifle too much leaves the fly in its mouth, and with the line extended straight down-stream and the weight of the current on it, it is surprising how little apparent force, with the assistance of the leverage of the rod, is necessary to make a smash of fine gut. Altogether, as before said, this is the most difficult and disappointing cast of any, and should never be adopted, except as a last resource where all others have been tried, and tried in vain.

CHAPTER IV.

WHERE TO CAST.

WITH the modern angler it may be taken as an axiom that his sport is not what is popularly called *luck*, but varies directly as his judgment; and, as a corollary, it may be added that, provided he is a keen and accurate observer, his judgment will vary directly as his experience, the result being tempered by his capacity of execution. The object of this chapter is to try and give, as far as possible, the experience of others to improve the judgment of the beginner, and to convey useful hints to the old fisherman.

No point can be of greater importance than a well-grounded knowledge of *where to cast*; and it must be borne in mind that this knowledge is not intuitive, but must be acquired by marking, learning, and continuously studying the relation of the fish and its food, and striving as far as is practicable to take advantage of it. The modern school are far too much addicted to continual change of fly, often changing merely for the sake of changing, and

trying imitations of the same insect, only differing slightly in size, or in the shade of the body, wings, or legs; forgetting that the fault too often lies in their own lack of discrimination, which causes them to select fish in unlikely or impossible places, or offer surface food to a fish feeding on larvæ or other forms of insect life in the middle depths or on the bottom of the river. At the same time it must be admitted that colour, form, and size, or, in other words, a fairly accurate imitation of the natural fly on the water, should be more likely to tempt a trout feeding on duns than some monstrosity like nothing in nature, styled a fancy pattern, which can only appeal to its curiosity.

Places which should be selected by the dry-fly fisherman may be divided into three classes—Class of places to select. firstly, those which are affected by fish feeding freely, owing to a large proportion of the natural insects being carried to or past them by the action of the stream or wind; secondly, those where, owing to difficulties inherent to the situation, the artificial fly is seldom presented to the rising fish in the same position and following the same rate and direction of progress as the living fly; thirdly, places where the inherent shyness of the fish is decreased by frequent sight of human beings, or by some other abnormal cause.

Ideal position
for a rising
trout.

Of the first of these three classes a trout rising close to a bank (and here perhaps it is as well to note that grayling, as a rule, are not found rising in such a position) is generally a large one, which chooses for its feeding-ground a spot where, almost off the sedges themselves, from under a hollow bank, or from the boards of camp-shutting, it can pick up a good meal with a minimum of effort or exertion. A typical fish to cast for is a trout feeding under the left-hand* bank of the river (looking up-stream), thereby giving the angler a right-handed throw, with the rod over the water. The stream should be slow and steady, the wind blowing only sufficiently to make a ripple on the surface, and in direction towards that bank. There should be a fair amount of fly hatching, but not too much. The fish should be lying near the top of the water taking every natural fly coming over it. The sun should be in the fisherman's face, and not too bright. The fisherman, of course, on the same bank as the fish, should be able to get within a

* Properly speaking, the left-hand bank is that on the left hand when looking down-stream. Dry-fly fishermen, probably from their preference for casting and working up-stream, have always designated the banks from the opposite point of view, viz., looking up-stream. To prevent possible confusion, it is well to note that the latter nomenclature has been adopted throughout this book.

PLATE XIV.



WHERE TO CAST.

reasonable distance, so as to cast for it with a comparatively short line, say from ten to fifteen yards. On the plan appended to this chapter (Plate XIV.) such places are indicated by the letters *a, a, a*.

A fish feeding upon the opposite bank is usually able to see you before you are at an angle of 45° with it, or fairly within casting distance. In a wide stream, where the current is slow and moderately even, with the strongest part of it running close to the opposite bank (Plate XIV. *b*), this may be considered a favourable spot if the angler will keep low and fish the under-handed cast, as the natural fly drifts there, and the artificial fishes well and without drag. Even if the wind is dead down-stream, so long as it is light, such a place is not to be despised when found. Unfortunately, however, it is not often found in practice.

At every turn of the river there are generally a number of points, close to the bank, to which every floating object, animate or inanimate, is carried by the set of the current and wind, and the heaviest and easiest fish, as a rule, take up these enviable positions (Plate XIV. *c*). Subject to exception, to be hereafter treated of, these are, as a rule, places where one should cast. It must always be remembered that when feeding close to the bank a trout is

generally less likely to be scared by a small mistake, and even less liable to notice it, as the eye nearest to the bank is in deep shade, and probably at the same time is intent on watching for edible morsels passing between it and the margin of the stream.

Every angler of experience has occasionally killed a trout blind of one eye rising close under the bank, and in such a case it may safely be predicted that the fish is rising with the blind eye towards the middle of the stream and the perfect one opposite the bank. It is sometimes a deadly plan to place the fly on the bank, and with a slight movement persuade it to drop on the water. This succeeds best on short grass, in which the fly does not usually get hung up; sedges, however, are dangerous. If the hook should be caught up, take the line in your hand and draw gently, but do not on any account try to extricate it by striking or jerking with the rod-point.

Hints for re-
covering a fly
when hung up.

If the fly is hooked up in a sedge, bough, or stone across the river, and the fisherman cannot get to it, most anglers begin pulling and jerking with the rod. Not only is this subjecting it to an unfair strain, but it is the least likely method of recovering the fly intact. Take the line in your hand and draw it steadily; if this is unsuccessful sway gently until it is free, or until you find the plan

impracticable. In this extremity pull steadily *without jerk* until you break; in the majority of instances you will only lose the fly, or a strand or two of gut. If the fly is not actually fastened into the sedges or bushes overhanging the stream, the best plan is to gather in the line until the fly hangs free of the water just under the obstruction. When the swinging motion of the foot line has ceased and the fly is at rest, holding the rod horizontally pointing towards the obstruction, draw the line steadily through the rings, keeping the rod motionless and avoiding anything like jerk, until the fly mounts up and glides over the obstruction. The same tactics should be pursued when hung up in a branch overhead, and the dryer the fly the more certain is the success of the experiment.

It often happens that to cast to a fish under his own side the angler is obliged from the trend of the bank to place a portion of the line on the ground. As the fly floats down, he is haunted by the fear of getting fixed in the grass, and having to scare his fish by going up to clear the line. At first he tries to obviate this by returning with a slight jerk, and each time he finds this plan unsuccessful, as likely as not will attempt to remedy it by a sharper jerk, which only increases the probability of getting hung up. After a long series of disappoint-

ments he gradually becomes disinclined to cast to fish rising in such a position, although his instinct pronounces them favourably placed.

Brother anglers, will you take the advice of one who has passed through all these stages himself, and after some careful study of the subject has found that there is no cause for despair? When returning, raise the rod slowly, smoothly, and without the semblance of a jerk, and you will find that the fly will generally come free. If, however, it should hang in the grass, drop the rod, and taking the line between the thumb and fore-finger, draw gently, and the fly will probably come clear. If not, a slight swaying motion with the hand will often disengage it. A difficult place with long grass can thus be safely fished, and if, perchance, you should get fast it becomes a question of breaking off the fly on the chance of retrieving it later, or crawling slowly up to the place, keeping quite low, disentangling it, and coming back with the same precautions to keep out of sight.

Gravel patches
on a shallow.

On a well-kept shallow—that is, one on which a fair proportion of the weed is left uncut in bars, and in which bright patches of clean gravel alternate with banks of weeds—every fish feeding on fly will take up its station over the open gravel spaces (*see* Plate XIV. *d*); and some of the cleverest fishermen

occasionally float a dry fly *on spec* over the best-looking of such places if even they fail to see a sign of a rise, knowing that if a fish is there it must be in a position and ready and likely to take advantage of any unexpected treat provided for it. It is, however, questionable whether fishing *on spec* is not a mistake on a dry-fly water unless a fish be seen in position. As it is successful only in a small proportion of cases and tends to make the fish shy, it should be avoided by the unselfish sportsman.

In all water, whether deep or shallow, with plenty of weeds scientifically cut so as to leave clear runs between them, the feeding fish lie mostly on the tails of the weed-patches, where the water commences to slacken, and are partly covered by the weeds or bank-edge, and in such a position rise with confidence to every passing insect. When disturbed by an imprudent passer-by, or pricked, they merely glide into the depths of the weeds close to them, and soon come on the feed again (such places are shown in Plate XIV. *e, e*). In an open, bare piece of water denuded of shelter, when alarmed they will, on the other hand, bolt off for twenty or thirty yards, starting in their headlong rush any other fish in the vicinity.

At the tail of a rough run, where the water commences to deepen and become smooth

Tails of weed-patches.

Tail of a rough run.

(Plate XIV. *f*), where the fly, after being whirled over and over and swept down at a great pace, recovers its equilibrium and sails calmly and slowly down on the deep glide, there is often a specially good fish waiting to be tempted if the first cast is delicately made and the artificial fly floats down cocked.

In hot weather the hatch of fly in the middle of the day is as a rule sparse ; but if at such a time an occasional quiet ring or bubble is espied in a shady nook or under an overhanging bank, a fish there should be selected in preference to any feeding in the full glare of the midday sun as likely to be large as well as sometimes unsuspecting. Crowds of "smuts" and other small insects may be seen in the summer dancing and flying just above the surface of the stream under the shade of rushes or withies. These flies seem to cause fish considerable irritation, and good trout will creep gently up to the tail end of their ranks and lie on the look-out for any stray flies that fall on the water. Such a fish may often be killed by a well-placed artificial just after it has taken a natural fly.

Fish rising in large, deep eddies.

In large, deep eddies the best fish often rise quietly in curious positions, generally with their heads directed apparently down-stream, although this is, of course, only apparent, as in this case the flies are carried round the

back-eddy in the opposite direction to the general run of the river. If the eddy be large enough, and the position of the rise such as to enable the angler to make a wide circuit *up-stream* in order to get *below* the fish, and, throwing up the eddy, place his fly so that it drifts accurately over the fish, while the reel-line remains in the back-eddy so as not to produce any drag, the spot is a favourable one to try. (Such places are shown in Plate XIV. *g.*) The foregoing are all positions to be selected as those in which fish are naturally prone to feed.

With respect to the second category, or spots where it is difficult to place a fly, such as under the boughs of trees hanging close down to the water, or where it is only possible to fish with an under-handed cast, or even with a left-handed under-handed cast, or close to the knotted roots of trees or willows, a feeding fish should never be passed over. In such a position it does not see an artificial fly floating over it cocked, without drag, and delivered without splash, half a dozen times in a season, and when it does the result is a rise, if not a kill.

Dry your fly up and down the stream and cast across from the hand (*dry switch*) in situations where there is a high bank, or bushes behind, and the water is clear. The *under-*

handed cast is also useful where there are trees behind with boughs not very low on the water. Look back when drying the fly and see that the line when returned behind you works clear of bushes or trees. If the fly should catch it is sure to be low down, where you can unhook it by hand. Where you see a fish feeding in a difficult place under a bush you are not unlikely to catch the gleam of a portion of a gut collar hanging in the bush. Note the danger to avoid it, and collect the remains of some other fisherman's collar. The fly at the end of it may often give you a useful hint as to the patterns used by the local talent—a hint they are not always willing to convey by word of mouth.

Advantages
of selecting
apparently
unfavourable
places.

Again, you are out on a boisterous day, and the first fish you see rising is in a foul corner, where the wind is in every way contrary. Nineteen out of twenty fishermen pass such a fish as impossible. But the twentieth, grateful for the chance, setting his teeth, grasping his rod and shortening the gut by two or three links, by means of the under-handed cast, or if that be impracticable, the downward cut, gives the hungry trout a chance of which it is not slow to avail itself.

Some days again, especially on a club or subscription water, you will notice that your brother fishermen have started early so as to

be before you, and have walked up the windward bank. You reflect that all the feeding fish that they, or possibly you, can reach are most likely killed or spoiled before you can get up to them. You decide to walk up as quickly as possible to get in front of them, and then all day long you and they are engaged in a breathless sort of race, one trying to get above the other, with the result that all alike get little or no sport. This is a great mistake, and the next time it happens try exactly the opposite tactics. Give them a good start, walk leisurely up the lee bank, cast a short line, and throwing *into* the wind, try all the fish you can see rising under your own bank. Do not be afraid of the work of casting against the wind, because this, as shown in a previous chapter, is not difficult when you know how it is to be done. I venture to prophesy that very possibly at the end of the day you may find yourself with a better bag, and generally more contented than any of them.

Also note fish rising under the *lee* of the Glass edge. windward bank, especially if the current sets there, as the natural flies remain in this *glass edge* out of the wind. Fishermen looking across will often walk over them and set them down. They soon come on the feed again, and you can walk leisurely up this windward bank and pick up a bag behind them. There

are usually two glass edges where the wind is across the stream—one under each bank. That on the windward side is the part protected from the force of the wind by the height of the bank, and that on the lee side is produced by the back-eddy of wind thrown off the lee bank counteracting the force of the breeze blowing directly towards it.

Places usually
neglected by
anglers.

The third class of places to select, namely, those in which the fish are rendered less shy by some abnormal cause, are as a general rule neglected by the majority of anglers, as, for example, the extreme ends or limits of a water. If at the lower end, most fishermen are far too impatient to get on, opining that if the fish are not feeding well there, they may perchance be farther afield. As to the upper boundary, that generally is never reached if the fishery be of any great extent. My advice is, never neglect these positions, and never leave rising fish to go in search of others in what you fancy are more likely places. As a rule, if the fish are taking well in one part of the water they are taking equally well in others, and *vice versâ*. If you are starting at the lower end do not be in a hurry; wait there until the fish begin rising, and try the fish there. On the other hand, if you are cold and want exercise to restore the circulation, walk briskly to the extreme

upper end of the water, and there again wait for the rise, and fish it.

In portions of a river along which a public footpath or roadway runs trout soon become accustomed to the sight of human beings, and are as a consequence comparatively tolerant of their intrusive curiosity. They are then not so easily scared, and if scared when rising, are not long in returning to their habitual feeding-place to resume their interrupted meal.

A fish rising immediately above a bridge or a hatch is never very shy, and, besides, is very seldom fished for. The sapient angler opines that it is hopeless, as the trout will bolt down through the bridge or through the hatch the moment it is hooked. If it be a bridge, it does usually run down *under*, but not *through*, and remains there in the shadow of the bridge until by the continued strain of the rod you have drowned it and you can land it at your leisure. An odd fish will make a clean bolt through a bridge, but even then by keeping a steady strain upon it from above, occasionally gaining a few inches of line, the angler will by patience frequently succeed in drowning it. Even if it smashes you, or comes unhooked, it is perhaps better to have hooked and lost your fish than never to have hooked one all day long.

Never hold a fish hard when bolting through

an arch of a bridge. If it is eased its natural tendency is to work up after the first rush, and then perhaps you may coax it away from the dangerous locality. In the case of a hatch, if a hooked fish runs through it, the rod can often be passed through point first, and the fish killed at your leisure in the hatch-hole below. With a fish rising under a bridge or at the upper end of it, either go above and drift to it with a strong downstream wind, or, what is far better, where possible go below and throw up with the under-handed cast.

In rough weather, in portions of the stream which are usually smooth but are then ruffled by strong gusts of wind, and perhaps occasionally lighted up by warm gleams of sunshine, an odd fish is sometimes seen feeding among the waves or sucking in the flies dancing over the rippling surface. Such fish are generally travelling; in that case throw well above the rise, taking especial care to notice in which direction they are moving. Under such circumstances they are usually silly and unsuspecting, and should never be passed by without just one polite invitation in the shape of a floating dun perfectly dry and well cocked.

Hatch-holes.

When fish are not feeding in the main stream it is often good policy to explore hatch-

holes or weir pools. In the eddies close in under the walls fish are fond of lying, ready for any food that may come down, and sometimes will take the first artificial floated over them. Sometimes they are actively engaged in sucking snails or other edibles off the walls themselves. A dry hackle sedge (No. 69, "Dry-Fly Entomology") will often tempt a good trout in such a position, but perseverance is frequently necessary, as the fly can only be seen by the fish when it is looking upwards and not feeding ravenously with its head down, and tail perhaps breaking the surface.

Among dry-fly fishermen the remark is often heard that a particular throw is not likely to be successful, or that a fish rising in a specified place is, practically speaking, out of danger, owing to the fact that with that throw or in that place the fly is bound to *drag*. The exact meaning of this expression is, however, only clear to a minority of anglers, and as the main principle of dry-fly fishing and the success and want of success of the angler is dependent on this point, it is worthy of a proper definition. When a fly is said to be dragging, the meaning is that it is travelling down the stream in some degree differently to the natural insect. This can occur in one of three different respects: firstly, by the artificial fly travelling more rapidly than the

Definition of dragging.

natural ; secondly, by its travelling more slowly than the natural ; and thirdly, owing to its drifting across the run of the stream, in each case leaving a more or less perceptible *wake*. The natural insects under normal conditions emerge from the covering in which they have been enveloped in the larva or nymph state on the surface of the stream, float down at the same pace as the current, and follow the direction of the particular run in which they happen to be when they reach the surface. Hence in every stream the probability of a shy fish like a trout or grayling rising at an artificial fly taking a course opposed to that of the natural one is remote ; while in clear water or in rivers which are heavily fished it may almost be deemed a certainty that this remote probability will not *come off*.

Natural fly
dragging.

Wind blowing strongly across the current may sometimes cause the natural fly to drag and leave a wake, and when this happens the fish seldom take it. This experience is derived from streams which are heavily fished, and it would be interesting, as tending to show whether this shyness is inherent in fish or the outcome of a prolonged and advanced education, to know whether the same thing occurs on waters where the fly-fisherman is comparatively unknown.

The conditions under which the artificial fly drags owing to its travelling more rapidly

than the natural insects must now be considered, and where possible the means of modifying or counteracting such tendency indicated. The most usual position in which the angler is troubled by this form of dragging is where he is casting across or partially across and up the stream, and where the swiftest portion of the current is between him and the point to which he is directing his fly. In such a case throwing in the ordinary way and with a moderately straight line, the strength of the current pressing against the reel line forces it down-stream, causing a pull on the fly, dragging it more or less across, but at the same time making it travel at the pace of the strongest part of the stream, or at a greater pace than the natural fly under similar conditions.

Drag owing to artificial travelling more rapidly than natural insect.

The most effectual means of obviating this is to make the cast in such a way that while the fly and last yard of the gut collar lie in a direct line, the remainder of the collar and a portion of the reel-line lie on the water in a curve the convex side of which tends up the stream. The strength of the current then acting on the belly of the line and pressing it down-stream does not cause the fly to drag before it has forced the convex side of the curve into a straight line, nor, if the convexity of the curve has been sufficiently pronounced,

Retarding or preventing dragging.

until the fly is beyond the point where the fish is rising. Of course, the longer the cast and the greater the disproportion between the extreme rapidity of the current and that at the feeding-place of the fish, the sharper or more convex this curve requires to be. To deliver the line in this curved state with an up-stream wind is not altogether easy, but it can be accomplished by a modified downward cut and turning the wrist over and down at the moment that the rod-point reaches the surface of the water.

With a down-stream wind and an under-handed cast it is not at all difficult to accomplish it. In such a case it is not necessary to throw absolutely against the wind, but merely to *cheat* it slightly. If the angler finds the direction of his first cast is too much into the wind, he must correct the inaccuracy in the next, either by using less force, by easing the point of his rod in the act of delivery, or by increasing the length of his gut collar. If the direction of the wind is up-stream the fisherman must take up his position on the bank a short distance below or even level with the rising fish, and, to allow for the action of the wind, the cast must be made as though his object was to place the fly slightly *below* the fish. With a down-stream wind, especially when on the left bank of the river, the left-

handed horizontal cast is frequently useful when fishing across stream, but, in positions where this fails to counteract drag, a back-handed under-handed cast made with the right hand and the line returned over the left shoulder will often prove efficacious.

Some natural obstruction on the bank or an extremely long throw may render the under-handed cast difficult, and on rare occasions, too, the force of the down-stream wind may be too great to be overcome. In either of these cases the fisherman must place himself directly opposite to, or slightly above, the spot where the fish is feeding. The ordinary over-handed cast (or, if necessary, owing to the distance being very great), the steeple-cast is used, and with either of them a slight downward cut is incorporated.

At the moment that the fly has travelled out to the full extent of the line the cast is perceptibly checked and the fly lands on the water with the last yard of the gut straight, and the remainder of the gut and a portion of the reel-line in curves or loosely behind it. As soon as the fly touches the water the hand is lowered to allow it to come over the fish before the line is sufficiently taut to cause a drag, and as remarked in a previous chapter, sometimes it is necessary for the angler to walk, or perhaps better, crawl, at the same pace and in the same direction as the fly is floating down.

Throwing a
slack line.

When throwing across a wide stream throughout which the current is flowing evenly there will frequently be a slight drag, especially if the line sinks. In such a case the plan described above of placing the fly with a convex side of the curve or belly of the line inclined up-stream should be adopted, or else that of throwing a slack line. The meaning to be attached to the expression *throwing a slack line* is, that the force to be used should be a trifle more than is needed to put the line out straight, and in making this cast the hand must be checked slightly, so that, as before, the fly and last yard of the gut are extended, while the upper part of the cast and a portion of the reel-line lie in curves or loosely on the water. To throw a slack line it is necessary to draw off more line than would be required to cover the fish with a straight cast—how much more depends on the pace of the stream, the strength of the wind and the relative positions of the angler and the fish. Sometimes a patch of weed on the surface can be utilised by lodging the reel-line on it so as to avoid the drag. A probable drag under the fisherman's own bank can often be prevented by letting a good length of the reel-line rest on the bank after making the cast.

The advantages of fishing with a slack line are not fully recognised by the modern school,

and this, I believe, is owing to their attaching undue importance to the loss of time caused by striking on a long slack line. This loss of time is infinitesimally small and is in many instances a positive benefit, as the majority of fishermen, especially of the younger generation, as a rule miss their fish by striking too soon and pulling the fly away before the trout or grayling has taken it fairly into its mouth.

Fish, more especially grayling, often rise in a smooth place immediately above a swift run, and in such a position a straight cast made upstream from below lays the reel line on the hardest of the run, and the fly, being on the comparatively slow glide above, is dragged down by it. To avoid this drag, the place must either be fished from above with the half-drift, or from below with a good deal of slack line on the run, so that the fly is below the fish before it commences to drag.

How to fish smooth water above a quick run.

Another favourite position for a rising fish is a small eddy or a slow running bay under the bank, where most of the natural fly is carried by the stream. Both trout and grayling, especially large ones, being inclined to get their food with as little work as possible, show a preference for spots into which the action of the stream or wind carries the fly and where it is almost stationary, or at most moves very slowly. If the eddy is so strong that the

Fish rising in small eddy or slow running bay.

natural insects drift in the opposite direction to the general run of the stream, the fish lies with its head down-stream, or rather down what is the general run of the stream; and if this happens in a very small space it is almost impossible to fish it without drag. Where, however, instead of an eddy there is a mere slackening of the stream, the difficulty may be overcome by putting plenty of slack line, so that no drag takes place until the fly is past the fish.

With a strong up-stream wind, a fish rising directly above the angler is apparently in a favourable position; but it must be remembered that the cast is a straight one, that is, that at the moment the fly lands on the water the line is extended to its uttermost, and hence any slight inequality in the pace of the stream will cause the fly to commence dragging, and to continue dragging until it has travelled far enough to produce slackness in the line. Anglers, from ignorance or want of observation, are often surprised at finding difficulty in rising fish in such a position, while the remedy is simple. To obviate the drag, keep the point of the rod well in the air when casting, and as the fly falls on the water drop the hand, and with it the rod-point, so as to slacken the line and remove the strain, which would otherwise cause a drag. The

foregoing are the positions in which the artificial fly travels more rapidly than the natural.

An artificial fly travels more slowly than the natural when throwing across, or partially across, the stream in places where the upper portion of the gut cast or the reel-line lies on an eddy. A slack line will to a certain degree prevent this; but such a place is never easy to fish, and the angler must not have great hopes of killing in such a position, except, perhaps, on a rough or rainy day, or in water slightly coloured, or late in the evening.

Drag owing to artificial floating more slowly than natural fly.

With a strong down-stream wind the natural fly itself is occasionally forced along at a greater speed than the normal pace of the current. In such a case the artificial fly drifts more slowly than the natural, but in rivers that are much fished or where trout are fairly well educated I do not find that they are very prone to take even the natural when drifting faster than the stream. I attribute this to the fact that under such conditions even the natural fly leaves a slight wake on the water; wherefore I would venture the opinion that this action of the artificial fly must not be considered as dragging; in fact, it is questionable whether under such conditions the fish will not at times take the imitation in preference to the living insect.

The artificial fly drifts across the natural

Drag owing to
fly drifting
across natural
set of stream.

set of the stream under the following circumstances:—Firstly, when throwing across, or across and partially down, as soon as the line commences to tighten. This particular form of dragging can in some cases be delayed until the fly is past the fish by easing the hand and dropping the rod-point towards the water, or sometimes by crawling slowly down-stream. Secondly, in deep pools through which a number of irregular cross currents or eddies flow. Such places are, as a rule, disappointing, especially in long casts, as the line is subject to the action of several of these currents, and, excepting in rough weather or late in the evening, or perhaps when quite dark, should be avoided. If, however, fish cannot be found rising elsewhere, some little time may be devoted to what is far more likely to be educating than catching them. Thirdly, where the water at the head or any other part of a shallow commences to widen, the stream usually divides into a number of fan-shaped runs, and a natural fly would of course drift down the run on which it happened to be when emerging from the nymph envelope. In the case of the artificial, however, if there happen to be one or more of these runs between the angler and the place where the fish is rising, it is dragged across the natural flow of the current, and, it may be reasonably inferred, will not be taken. If in

such a place it is practicable to wade and stand immediately below the rising fish, on the edge of the very fan-run in which it is feeding, well and good; there is every chance of getting the fish. If, again, by standing well above the fish and half drifting, the fly can be got past it without drag, there is again a chance of killing. If, however, it is too deep to wade, and the distance from the bank is too great for the second alternative above defined, the place is practically impossible and the fish is safe. A fish feeding just above where two or more fan-shaped runs converge will at times take flies coming only from one of these runs, and the artificial should therefore be fished from the one in which it is taking the natural insects.

The general surroundings, the probability of the fly dragging, the idiosyncrasies of the individual fish when feeding, should be carefully studied by the angler before making his initial cast. Success largely depends on the degree of intelligence brought to bear on the subject in preparing the attack. Hence the past master sits down and thinks over his plans before risking his luck, while the tyro rushes in, in hot haste, the moment he sees a rise and too often sets his fish down at the first cast, owing to his impetuosity.

In indicating places which should, as a rule, Places to be avoided.

be avoided, it must be understood that the idea is to give hints, especially to the younger generation, to assist them in judging whether, under ordinary conditions, a fish feeding in a particular spot is a *killable* one or not.

At the same time, in streams where fishermen are not often seen, and where the floating fly is almost unknown—in fact, where the education of the fish has not been carried to a high standard—the silly ones will occasionally take in such places, and upset all preconceived theories on the subject. In the same way, in a gale of wind, with the surface lashed into heavy waves, or during heavy rain or hailstorms, or when nearly dark, these unlikely places may, even in the shyest of chalk-streams, be tried with success.

To recapitulate briefly, a fish rising in any place where the fly is likely to drag is a difficult one to tempt. Such places are: where the strongest of the current is between the angler and the feeding place of the fish (Plate XIV. *v*); where throwing across a very wide stream, even where the current is uniform (the use of the slack-line, the bowed cast with belly of line up-stream, or the half-drift, will prevent or delay the drag in these positions); a small eddy or bay (Plate XIV. *w*); deep eddying pools (with some exceptions); a smooth glide at the head of a run (Plate XIV. *x*); or

amongst the fan-shaped runs where wading is impossible, as shown in Plate XIV. *y*.

In summer-time there are on most shallows Celery beds. portions covered with a close, compact growth of quite short, bright green weeds, and for the purpose of briefly referring to such places it may be well to borrow the late Mr. Marryat's terse cognomen for them—*celery beds*. It is illustrative of his keen powers of perception that he should have detected the resemblance of this weed (*Apium inundatum*) to the common celery—the more so as (although he was not aware of it) it is known as the water celery and is closely allied to, and I believe belongs to the same genus as, the vegetable of the same name.

Often and often trout are apparently rising well over these celery beds, and inexperienced anglers waste time in trying to tempt them. At first their inability to get even an offer induces them to try another pattern of fly, which in its turn is changed for another, and still another. At length, in despair, the fisherman makes cast after cast in rapid succession, generally not even taking the trouble to dry his fly, until, utterly worn out and with every muscle of his hand and arm aching severely, he abandons the attempt. In point of fact, fish in such a position are rarely, if ever, taking duns or winged flies of any sort, but are pick-

ing up any little larvæ, caddis, shrimps, snails, or other mollusks drifting off the weed.

This is no theoretical assertion, but the result of continual practical experiment, obtained by minute examination, day after day and year after year, of the contents of the stomachs of both trout and grayling taken under such conditions. Methinks the reader may with reason exclaim against the inconsistency of advising him in the first instance to avoid such places, and in the very next sentence referring to an examination of the contents of the stomachs of fish—an examination which, in the natural course of events, must have been preceded by their capture. True; but mark how this has been accomplished in nearly every case. When no rising fish could be found in a more favourable situation, the plan adopted has been to put up either a gold-ribbed hare's ear (one of the best general patterns known) or an orange bumble; in either case to fish quite dry, throwing only at long intervals, and altogether resting the fish from time to time, until at length occasionally a rise has secured the trout or grayling. What the fish mistake the hare's ear or bumble for is mere conjecture. The hare's ear, possibly, is taken for a dun just emerging from the nymph envelope, and the bumble does certainly bear some faint resemblance to one of

the orange-tinted fresh-water shrimps. The above remarks as to fish feeding over "celery beds" apply in a lesser degree to fish rising in any part of the water, deep or shallow, swift or still, over heavy banks of submerged weed.

The inexperienced dry-fly fisherman should generally avoid places in which the stream is very swift. Such places are difficult, for two reasons; firstly, because it is not easy to time the action of the hand so as to raise the rod just quickly enough to keep the slack-line off the water without dragging the fly; secondly, because fish in a very swift run do not as a general rule feed in the most rapid portion, but take up their position just above the hardest part of it, in which case the artificial fly will drag.

Difficulty of fishing very swift water.

There are nearly always fish feeding immediately below a wide plank bridge or wooden-trunk carrier, and every fisherman passing by is irresistibly impelled to study their movements. As a natural sequence he crouches down, creeps slowly below them, gets into position, dries his fly carefully, and takes a cast or two. How very seldom he is successful, and how rarely fish in such a place are easy to kill though really taking well! Is it because they are so frequently tried for? This may be, although I doubt it, and am inclined to think that from some as yet unexplained

effect of light and shade either the gut, the hook, or any little imperfection of shape or colour in the fly itself, is in some way brought prominently to the notice of the fish, looking upwards against the dead background of the bridge or carrier.

Fish in deep
pools.

When only rising moderately, fish in deep, black-looking pools may as a general rule be considered unpromising, although here, again, an exception may be made at dusk, when, if no other rising fish can be descried, a few minutes may often be profitably devoted to them. At times, in such a place, a considerable number of fish are rising in close proximity, and after a number of casts, or until the angler succeeds in catching one, he is in doubt as to whether they are *Salmonidæ* or not. If he can secure one, and finds it is a dace, there is no occasion to go on, as probably they are all dace; at the same time it is frequently the habit of anglers to pronounce fish they cannot catch in a trout stream to be dace—and they certainly are so difficult to catch that at times it is a convenient excuse for not killing a big trout.

Dace and
trout.

An example of this I can give on a club water well known on the Test. Two members starting in the morning saw two fish rising quietly under the shade of an old elm. Piscator No. 1 settled down to try them, and

his companion walked on. An hour or so later Piscator No. 1 joined Piscator No. 2, and with some emphasis exclaimed at the presence of this wretched vermin in a trout stream, stating that he had wasted his valuable time in vainly trying to tempt two big dace. Piscator No. 2, a somewhat incredulous but experienced follower of the craft, made a mental note of the exact position of these two dace, and determined to devote a few minutes to them on his way home. When comparing bags, Piscator No. 1 was rather disgusted to find that two trout weighing somewhere about seven pounds were the dace which he had failed to beguile in the morning. I mention this to show how difficult it is to differentiate the rise of dace from that of trout, and how unsafe it is to be positive in these cases. As a rule, a number of fish rising abreast of each other are dace. Trout feeding close together usually hunt one another, as also do grayling, but not so decidedly as trout. Dace generally travel in shoals and feed in shoals, while trout feeding are more often in position one behind the other.

Sometimes grayling, and large grayling too, may be seen rising in close proximity in these deep, still pools. As a rule, careful scrutiny will enable the angler to distinguish them from coarse fish, from the curious way in which

Grayling rising in deep pools.

when breaking the surface they show their dorsal fins, and at times, too, all doubt is removed by catching sight of the adipose fin, which latter, it must be mentioned, is an unmistakable index present in members of the salmon family only.

Favourable
corners or
bends.

A corner or bend into which the wind sets directly up-stream, and into which every fly floats, looks an inviting one. It should, however, be borne in mind that on a club or subscription water no passing angler can fail to catch sight of fish feeding in such a place; and if they have been sedulously fished for only a few minutes previously, it is surprising how soon their suspicions are aroused, and how small a mistake will *set them down*. This same argument applies to any portion of a piece of water held in high repute by our brother fishermen, either as a taking place or as one containing an extraordinarily large number of fish, and it is often the wiser policy to pass such places by. At best the angler is more likely to add to the already far advanced education of the fish than to the contents of his bag. When fishing for trout in hot, calm weather, portions of the river in the full glare of the sun, especially in mid-stream, should be avoided. But, at the same time, it must be remembered that the largest and freest rising grayling are usually to be found in such places, and this, I take it,

is one of the salient points of difference between the feeding places affected by the grayling and by the trout. Shady backwaters should be carefully looked over for a rise on hot, bright days, as trout are fond of cruising lazily about in such places, taking off the surface any small flies which may have drifted in.

Wherever the bank is raised much above the level of the river (and such a place is shown in Plate XIV. *z*), the angler is more visible to the fish, and therefore placed at a disadvantage. If it be just as the shadows are commencing to lengthen in the evening on the western bank, it is often impossible, when standing up, to approach within twenty-five or thirty yards of the stream without scaring every fish over which the fisherman's shadow passes. If no fish can be found rising in a more favourable place, it is sometimes possible to get into position by crawling slowly to the bank on all-fours, taking especial care that the shadow is not thrown beyond the edge of the sedges on the side of the river nearest to you.

Disadvantage
of fishing from
high bank.

Above all, when stalking a fish do not forget to move slowly. A rapid movement is not only more visible to the fish, and more likely to scare it, but a quick footstep causes more motion of the bank, which communicates vibration to the water, and, with it, an intimation to the fish of the angler's presence.

Precautions to
be observed
when stalking
fish.

Having stalked into position, and the fly being thoroughly dry, crouch down, throw with the under-handed cast only, and be careful not to raise the point of the rod, nor to throw its shadow across the rising fish, either when casting or when drying your fly, as neglect of this advice reveals the fisherman's presence to the well-educated fish. With these precautions, it may be possible to float a fly over the fish without setting it down; but at the same time, it is astonishing how small a movement will scare it, a fact which will usually be brought home to the fisherman by the heavy furrow caused in the headlong flight of the frightened trout to the innermost recesses of the nearest beds of weeds.

When wading follow the tactics of the heron, which sets one foot down after the other slowly and without splash until it reaches a favourable spot, where it will stand without moving a muscle until the moment for striking its prey has arrived. The dry-fly fisherman should select what he deems the favourable place from which to cast, wade out there and keep quite motionless until the fish is rising well.

CHAPTER V.

WHEN TO CAST.

I F the first throw over a rising fish, before it has caught sight of the angler or the reflected wave of his rod, is accurately and delicately made, and if the fly floats in its natural position without drag or curl in the gut, you will probably rise, and possibly kill, the most highly educated trout or grayling in the clearest water, while the slightest mistake will as probably set the fish down for the next half-hour. But much of this success depends on when this first cast is made. It may pay you better to wait ten minutes before the first cast is made than to make it as soon as you are in position. A good fish is in this respect not unlike a stag; you may take hours to stalk it, and find it in such a position that a favourable shot is almost an impossibility. The practical sportsman will wait for an hour until the stag changes its position before using his rifle, and it is certainly far better to kill after waiting than to wait after scaring. The same rule holds good with fish.

Approaching
a rising fish.

To put theory into practice, suppose the angler catches sight of a fish rising fairly well (selecting for choice one under his own bank), the first problem is to get within throwing distance without betraying his presence. Starting at thirty yards below, and keeping well back, so as not to scare other fish on your journey, crouch down as low as possible, and creep up, still in the crouching position, until within about twelve yards of the place. If your fly is not quite dry, you should dry it in the air before approaching. When the wind is gusty creep up during a cat's-paw, get into position, wait during the succeeding calm, and cast when the next gust ruffles the water. Let out line sufficient in your judgment to cover the fish, and take the greatest pains to make the first cast accurately, but, above all, beware of waving your rod backwards and forwards in such a position that the flash of it on the water is visible. This will probably leave you waiting in vain for the next rise of a fish that has prudently beaten a retreat and departed to happier hunting grounds.

One more piece of advice. If all your precautions and efforts fail to tempt the fish, retire in the same crouching position, and do not stand upright and expose yourself clearly defined against the sky-line to the vision of the trout. Even if you are unable to come

back to it later yourself you may thus give the next passing fisherman a chance, and nothing more surely indicates a thorough sportsman than consideration for others.

Example, they say, is better than precept. Efficacy of the first cast.
A nobleman residing within a comparatively short distance of the metropolis had kindly granted me permission for a day in a small stream running through his park. He added, however, the well-considered advice not to expect much sport, as the owners of a number of gardens extending to the edge of the water on the opposite side had always enjoyed—and, it is to be feared, abused—the privilege of fishing, by killing every trout they could get with worm or minnow.

Arriving on the scene of action early on a June morning, I found the water pretty and promising-looking, with trees of all sorts along the banks, throwing out branches meeting over the stream. In the whole length of a mile there was only one open place in which it was possible to fish with the usual return behind the angler. To this spot the keeper took me at once. On cross-examining him, it appeared that nearly all his lordship's friends patronised this spot, but that one resident in the vicinity, who was generally most successful, never fished there, but to use the keeper's own expression, was "allers poking about among the trees with

a short rod and a partiklar fly of his own tying."

On a prospecting tour I gradually worked my way down to the bottom of the water, determined to fish it up with a dry fly wherever a possible fish was rising. The stream was beautifully clear, and flowed at a fair pace. The only flies visible seemed to be iron blues, of which here and there an occasional specimen was floating down, not appreciated by the trout. At length one close to the opposite bank was taken, then another, and then a third. The fish rose immediately under an overhanging bough of an alder not more than a foot above the surface. The artificial on the cast was a gold-ribbed hare's ear, and to my delight, I was successful at the first attempt in putting it about a foot above the fish's nose. In such a position a trout seldom sees a floating fly, except the natural duns, and hence it was taken without suspicion. It being impossible to raise the rod into a perpendicular position, it was some time before the first impetuous rush up-stream of the hooked fish could be checked, but at length the pressure of the rod, bent nearly double, turned it, and eventually brought to the net a good-looking trout of 1 lb. 6 oz.

Continuing up-stream, and trying every feeding trout under the shade of the trees,

each time the fly was accurately placed the first throw, the result was invariably that the fish rose at it, and was either killed, returned, or lost, while on each occasion that the first cast was in any way bungled the trout gave up rising. A considerable number of flies and strands of gut were left in the boughs of the trees, and eventually at two o'clock, finding that my bag contained four brace of as pretty trout as ever charmed the eyes of an angler (weighing $11\frac{1}{2}$ lbs.), and having returned as many more, I gave up fishing, although the trout were still rising. During the whole time no fly except iron blues was seen, and yet every one of the fish hooked or killed took the gold-ribbed hare's ear, which by no stretch of the imagination could be deemed a good imitation of the bluish-tinged wings and purple body of the iron blue.

Another illustration of the efficacy of the first cast occurred one September some years since to a party of three on a Hampshire stream. Our host, being desirous of trying the upper portion of his water until lunch-time, posted Mr. H. and myself at the lower end, which held a good stock of both trout and grayling, some being of great size. It was a sultry, oppressive day, with a southerly wind, and to one unaccustomed to these rivers the absence of movement on the surface of the water might

have given the idea that there were very few fish. My friend H. had a fancy for a narrow piece about three hundred yards long, extending from a foot-bridge to a weir, in which were set a series of eel-traps, and leaving him there, I wandered aimlessly down to a taking-looking shallow at the bottom. Here I sat down, put my rod together, and laid it down with the cast in the water to soak the gut. Presently I saw a trout about 3 lbs. just under my eyes busily engaged in appeasing his appetite with that aggravating insect the *smut* or *fisherman's curse*. The bank being overgrown with sedges, I was invisible to it. After rising it short with three or four different patterns I pricked it, and put an end to my amusement.

The previous day I had dressed some *red tags* with a bit of scarlet ibis instead of wool, and with a desire of trying the improved pattern, knotted one to my cast. Just where a cart-track crossed the river in the widest part of the shallow a fish rose several times at the pale watery duns which were hatching. I crawled up into position, and after measuring the length of line by a preliminary flick over the meadow, at the first cast the fly landed right, and never having been wetted, of course floated admirably. There was a quiet rise, and down-stream the

hooked fish went like a shot, and after a good fight succumbed, a grayling, 2 lbs. 1 oz. Thinking it would be friendly to give H. the *tip* as to the killing fly, I started to walk up, but before going a hundred yards saw the head and shoulders of a big fish out of water in the centre of a deep but rather rapidly running horseshoe turn in the river. Crouching down behind the bank, I waited another rise to make sure of the exact spot, and at the first cast again the fly was rightly placed, and the grayling (one of 2 lb. 9 oz.) was landed after a grand rush.

Meanwhile H. could not get a single chance, but at my request put up one of the red tags. But it was of no avail. Each time he tried a fresh fish the first cast did not come off accurately, and the fish went down. Fly after fly and fish after fish were thus tried in turn, but all to no purpose, as, although a first-rate performer usually, he seemed on that day to be out in his judgment respecting the first cast.

Ex uno disce omnes.

The first throw, no doubt, if properly made, will often kill the most educated fish, and every true sportsman gives due admiration to such a performance when it comes off. But how often does it come off? How easy it is for the comparative novice, or even the skilled hand if out of form, to misjudge the length of

Difficulty of judging length of line required to cover a rising fish.

line required to cover his fish in any position, and especially when rising under the shade of rushes or withies, where the light is most deceptive. Hence, as the smallest excess of line is certain to set the fish down, it is gradually becoming more the policy of modern anglers to let out such a length for the first cast as will place the fly some distance short of the fish and correct the length at the next attempt.

Many anglers will be disposed to urge that it is a matter of comparative indifference to them as to *when* they throw to a rising fish, and that the only important point is *where* they throw, or, in other words, to place the fly accurately. No doubt they are, to a certain extent, right in their contention, and the question of accuracy and delicacy combined, especially in the first cast over a fish, is the essential object. Yet with shy fish there is a right and a wrong moment to throw, and the subject is worthy of consideration by all dry-fly fishermen who are desirous of following up the more scientific portion of the question. To a mere pot-hunter, whose only object is to kill as many fish as he can in a given time, it will not be an interesting study; his tactics are simply to keep on throwing over every feeding fish he can see from morning to night; and although he imagines he will get a larger bag, it is one of the many cases in which

his very eagerness defeats itself, and certainly he does not derive the same satisfaction from the pastime as the less jealous and more unselfish fisherman who is worthy to be styled a sportsman.

With a trout poised close to the surface of the water, and merely opening its mouth slightly to suck in each passing fly, it is scarcely possible to be wrong. When, however, in such a position it is only taking one out of six or seven flies floating down, the least splash, or sometimes even the mere gleam of the gut, will be enough to set it down, and the further from the bank the position of the fish the more gut-shy it seems to be. Hence the axiom: "Never fish a trout with duns in mid-stream when you can find one rising under the bank."

With a trout, the best policy is not to be in too great a hurry to make your first cast, and not to throw too frequently. Cast a perfectly dry fly, cocked, with greatest care and accuracy, twice, or at most thrice, and then rest the fish for three or four minutes, or at least until it has again risen at a natural; then throw once or twice more. If this second attempt proves unavailing a study of the fly on the water is sometimes useful, as a change to one lighter or darker, or a size smaller, may be found successful, although it is to a great

degree doubtful whether the trout are so particular as to a mere shade of colour. On the other hand, it must be admitted that a number of the same flies, hatching at the same time, are to our eyes very much alike in colour, form, and size.

When not to cast.

A point which is inseparably connected with the question of when to throw is when not to throw. With trout it should be remembered that, as they are most easily scared, they should be cast over less frequently and rested more often than grayling. A bad moment to select to cast over a fish rising only moderately well is just after it has taken a natural fly, when it will frequently go down with the fly in its mouth to *ruminate*, or possibly enjoy the flavour. A shy fish in still, smooth water, on a hot, calm day, can occasionally be tempted by a good imitation immediately after it has risen at the natural insect, or, as Ronalds puts it, by "casting into the ring of the rising fish." The disturbance it has itself caused by the act of rising seems to cover any little splash made by the cast, which under other circumstances would set it down. This plan is specially successful with smutting fish, as they usually come to the surface, and moving slowly along, suck in some six or seven of these aggravating little wretches, and then go down to digest them.

As previously remarked, a trout rising in a small slack bay or eddy is a difficult fish to tempt, owing to the artificial fly generally travelling down the stream, and being dragged by the line outside, while the natural is almost stationary, or drifts up with the eddy. In a place of this description a fish takes duns or spinners very much in the manner above described with *curses*. Coming to the surface, and moving with barely perceptible motion just under water, it clears off every fly in the bay or eddy, and then goes down to await a fresh hatch. Should a sudden gust blow all the flies in the eddy off the water, the observant angler will often succeed in deluding the fish by placing the artificial just in the bay; or sometimes even the fish will, when its stock of food in the eddy is thus exhausted, come outside or on the edge of the run, where the cast is a simple one, and the moment propitious.

When fishing a slow-running stream, it is a sensible plan to leave your fly on the water as long as it floats. A good illustration of the wisdom of this course occurred to my late friend Marryat in my presence. It was during the later part of the May-fly, at Newton Stacey, when the fish were taking the spent gnat. In a stagnant bay of a small side stream a quiet rise had been seen. Across the neck of this bay a plank was extended to serve as a bridge

when walking up the stream. Without a moment's hesitation, Mr. Marryat cast his spent gnat over the plank into this little bay, and waited for some minutes, when his patience was rewarded by a bold rise. The moment the fish was hooked, the keeper, at his request, slid the plank away, and the trout—a good one, nearly 3 lbs.—was dragged out into the stream and there killed. Not one in a hundred anglers would have waited so long for the rise, and the smallest movement of the rod would have produced a drag on the fly, and infallibly scared this wary old stager.

Do not cast to a shy fish in the bright glare of the sun if there are clouds about. This is pre-eminently a case where the practice of patience by waiting until the sun is temporarily clouded over is often rewarded by success.

When to cast
over grayling

With grayling the question of when to cast is not so important as with trout. The former, when feeding on surface food, usually lie in mid-stream and deep down in the water, or even on the gravel at the bottom. Those curious lozenge-shaped eyes are designed for looking upwards, and from a depth of two and a half to three feet can distinguish the tiniest insect floating on the water. As grayling rise almost perpendicularly to the surface, they are prone to *rise falsely*, or, in other words, miss the fly, either natural or artificial.

When, however, they do secure it, they turn slowly over and go vertically down to their previous position, and in the motion of turning over often show their large dorsal fins and tails above water, thus making that unmistakable rise so well known to all in the habit of fishing for them. When they are thus going down head-foremost is evidently not the moment to select for placing your fly over them. They lie as a rule so much deeper in the water that they are less easily scared than trout, will stand being thrown over much more frequently, and require less resting.

Fish often rise best at the commencement of the hatch of a particular fly on any day, and the reasons adduced by many authorities are—first, because they, like other living things, are more hungry and keen at the commencement of their meal; secondly, because they *have not the colour* in the earliest portion of the hatch, and are not critical as to the pattern of artificial. The colour question is one on which there is great diversity of opinion, and in this edition considerable space is devoted in the early part of Chapter VIII., “Selection of Fly,” to what I hope is an exhaustive study of the subject from every point of view.

Another point worth noticing is, that it generally happens with a good hatch that the

Ephemeridæ come down in droves of six or seven ; then there is a small space or break, then another drove, followed by another break, and so on. In trying a fish taking nearly every fly of such a hatch the moment to cast can hardly be wrongly chosen ; but when the fish are only taking moderately, it is a good plan to watch for the drove coming down, and throw a thoroughly cocked dry fly in the break, so that when floating down it heads the natural insects.

CHAPTER VI.

STUDIES OF FISH FEEDING.

A DRY-FLY fisherman requires at all times to keep his senses of hearing and sight at full tension, and to note systematically every circumstance or movement in the water likely to betray to him the *locale* of a feeding fish. This very state of tension is often likely to lead him astray, as straining every nerve to hear or see the rise makes him superlatively sensitive to the faintest sound or smallest disturbance on the surface of the water. Hence, in his excitement, he is often irresistibly impelled to waste his time in drying his fly and floating it over what, after all, does not turn out to be a rising fish—that is, one sucking in winged insects on the surface of the stream.

A *past master*, however, who has often spoilt a favourable day by this useless hunt after the impossible, will make sure that the apparent rise to which he intends devoting his attention is a real one. As a first point, he establishes to his satisfaction that it is a fish, and not, as well may be, a rat sitting close to the edge

in a bay out of sight and feeding on some of the various forms of vegetable food it affects, or a dabchick diving under water when scared by the angler's approach, and then just putting its beak above water a few yards higher up or down the stream to take a fresh breath, giving very much the appearance of a rise. If this apparent rise is seen twice or more times in succession in exactly the same place it is almost certain to be a fish, as the dabchick generally swims or dives either up or down, and repeats the apparent rise elsewhere. An obstruction, such as a floating stick carried to and kept against the bank by the current, or a bobbing rush only just reaching to the top of the water, or a curling eddy turning over stone, frequently produce very much the effect of a rising fish.

Minnowing
and fighting
trout.

Having determined that the movement is caused by a fish, it is far from certain that because that fish is making waves, or rings, or bubbles, it is rising at or feeding on surface food. It may be *bulging*, *tailing*, *smutting* or *minnowing*; or the commotion may be brought about by two fish fighting. Of the symptoms indicating bulging, tailing, or smutting I will treat in a later portion of this chapter. When minnowing, trout usually make a quick dart through the water, and the fry are often seen leaping to escape their open jaws. When fighting, they generally rush headlong at each

other several times in rapid succession, until the stronger has driven the weaker off its vantage-ground. It is well to note that, except when spawning, grayling rarely indulge in pugilistic encounters.

Being certain that the movement in the water is that of a fish, and of a fish feeding on flies, the angler's next difficulty is to *spot the rise*, or to place its position. When under the bank this may generally be accomplished by fixing the eye on some striking object opposite to it, such as an extra high spear or a particularly bright patch of sedge, or a flower, or a brown hollow place in the ground, remembering, however, that the ring made by the rise must naturally drift down-stream, so that the rise is almost invariably placed below its actual position. Spotting the rise.

This inaccuracy of judgment is increased owing to the sense of hearing usually giving the first warning to the angler. In the space of time occupied by the sound travelling to the fisherman's ear, in addition to the moment which must elapse between hearing and seeing, the mark of the rise is carried some distance farther down than one would expect. It is also a well-known scientific fact that the sense of hearing is most unreliable for locating accurately the place whence the sound proceeds. When, however, the rise takes place

in mid-stream it is less easy to place it, as, in addition to the difficulties above referred to, the only guide to assist the angler in determining the precise spot is, generally speaking, the apparent distance and direction from some rough run or break on the surface, itself a changing and moving object.

Travelling
fish.

Sometimes a rising fish is accurately marked down, and a good cast made over the place without result. The next rise of the same fish is three or four yards higher up, and the angler, in response to it, either crawls up or lengthens his line the required distance, and covers the last rise again with no result. A few minutes later the fish is again seen taking a fly, having travelled three or four yards still higher up the stream. This wild-goose chase may, in some instances, be repeated, until the trout has, by successive steps, moved as much as forty or even fifty yards. At length no more rises are seen, and the natural inference is, that the fish is set down. Looking back, however, to the place where the first movement of the fish was observed, it may be seen steadily continuing its interrupted meal there in safety.

It will be generally found that such a fish has a defined track, and a short preliminary study will show the angler the limits of its wanderings. To follow it to the top will

usually result in its being scared on its return journey by the sight of the angler on the bank, and it is therefore advisable to cast for the fish just as it moves upwards from the lower limit of its beat, and place the fly a yard at least above it. A traveller is, however, a most tantalising fish, usually of large dimensions, well fed, and in good condition; very shy, and as often as not, has been hooked many times before, so as to be quite alive to the dangers of the position. The fisherman is not advised to waste much time, and if not hooked at the first few casts, to leave it altogether, and find a more unsuspecting prey elsewhere.

It is not an unusual occurrence to see a trout working slowly up-stream close under the bank, rising occasionally on its journey, and sucking in a fly here and there. If this is noticed, before making a cast wait patiently, and do not throw until it has settled down to feed in one place. The fish is simply sauntering up to its habitual *salle a manger*, whetting its appetite with a passing insect as a sort of *hors d'œuvre*, and will presently commence dinner, taking its own particular seat at a favourite corner.

Fish travelling while rising.

When a fish has settled down to feed in a particular spot, it is said to be *in position*. A fish will, at times, come up-stream a short

Fish in position.

distance to take each natural fly, but more frequently drops slowly back tail first, with its nose close to the fluttering insect, before either taking or refusing it, in either case returning to its original position. It is well to notice these little peculiarities, and place the fly accordingly either well above or comparatively close to the place where the fish is lying.

How to present a fly to a rising fish.

A propos of where to place the fly relatively to a rising fish is a question on which considerable diversity of opinion prevails. Some authorities recommend the angler to drop it a yard or more above, some suggest two feet, and others that it should be put right on to its nose. It depends chiefly on the character of the water; thus, where it is very rapid a yard is not too much, but with a moderate current eighteen inches, or at the outside two feet, is sufficient. With a shy fish in slow water, a fly dropped neatly and lightly three inches in front of it is often successful, perhaps because it has less opportunity of noting the cast and criticising imperfections. A fisherman who is not an accurate and delicate performer should cast well above his fish so as not to make a splash or any other defect too apparent.

As regards grayling, the fly should generally be placed well above them, as they usually lie

deep down in the water and come to the surface for each fly; hence their propensity for missing the natural insect as well as its imitation.

It is questionable whether it is ever good policy to cast so that the gut comes straight over the fish's back, because it has been noted that under such conditions a trout will often miss the artificial through lifting the point of the gut, and with it the fly, in the act of rising. Besides, if the fish is well on surface food there is the risk of the gut touching its back as the fly falls, and this will infallibly scare it.

A fish rising under the bank should if possible be cast to from the bank or shady side, and one in mid-stream on a bright day from the side from which the shadow of the cast is not thrown over it.

When looking up or down from any great distance, it is difficult to locate a rise with any degree of accuracy. Possibly taking a quick glance at the bank, noting some striking object apparently opposite to it, and at the same time measuring mentally the distance from the margin, may assist, but it is impossible under such circumstances to *spot the rise* accurately. In such a case the angler should crouch down, well away from the water's edge, and, taking advantage of any shelter to keep

Difficulty of spotting a rise from a distance.

out of the extended range of vision of the trout's sharp eyes, creep up until he has, as nearly as he can judge, got into position, and wait patiently for a second rise. Natural impatience often impels an active-minded man to fish *on spec*, persuading himself that he has the place all right, and then he keeps on persistently flogging, in hopes of tempting his quarry. One of two results will certainly ensue; either he keeps throwing below the fish and tires himself by his useless exertion, or his fly is placed too far above, in which case it usually drags. This sets the fish down for the next half-hour, besides adding a little more to its already advanced education.

Definition of rising, tailing, bulging and minnowing.

In speaking of *rises*, it may be explained, in passing, that the expression is used to describe the act of a fish taking flies on the surface of the water, whether Ephemeriðæ, in the sub-imago or the imago state, Trichoptera, or flies hatched on land, such as the cow-dung, red ant, &c. A fish taking caddis, shrimp, or snails is said to be *tailing*, from its tail appearing at intervals above water, when the head is buried in the weeds; when feeding on larvæ or nymphæ it is described as *bulging*, from its motion through the water; and when taking "curses," or other tiny Diptera, it is spoken of as *smutting*.

Estimating size of fish from the rise.

Nothing is more aggravating to an enthu-

siastic angler than, after patiently casting for half an hour over a feeding trout or grayling, to find, when hooked, that it is a wretched fingerling instead of the noble three-pounder his fancy painted it. In some cases it is impossible to form any estimate of the size of the fish from observation of the rise, but in other cases experience enables a fisherman to arrive at a fairly good estimate from the nature or position of the rise, the sound made, or other circumstances. This power of estimating size is an important factor in the comparative success of a number of men fishing the same stream on the same day and under the same conditions. The most careful, the most experienced, and the most observing, are, however, at times quite out in their judgment on this point.

The best means of judging size from the rise is probably derived from the sound produced by the act of breaking the surface when taking a fly, and the comparative weights may be said roughly to be arranged in a scale of harmony, the heaviest fish being the lowest bass, and smallest the highest treble; the intermediate notes indicating the intermediate sizes. In applying this test of sound, it must, however, be remembered that it is only applicable to the case of a fish remaining stationary and sucking in the fly passing over the spot

where it is lying. The case of a fish following and dashing at a passing fly produces some confusion in the scale.

The volume of sound is to a considerable extent dependent on the relative size of the insects themselves. A fish only separates its lips sufficiently to enable it to take in the fly, and experience tends to show that the shyer the fish the less widely it opens its mouth, so that with a small insect the sound is comparatively faint, and with a larger one louder in proportion. A splashing rise in day-time is never a likely one, and in the majority of instances is made when taking larvæ or nymphæ, and not duns or spinners.

Fish well on
the feed.

A fish rising frequently is well on the feed and is likely to take the artificial the first time it comes over it, floating and cocked. On the other hand, having seen a trout rise only once, and waited for say five minutes, without result, for a second rise, the angler may, if the exact position has been *spotted*, throw carefully and at longish intervals; and perhaps, after a dozen or more ineffectual casts, the fish is tempted and killed.

Quiet rises.

A large trout often takes with a quiet suck close under the bank, making a mere bubble instead of the ring so generally looked for. This bubble floating down is often the first indication to the fisherman of there being a

feeding fish at all ; and in this case it is well to wait and watch for a rise five or six yards above where the bubble was seen, close to, in fact under, the overhanging bank, or against a standing rush or bit of weed or stick stranded against the edge of the stream. A rise of this description in slow-running water looks like the movement of a minnow, and is too often passed as unworthy of notice by inexperienced anglers ; or if thrown to at all, a careless indifference is displayed in drying or placing the fly. At such times the scaring, pricking, or hooking of the fish is quite a revelation in the shape of a heavy wave made by a trout of two or three pounds when dashing away from the bank. No amount of care in drying the fly and placing it accurately and lightly in such a position is thrown away.

A trout jumping out of the water is certainly not rising : but what causes fish to take these sudden leaps is more or less a matter of conjecture. Some authorities say that it is done by the Salmonidæ with the object of falling flat on the surface of the water, and stunning or killing a parasite with which their skin is infested. A quick rush through the water and a break of the surface is often caused by pike or large trout chasing and striking at minnow, dace, or trout fry. This is, however, hardly likely to be taken for a rise by any but the

Trout jump-
ing.

merest tyro, the sound being unmistakable ; and frequently, too, the minnows or fry are seen leaping out of the water in their endeavours to elude the hungry jaws of their pursuer.

Fish darting rapidly to surface when rising.

At times both trout and grayling will dart rapidly to the surface, take a fly, and as rapidly dart away again. This is an undoubted rise, but not a hopeful one for the fisherman. It is either a shy fish, not likely to forgive the slightest mistake or bungle, or, worse still, it is the case of a fish which, in the very act of taking the fly, has caught sight of the angler and beaten a headlong retreat.

Sometimes a fish rising steadily and slowly in mid-stream, will show its head above water, then its dorsal fin, and at times even its adipose fin and tail. In such a case, try and see whether it is a trout or a grayling. If a grayling, it is not unlikely that it will be tempted. The shape, colour, and size of the dorsal fin will often enable the fisherman to make sure of the species ; and on the rare occasions when the tail is visible, the difference between the forked one of a grayling and the straight or slightly convex outline of a trout's tail is so marked as to be easily distinguishable. If, however, the fish making the head and tail rise is a trout, it may be considered as a bad sign, and an indication that it is feeding on nymphæ near the surface.

In deep, slow water a quick flip on the surface is usually the rise of roach or dace, the presence of which is generally further indicated by a quick succession of rises on the part of a number out of the shoal comparatively close together. Many Hampshire fishermen are fond of selecting a fish just showing the point of its nose above water when rising. Although, as a general rule, this is a good sign, yet occasionally trout bulging at larvæ give this idea, especially when the angler is directly below the fish, where the movement up-stream is not distinctly visible; hence it is well to make quite sure that the fish is taking winged flies off the water.

Rise of roach
or dace.

Large fish, as a rule, rise slowly and take the fly quietly, while small ones more often come quickly to the surface and dash down again with equal speed. On this point a friend writes: "I was watching a 2 lbs. trout rising in a hatch hole the other day. There was a gentle current coming through the hatch, and the fish was lying about nine inches below the surface. I noticed that it began its upward movement when the fly it intended to take was quite three-quarters of a yard from it. A smaller trout of about $1\frac{1}{4}$ lbs. lying just below it and at about the same depth did not stir until the fly was nearly twelve inches from its nose, and was therefore much quicker in its movements."

Comparison of
rise of large
and small fish.

Splashing
rises.

A splashing rise at night is considered by many a sure indication of a good fish feeding on sedge or other large flies. Although this opinion is occasionally borne out by facts, it is not by any means a safe one to follow, as the largest and best conditioned fish frequently take the adult Trichoptera as quietly and with as little commotion as when rising at small Ephemeridæ in the middle of the day. We have all wasted the few and precious moments of a maddening rise in trying for splashing fish, and when successful, finding that they were small. If sizable, an autopsy has often shown few if any sedges, and a considerable number of shrimps, snails, or other mollusks, and larvæ of both Ephemeridæ and Trichoptera.

I remember one evening at the end of May, 1815, with my excellent friend "Red Spinner"; the fish rose badly during the day-time, but in the evening, just before dusk, every trout and grayling in the river seemed madly on the feed, splashing continually, and apparently taking sedge-flies in all directions. The difficulty was which fish to select, as the whole surface of the stream seemed to be in a literal boil. For some time we both tried, and tried in vain, fish after fish and fly after fly, and at length I managed to secure one trout of $2\frac{3}{4}$ lbs. with a large "artful dodger."

On arriving at our quarters I opened this fish, wondering what the autopsy would show, and, *mirabile dictu*, found the undigested food to consist of three or four Mayfly nymphæ, three large dark sedges, and at least thirty fresh-water snails. I am told that these mollusks are in the habit of coming near the surface of the water in the days as well as the evenings during hot weather. It would be well for others to note the contents of the stomachs of trout killed under such conditions, to see whether it was an exceptional circumstance, or whether one may generally infer that fish splashing noisily during their evening meal are partaking of this heterogeneous diet.

“I tell you, sir, the trout were rising all over the place, and although I tried every fly in my book, I could not find out what they were taking.” Season after season we hear this formula repeated over and over again by tyros, or even by old hands who have not taken the trouble to study the subject thoroughly. If discussed *à fond*, it is generally found that the fish in the stream have been feeding ravenously, ploughing the water in all directions while following the food, but scarcely ever being actually seen to take a dun floating on the surface.

Indications of bulging.

On such a day the *dilettante* usually returns with empty creel, deploring his ill fortune at

being unable to determine the particular form and colour of fly the greedy trout were affecting. The more experienced, and perhaps more earnest, votary of the art has already discovered the futility of hoping to be even moderately successful under these conditions. He knows only too well that the apparent rises are bulges, and that, instead of sucking in the winged duns floating down on the surface, the fish are busily engaged in chasing and securing the Ephemeridæ in the nymph state, before they have emerged from the shuck.

At times the indications of this preference for the fly in the immature state are unmistakable. The fish have taken up their positions on shallows, usually over or immediately below "celery beds," and are feeding under water in a space of a yard or more on either side of their stations. They may be seen darting rapidly backwards and forwards to the right and to the left, and after each mouthful returning to their original positions, their precipitate movements through the water causing these continual disturbances of the surface, whence the expression *bulging* is derived.

As a rule, they take under water, but a fish here and there will follow its prey to the surface, and only succeed in catching it at the very moment it emerges in the sub-imago

dress. Some authorities recommend the use of a large sunk fly when trying bulging fish, but personally I have never found this advice of any assistance. One cause has, however, to a certain extent operated against the chance of success, viz., that not having confidence in the use of a large artificial when fish are feeding on a small natural, I have tried it in a half-hearted way, and without much faith in the experiment.

On rare occasions one hears of a brace or two of bulging trout or grayling having been killed by a comparative novice with wet-fly dragging, or fished down-stream; and I have positively seen such a thing occur. Possibly these tactics might be adopted with advantage on private streams which are seldom fished, but on club or subscription waters, where the fish are highly educated, they are not likely to prove of much avail. It should, however, be borne in mind that a bulging fish is feeding and looking out for food, and if by any chance a tempting morsel drifting past attracts its notice, it is not unlikely to add this to previous items in the midday or evening meal. Hence, a slightly showy pattern, such as an *orange bumble*, floated occasionally over the feeding fish, may be successful, but only occasionally, and by giving the trout or grayling a rest after each cast so as to restore confidence, which

Patterns for
bulging fish.

may have been shaken by the gleam of the gut, or any error of judgment in the preceding throw.

One of the best flies for bulging fish is the *gold-ribbed hare's ear*, and the reason is not far to seek. Put side by side, under a microscope with a low-power (say a 3-in. or 4-in.) objective, a nymph of one of the Ephemeriidæ and an artificial of the above pattern. It will at once be noted that there are arranged in pairs on the foremost segments of the abdomen of the nymph a number of fin-like appendages. These are called branchiæ, and "their function is considered to be the change of carbonic acid, introduced into the air contained within the tracheal system from the fluid which serves as blood, for oxygen held in solution in the surrounding water."* The short hairs of the fur picked out in the body of the artificial bear a strong resemblance to these branchiæ. If unable to get a look from a bulging fish after a few attempts, do not change your fly, but change your fish, and then, later on, again, perhaps, return to your old love. At times trout bulge at shrimps, snail, and caddis, as well as larvæ and nymphæ, but more frequently when feeding on them they are tailing.

* "Dry-Fly Entomology," p. 41.

It has been darkly rumoured that some anglers are invariably able to get sport among bulging fish, and that the plan adopted is to cast up-stream with a good-sized sunk fly put directly above. The slightest movement of the trout is answered by a quick and somewhat violent strike, the effect of this action being to drive the hook into some part of the moving fish, but probably not into its mouth. I am inclined to doubt the possibility of accomplishing this with a single hook, although it has been vouched for by fishermen of ripe experience and unimpeachable veracity. Be this as it may, there are no words strong enough to express the contempt which a true sportsman should feel for a pot-hunter who would descend to such a strategy. It must spoil a water, and for every fish killed at least ten must be pricked, scratched, or rendered shy, and any so-called fisherman detected in such an act should be boycotted by all true lovers of fly-fishing.

Fish, when feeding on larvæ and nymphæ, at times rise quietly, without moving about from place to place. It is almost impossible under these circumstances to distinguish the apparent from *bonâ fide* rises, except by watching the surface of the water with the view of seeing whether the winged duns floating on the stream are being taken.

Fish rising quietly when taking nymphæ.

One such case is brought prominently to

my mind, when on a hot August evening a trout rose steadily under the bank until it was nearly dark. For an hour or more I kept on throwing steadily over the fish, without making any glaring mistake. Commencing with a Flight's Fancy, then trying in succession a blue-winged olive, red quill, ginger-quill, hackle-winged red spinner, Jenny spinner, and detached badger, I at length, as a last resource, put up a small silver sedge on a o hook. The first cast secured a trout upwards of 2 lbs.; and knowing that fish feeding on *curses* will occasionally take this particular pattern, I fancied that I knew all about it, and made sure that he had been feeding on these annoying little insects. On my return home, an autopsy of the contents of its stomach revealed an extraordinary conglomeration of shrimps, caddis, snails, larvæ, and nymphæ, but not a single winged fly.

Indications of
tailing.

The expression *tailing*, as applied by the angler, refers to a fish lying with its head in the weeds gorging itself with shrimps, snails, caddis, young crayfish, or some of the many minute forms of animal life with which they abound. In order to force its head well into the thickest of the subaqueous vegetation, a series of vigorous strokes are every few moments given with the tail, which is, of course, at a much higher level in the water

than the head—in fact, is as often above the surface as below. If carefully watched when feeding in this way in shallow water, every movement of the fish, from the tail to about the lower end of the dorsal fin, will be visible, the head and remainder of the body being hidden by the weeds, out of which it is actively engaged in extracting succulent morsels. First the tail rises, until half or more of it is out of the water; an energetic wag follows; the fish, meanwhile, turning half on its side, and boring its way down into the undergrowth, seizes all the food within its reach. This action sets a number of shrimps, caddis and other larvæ adrift, and as they float off from the weeds the fish's tail sinks, and its head as a natural sequence rises in the water, enabling it to secure a further supply to add to the mass already in its mouth. It remains quiescent for a few minutes, probably while swallowing the mouthful, and then the operation of raising the tail and forcing the head into the weeds, followed by the depression of the tail and resumption of the horizontal position in the water, or rather near the bottom, is repeated *da capo*.

When, as usually happens, the tailing trout or grayling is in a deadish, shallow place, over thick weeds, the case is unmistakable. When the depth of water above the weeds

is a trifle greater, so that in the most vertical position the extreme tip of the tail only just breaks the surface, or does not quite reach it, and when, in addition to this, perhaps, it is nearly dusk, the appearance, especially if the fish is moving slowly, is so similar to that of a rise that the most careful and observant anglers are often deceived. Not infrequently they keep on throwing over it, perhaps devoting some precious moments to a minute examination of the natural fly on the water, changing to the best imitation of that insect, and using the utmost caution in approaching and casting with accuracy over what, after all, turns out to be the caudal appendage, and not the mouth, of the fish.

Methods and patterns for tailing fish.

Various methods and diverse flies are recommended as likely to tempt tailing fish. Some say that a moderately large, flat-winged fly, such as an alder, governor, or caperer, fished wet down-stream, and dragging, will be found efficacious. Others, again, advise the use of a showy grilse fly, well sunk, which should be thrown up stream, well above the fish, and worked down in steady draws of six inches or a foot each. To anyone wishing to try this last plan, I would add that the cast should be made just as the fish's tail is sinking, so that the enormity called a grilse fly should be visible to the trout as its head

rises in the water. It is obvious that, as long as the greater portion of the fish, including its eyes, is buried in the thicket of weeds, an object above that level cannot be seen.

Some authorities recommend a fly consisting of a huge bunch of peacock herl for wings over a flat silver body dressed on a large grilse hook. What this monstrosity (on which the name of "Alexandra" has been most inappropriately bestowed) is intended to represent is a mystery. It certainly is not the imitation of any indigenous insect known to entomologists. Possibly the bright silver body moving through the river gives some idea of the gleam of a minnow. Long ere this its use and that of grilse flies should have been prohibited in every stream frequented by the *bonâ fide* fly-fisherman, as it is a dreadful scourge to any water, scratching and frightening an immense proportion of the trout which are tempted to follow it. It certainly *would* have been prohibited, too, but for the fact that in any stream in which it has been much fished the trout soon become alive to its danger, and not only will not move towards it when worked close to them, but fly in terror from the dread apparition.

The best policy to adopt perhaps, is to leave tailing fish alone. True, they are feeding, and feeding well. They are, however, intent on the shrimp, caddis, &c., drift-

"Alexandra"
for tailing fish.

Advice to
leave tailing
fish alone.

ing out of the weeds, or are partially submerged in the thickest of them with their heads down, and in a more or less perpendicular position; and no means are as yet known to the angler by which he can make his artificial fly travel in a similar way. A really good imitation of the fresh-water shrimp might at times be successful in basketing an odd trout here and there, and such imitations have been made. To my mind it is questionable whether all wet-fly fishing should not be prohibited on dry-fly streams where exorbitant rents are paid for the privilege of a form of fishing which is ruined by fishermen continually walking over the fish and raking the water from end to end.

In the heavily fished Hampshire streams it is desirable, too, that the trout and grayling should be able to indulge in an occasional meal in safety without being haunted by that dire dread and danger of the barbed hook. Honestly, I doubt, if the artificial shrimp would under any circumstances prove killing; for, as in the case of the larva, it is problematical whether the best imitation would prove efficacious unless the active motion of the natural creature could be imparted to it.

At times every trout on a shallow is tailing, and not a single rise can be distinguished, although possibly a considerable number of

different flies are floating down. To one residing permanently near a river, the best counsel in such case is to give it up in despair, and go home or wait for a change in the mood of the fish. To a busy man living in town, and only having rare opportunities of indulging in his favourite sport, this advice is too trying and disappointing. At all events, he must not expect much success; but if he must try, his best chance of getting a brace with dry fly is to use a pattern, such as the *orange bumble*, dressed on a largish hook, \circ long, which is not unlike a shrimp; or at times the *furnace* will rise tailing fish when floated over them at the moment they are raising their heads towards the surface.

The chance of killing tailing fish in a clear chalk-stream with a floating fly is remote, and in club waters, which are daily and hourly thrashed from end to end, practically *nil*. In private waters, where the appearance of an angler is a rarity, on a day when no rising fish are to be found, one of the above-mentioned flies may prove efficacious in picking up an odd fish. In all such cases it must be remembered that the less the depth of the water the greater is the probability of the trout or grayling catching sight of the fly and taking it; hence, if tried at all, the very thinnest

portions of a shallow over weeds should be selected in preference to the deeper channels flowing through the clean gravel.

Indications of smutting.

On a still, hot, muggy day in July, some years ago, starting from the lower end of a favourite club water, I wandered in a disconsolate frame of mind gradually up the stream. Every now and again a fish would rise faintly and lazily to the surface, but the lightest and most accurate cast produced no response ; and whether with smallest of flies on the smallest of hooks or larger ones ; whether with sad and sober-coloured duns or gaudy fancy patterns ; whether with winged flies, hackles, or with bumbles ; whether fished up-stream, across, or down—the invariable result was nought. At length, reaching an eel-weir at the upper part of the water, and thoroughly exhausted by the long walk in waders and the high temperature combined, a smooth, sloping grassy bank tempted me to take a well-earned rest. Reclining well out of sight, and looking over the still, calm surface of the stream above the weir, a gentle movement of a 3-lb. trout in the middle of the water attracted my attention. It seemed to glide slowly upwards, and scarcely making a ripple, just showed the point of its nose above the water as it quietly sucked in some tiny insect. It then gradually dropped down until it was perhaps a foot below the

surface, and slowly swimming to the right, again almost imperceptibly rose and took another fly; then to the left, taking a third; then again it leisurely sank to a short distance.

Four or five other trout were to be seen following the same tactics; and the water being as clear as possible, the day perfectly calm, and the light of that dead-grey, hazy type in which every object in the water for many yards seems distinctly visible, each movement could be discerned, and the outline and even markings of the fish plainly distinguished. This day was so pre-eminently a typical one for smutting fish—or, in other words, fish feeding on the *fisherman's curse* or *smut*—that, though loth to intrude personal experience on my readers, I cannot help citing it as an excellent example from every point of view, except that of killing fish. The heat, the haze, the absence of wind, the peculiarly languid way in which the trout seemed to swim about in the slow-running water, apparently without aim or object, every now and then sucking in a fly or two, all combined as a vivid example of that aggravated form of rising described as “smutting.”

Perhaps the most annoying feature connected with this particular subject is, that in the Hampshire chalk-streams, on a day when the

smuts are hatching in great numbers, the largest and best-conditioned fish are ever on the feed. Taking no notice of the most tempting-looking natural duns floating down over their very noses, they will travel yards to secure a wretched little insect scarcely visible to the naked eye. There must be some specially *piquante* or attractive flavour in the tiny insect, or possibly a sense of security from the knowledge acquired by ripe experience of the difficulty of imitating so small a fly.

There are several sorts of smuts, varying in size, colour, shape, and other details, and in "Dry-Fly Entomology" there is a chapter devoted to the "Diptera," in which I have given some particulars of the life history of two species of smuts and the so-called black gnat.*

Imitation of
smuts.

Although in many cases too large for the size of the natural fly, 000 hooks, being the smallest made, must be used for dressing imitations of the smut. The Fisherman's Curse is dressed with body made of a couple of strands of cock golden-pheasant tail, legs of cock-starling hackle, and wings of young starling very small and flat; in fact, all species of *curses* should be tied with the wings as flat as possible. For the black gnat, the body

* "Dry-Fly Entomology," chap. v., pp. 137-143.

should be of black, shiny quill (that stripped from the central quill of the cock-chaffinch tail being perhaps the best), cock-starling hackle, the wings for the male of palest starling-wing, and for the female of starling tail, which has a distinctly marked pale-buff margin to the feather, thus imitating the pale tip of the natural wing.

The most effective looking wing is made of a single piece of pike scale, cut to shape and laid flat along the top of the hook. The idea of using pike scales for wings originated with Mr. H. S. Hall, and this pattern is generally known as his. Another good rendering is the late Sir Maurice Duff-Gordon's, a black silk body, with silver tag, hackled with two badger hackles, worked over a couple of turns of black ostrich herl. These various dressings are given, although the angler must not expect to make a great bag with them.

Some years ago, Mr. H. S. Hall killed a good basket of fish one day at Dorchester with his pike-scale pattern, and he and others have on other occasions repeated this success. When, however, one considers how heavily a fisherman is handicapped by the small hooks, and the necessity for using fairly fine gut when the weeds are in their most vigorous and luxuriant growth, it is not surprising that a large proportion of rising fish are scratched,

and even when fairly hooked, manage to break the hold of the diminutive barb, or inextricably entangle themselves in the dense vegetation.

Smutting fish are undoubtedly rising and taking surface food, and are to be killed with floating flies. It is doubtful, however, whether imitations of the smut are as successful as other flies which have been proved by experience to be effective under such conditions. Patterns to be used with success vary to a certain extent in different rivers or in different parts of the same river, and the more persistently a water is flogged the more shy and suspicious the fish become, and the more difficult to delude.

Patterns for
smutting fish.

Why the fish should take these particular patterns is a mystery to those who take the trouble to think about the matter, especially as no one of them bears the smallest resemblance to the natural fly in size, form, colour, or any other characteristic. As far as known to me, and for what it is worth, the following, however, have proved in my experience the most deadly artificials. For either trout or grayling the Wickham, or, better still, the land-rail-winged variety of it, usually known as the pink Wickham, dressed on oo hooks, should be tried first as the most likely, to be followed by the silver sedge on oo hook, red quill on oo

hook, orange bumble, and furnace. Another good pattern for smutting fish is Mr. Pope's "Green Nondescript," dressed with starling wings, ginger hackle and whisk, and bright green silk body ribbed with fine flat gold. When wet or paraffined the body is a very dark green black.

For grayling, when taking the "curse," no fly yet dressed has borne comparison with the red tag, or, better still, the improved pattern of that fly invented by the late Mr. Marryat, in which the tag is of scarlet ibis, two blood-red cock hackles, and the body of a single strand of macaw tail, which is a brilliant metallic-blue on one side, and a bright-yellow on the other. When this strand is rolled on to form the body, it gives the appearance of a yellow ground with a fine blue rib running up it. What object, animate or inanimate, hatched in the water or bred in the air, it resembles is a problem not easy of solution. One parting word of advice. With smutting fish, above all, remember the importance of "accuracy and delicacy combined in the first cast."

The field-glass is almost as necessary an adjunct to the impedimenta of a chalk-stream fly-fisher as it is to the deerstalker or to the modern soldier on campaign. The *dilettante* may be excused from burdening himself with

The dry-fly fisherman's field glass.

it, and the most conservative of the old school may indulge in a harmless sneer at these new-fangled notions ; but the enthusiast, when prosecuting his studies of fish feeding, will soon discover that its use has added much to his knowledge of the habits of the fish and the conditions under which his floating fly is taken by the feeding trout or grayling.

A few remarks as to the form of glass to be selected may not be out of place. Although when purchasing it is obviously wise to equip oneself with the latest and most approved pattern, yet any ordinary achromatic field-glass of moderate power will serve at a pinch. Optical instruments generally have been revolutionised during recent years, chiefly through the scientific researches of Professor Abbé, of the University of Jena, at whose suggestion a well-organised factory was established to make the special kinds of glass which have so vastly increased the efficacy of all lenses. The great house of Zeiss, at Jena, first made microscope objectives, eyepieces, and photographic and other lenses in accordance with Professor Abbé's formulæ. Their success soon induced other opticians in Germany and Austria and a few in England to follow in their footsteps. The field-glasses are made in various powers designated by their magnifying capabilities, and for the purposes of the dry-fly fisherman,

those magnifying six or eight diameters are preferable.

At the first cursory glance the angler will at once realise that one great advantage of the glass over the naked eye is that, while all objects not nearer to him than, say, ten yards are clearly defined, those at a considerable distance are equally distinct, and hence he can spot rising fish, insects floating on the water or flying in the air, without any trouble of adjustment or alteration of focus. If he is using the Zeiss binocular he will see that the increased stereoscopic effect will, after very little practice, convey to his eyes an accurate notion of the relative distances of the various objects in the field of vision.

An object just under the surface of the water will have a blurred outline, while at a moderate depth it will be almost invisible. This is not a disadvantage to the dry-fly purist, and is due to the lenticular continuation being corrected for use in air. He can see further and more distinctly into the water without the glass, because the human eye has considerable power of adapting itself to the medium through which it is working.

As soon as the eye is educated to the use of the glass, the student will discover that it is a great assistance to him in examining and weighing in detail the varying conditions under

which the fish take, or abstain from taking, surface food. He will have no difficulty in differentiating the orders or families of such insects as are familiar to him, and in feeling certain whether the flies on the surface of the stream, or rising from it, are Ephemeridæ, Trichoptera, or Diptera. It will perhaps come as a surprise to him to find, too, that at a distance of twenty-five to thirty yards he can, with the glass, separate many of the genera, or even species of the same genus. Thus such well-known flies as the Mayfly, Turkey-brown, yellow May dun, olive, iron-blue, pale-watery duns, blue-winged olive, and their respective spinners will be unmistakable, and further experience will add many of the Trichoptera and Diptera to this category, besides enlarging the distance at which they can be distinguished.

Prolonged study of fish feeding will be one of the most fascinating parts of the work, which may serve to elucidate many questions which are now imperfectly understood. There cannot be much doubt as to whether they are bulging at nymphæ under water or sucking in the winged sub-imago or imago, when each dun or spinner can be distinctly seen floating down the run in which the fish is feeding. A trout taking "curses" one after another and letting duns pass unnoticed can be offered an imitation

of the insect, on which it is thus seen to be feeding, with the greatest confidence. Then, too, in the many cases where a trout or grayling is feeding indiscriminately on flies of many sorts, the importance of the precise pattern to be used is obviously not so great as we are generally given to imagine.

The best lesson of all, however, is to be learnt by watching a past master casting over a rising trout. Place yourself in a comfortable position whence the whole performance can be seen, and be quite certain that your glass is accurately adjusted for the distance between your eyes, and critically focussed. Study the action of the fish when taking the natural insects; note which are the species on which it is feeding, see what is the range of its movements and whether it swims up to meet the fly or drops back with its nose to the floating insect before taking it. Then get your friend to commence operations, and you will soon discover some of the reasons why an apparently perfect cast is often unsuccessful in rising the fish. The clear image given by the glass and the magnification of details will reveal imperfections which are quite invisible to the naked eye.

Your friend thought this cast was a delicate one, but you have pronounced it in your opinion rather a bungle, causing a decided

splash as it landed on the surface. The fly was as well tied as possible, and of the latest and most approved pattern, yet when seen floating down near a natural insect you realised how heavy, opaque, shapeless, and lifeless an object it was after all. Perhaps the fisherman will hazard the assertion that the fly does not, as far as he can see, drag, and he will be disappointed when you describe its erratic movements as viewed through the glass. Instead of floating down at a uniform pace with the stream, you can see it suddenly race for a few inches, then gradually slow down and travel steadily for a short distance ; then, just as the fish is in the act of taking it, stop altogether, and cause the trout to *come short*. At times it will veer round and float tail first, and in some positions will turn a complete somersault. In fact, its eccentricities seem endless, and each of them is sufficient to cause a shy trout to sink down in the water half afraid, and let several natural insects go past it untouched before its confidence is sufficiently restored for it to resume its interrupted meal.

Mr. W. H. Pope on studies of fish feeding.

Mr. W. H. Pope writes :—" One of the " " charms of dry-fly fishing among the various " " open spaces and cuts on the shallows is to " " watch the effect of the artificial on trout in " " position as it floats over them. An experi-" " enced angler knows instinctively a fish "

“likely to rise at a floating fly, although it”
“has not been actually seen to take a natural.”
“At the first cast, perhaps, as the fly comes”
“sailing down over it, it may just turn its”
“head as if to acknowledge the compliment”
“with a sort of ‘No, thanks, not at present’”
“sort of air. At the second offer its fins and”
“body seem all of a tremor, exhibiting symp-”
“toms of uneasiness as the fly approaches.”
“If even then it does not take, the fly may be”
“offered at intervals and perseverance re-”
“warded by success. If, however, the artifi-”
“cial produces no responsive thrill, it may”
“safely be concluded that the fish is not”
“likely to take.”

“Supposing the trout are really rising on”
“these shallows, to see them come gently up”
“and suck in the fly is one of the prettiest pos-”
“sible sights to an enthusiast. The whole”
“scene is then enacted before the angler’s eyes”
“from the Temptation to the Fall. But, un-”
“fortunately, another scene is often portrayed”
“when the fish flies for its life to the nearest”
“weed-bed the moment the cast falls on the”
“water, leaving the fisherman all disconso-”
“late.”

CHAPTER VII.

CIRCUMSTANCES AFFECTING SPORT.

Influence of
weather on
sport.

OF all circumstances usually credited with exercising an influence, prejudicial or beneficial, over the angler's sport, the state of the weather is, according to the works of most authorities on the subject, the predominant one. Although it cannot be denied that the force of the wind, its direction, the state of the atmosphere, the presence of sun or cloud, rain, and the ever-varying effects of light, are conditions to be considered in estimating the probability of good or bad sport on any one day, yet they are not the all-important factors that some eminent angling authorities would lead us to believe. If this is true (and I hold it to be true) of wet-fly fishing, it is ten thousand times more so when treating of the dry-fly fisherman's art.

To find a rising fish is the first problem, and the fish cannot rise until the insects on which they feed are to be found floating on the surface of the stream. They seldom rise well unless these insects are plentiful, and it may be

safely argued that the most important factor in determining the dry-fly fisherman's chance of success is the presence in considerable numbers of the Ephemeriidæ, Trichoptera, Diptera and other winged insects. This is called by anglers *a good hatch* of fly.

The word *hatch* is a convenient one, and it is here used in the above sense ; but it must be understood that it is a misnomer. The meaning of the expression *hatch* is the metamorphosis from ovum to larva, or the change of state effected by the larva emerging from the egg. This metamorphosis takes place with all Ephemeriidæ and Trichoptera at the bottom of the river while of the other fishing flies the Diptera are hatched some in the water and others on the land. The Alder has a somewhat curious life history, as the eggs are laid and hatched in the sedges, the larva lives in the water and the pupa on the land. The life history of these insects is treated fully in "Dry-Fly Entomology," and the angler desirous of studying that branch of the subject is invited to consult its pages. As used by the angler, however, the word *hatch*, if applied to duns, signifies the first appearance on the surface of the sub-imago after it has split open and struggled out of the shuck or envelope forming the outer skin of the nymph. When applied to spinners, it refers

Definition of
"Hatch of
Fly."

to the falling on the water of the imago after the duties of reproduction have been fulfilled. In respect to the Trichoptera in some genera and species it is applied to the imago emerging from the pupa and in all to the visits of the imago to the water for the purpose of laying the eggs.

It is surprising that so little attention has been devoted to the hatch of duns by entomologists or anglers. Considering that their sport is so largely dependent on this point, it is a source of astonishment that dry-fly fishermen should not have made serious attempts to work out the conditions under which they may expect either a plentiful or a sparse supply of floating food for the fish. Nothing but continual observations made simultaneously in different streams and different parts of the same stream on definite and identical lines, carried on from season to season, can elucidate this question, and the results should be methodically arranged for careful examination and consideration.

Temperature
of air and
water as affect-
ing the hatch
of duns.

I have devoted some attention to the subject, and have from time to time propounded in my own mind theories to account for the prevalence of Ephemèridæ in the sub-imago state on some days, and its comparative scarcity on others. At first I fancied the temperature of the air was a controlling influence.

This theory, however, was soon disproved. Then the idea occurred that the temperature of the water or the relative temperature of the air and water might have something to do with it. To work out this theory during two years when at the river-side I invariably took on each day two or three simultaneous readings of two thermometers, one registering the temperature of the water, and the other that of the air. The result of these experiments was to strengthen a theory I had conceived, that whenever the air temperature fell below that of the water the hatch of duns ceased. I still believe that as a general rule this theory holds good, although my belief in it was seriously shaken on the 3rd December, 1886, when, on a fine cold moonlight evening, with the air temperature at 30° , and that of the water at 36° , olive duns were hatching freely, the grayling taking them, and my friend hooking fish after fish, only losing them one after another owing to his line freezing to the rings of his rod. After this experience I abandoned taking temperatures as unlikely to lead to practical results. As before said, however, the subject is worthy of consideration and study.

In the early spring, an inquiry as to sport, especially on the Hampshire chalk streams, generally seems to invite such answers as, "This cold wind quite prevents the fly from

North wind as
influencing
sport.

hatching"; or, "The fish never take well in a northerly wind"; or, again, "How is it possible to do anything with the wind directly down-stream?" Or you may hear from a veteran regrets as to the deterioration of climate in the good old country, and fervent prayers for a light southerly breeze. When philosophically considered, what does all this amount to? Three distinct hypotheses, all more or less erroneous—first, that with north wind the fly does not hatch plentifully; second, that what does hatch is not freely taken; third, the difficulty of throwing up-stream in the teeth of half a gale. In a previous chapter I have shown how the difficulty of casting against the wind can be overcome, and my present object is to deal with the first two points.

As to the first point, a northerly wind in the spring usually brings with it a high barometer and a low thermometer. If these two causes are sufficient to reduce the temperature of the water to a point only two or three degrees above freezing, flies of the Ephemeridæ family do not as a rule hatch in any considerable quantity. In such weather, too, the water seems extraordinarily clear, so that every weed and patch of gravel, and every trout or grayling lying or moving on them, is distinctly visible to an angler stand-

ing on a bank. It is, however, held that this extreme clearness of the water is only apparent, being due to the dull leaden colour of the sky and to the density of the atmosphere, and that it does not of itself indicate that to the fish looking upwards objects are abnormally magnified or more easily distinguished than under ordinary circumstances.

The question of temperature is not a matter of conjecture, but can be determined by experiment. There are few days in spring during which, between the hours of eleven in the forenoon and three in the afternoon, a thermometer plunged in the coldest of chalk-streams will register less than 40° Fahr. At this temperature the early duns, both olive and iron-blue, hatch freely, and an angler neglecting occasionally to keep on throwing over rising fish will be enabled to note the number of these insects floating down the stream. He will at the same time probably improve his chance of sport, no mistake being so continually made by modern fishermen as that of casting in rapid succession time after time over a feeding fish, until sooner or later some slight mistake rouses its suspicions.

To quote from actual personal observation, let us take May 8, 1885. It was a fresh day, with north-westerly wind, and so cold that an idler on the river-bank would find it difficult to

keep his hands warm. Yet the number of flies hatching was, even to one accustomed to the plentiful supply on chalk-streams, something astonishing. The trout seemed to have appetites which could not be appeased, darting about in all directions, making heavy bulges under water as they took the nymphs rising from the bed of the river, or just breaking the surface as they seized the fly at the instant of its casting off the envelope in which it had passed the nymphal state. This should of itself indicate the fact that it was not a successful day, and that the trout could not be persuaded to look at any artificial fly, as their every movement was to secure the active nymph rising to the surface and before emerging from the *shuck*.

Imitations of the larvæ and reasons for their non-success.

This failing of feeding on immature insects is said to increase from year to year, and for the dry-fly fisherman it is a most unfortunate one. To dress an artificial representing the larva or pupa is by no means an impossible task. Having overcome his natural repugnance to descend from what may be described as *high art* to the less scientific sunk-fly style of fishing, and having succeeded in turning out a good imitation, the amateur is prone to imagine that he has solved the problem, and can, by fishing it under water, make sure of a respectable bag at a time when the fish are

bulging at the nymphs. Alas! how woefully he is *désillusionné*. The fish will not look at this, although it is an admirable representation, both in colour and shape, of the natural insect. And what is the reason? To elucidate this, take a handful of weed from the bed of the river, and extract from it three or four specimens of the Ephemeridæ nymphæ with which it abounds. Place these in a tumbler of clear water, and patiently watch. Those that are nearly ready to hatch, or are rising to the surface for that purpose, seem positively electrified, every feeler or leg, and every fold or rib of their bodies, moving in an eccentric but continual motion. How is it to be expected that a shy fish like a trout, which from painful hourly experience is warned to use the keenest of all the senses with which it has been endowed by nature, viz., its sight, for its protection, should mistake that motionless, supine compound of dubbing, silk, quill, and hackle drifting helplessly and lifelessly like a log down the stream, for the active ever-moving nymph, sparkling and varying in colour at every motion as rays of light strike it at different angles.

As to the second erroneous hypothesis, viz., Hatch of fly with northerly wind. that the fly when hatched is not taken freely during a prevalence of northerly winds; when the wind is down-stream the fish rarely have

a fly put to them right, and hence appear less suspicious than when the wind is more favourable. North wind is generally a cold wind; a cold wind is an iron-blue wind; the iron-blue is the favourite fly of the fish in chalk-streams. Carry your memory back, or (if you are sufficiently methodical to keep a diary) refresh it by a reference thereto, and see how on the 18th of April, 1885, a bitterly cold day, with a strong wind from that unpleasant quarter, the fish rose well from ten or eleven o'clock until four; how every fisherman on the water secured more or less sport; how your own bag contained two or three brace of really good trout, through your fortunately securing that little bend or corner where the north wind was favourable; and how, when returning to your homely quarters, tired and stiff from the unaccustomed exertion, and your shoulder aching from the pressure of the strap of your creel weighed down by a goodly load, it just dawned on you that after all fish do sometimes rise well in a down-stream wind, and when they do so take hold of the fly in right earnest, so that a fair proportion of hooked fish are landed.

Contrast this with the 21st of April, only three days later, when your first glance out of doors showed you a dull, leaden-coloured sky, with heavy banks of drifting clouds

travelling before a southerly gale. Remember how the usually smooth portions of the river were lashed into crested waves by the force of the wind blowing in the opposite direction to the current. You then wandered for miles, watching in vain for either fly or the welcome ring of rising fish, and returned at night weary and disheartened, with an empty basket, to find every one of your *confrères* in an equally dismal plight.

The further this reference to your diary or other reliable data is carried, the more you will be inclined to doubt whether in the chalk-streams running from north to south the time-honoured condemnation of a northerly wind is not a worn-out and erroneous impression handed down from generation to generation. A southerly wind, which in these streams blows directly from the sea, is usually a cold, damp, and unpleasant one, bringing with it alternate squalls and heavy rain. During the showers the dry-fly fisherman is more inclined to take shelter than watch for rises and cast to them. In the intervals between the showers the rough up-stream wind is continually blowing the natural fly over and over in strange and unnatural motions, or forcing it upwards against the stream. Shy fish never rise freely at flies comporting themselves in this eccentric fashion, but seek their food in comparative safety below the surface.

Yet on the very next day, when "rude Boreas" has been running riot, each and every one of you, comparing notes in the modest village inn over your post-prandial tobacco, will revile your atrociously bad luck in getting such weather. That delightful old colonel in the corner will again treat you to his special grumble on the dire effects of the Yankee predictions, or the School Board, or some other new-fangled and even *Radical* notion (pray pardon the word—no politics), on the climate of our well-beloved fatherland, and tell you how in olden times, during the "forties," the weather in spring was a compound of warm, refreshing showers, delicious, bracing, light southerly breezes, and long spells of beauteous sunshine, and how it is only since the advent of the transatlantic cables that these dreadful north winds have been introduced to damp our ardour. Do you think he really believes in the terrible theory he is advancing? Do you honestly think that the prevailing wind and weather during successive seasons have not followed the immutable law of average; and, above all, do you think that the same beneficent Providence does not now, as much as heretofore, adhere to the eternal fitness of things, and send in due season heat and cold, frost and rain?

East wind as
influencing
sport.

In southern streams the east wind is not, as

a rule, a favourable one ; it seems generally to be accompanied by haze, and in hazy weather duns do not hatch freely. At the same time, however, it sometimes happens that with east wind a fair hatch of fly, especially of "curses," during the spring, is seen, and the fish take well. Light winds are preferable to heavy ones. Just sufficient breeze to cause a slight ripple on the surface of the water is the *beau ideal* as to force. Less than this renders it difficult to approach the water without scaring the fish, and with more than this it is not easy either to spot the rise, or, what is quite as important, to see your own fly floating down over the fish.

When the wind is very strong and the surface of the water lashed into heavy waves, fish do not rise well. The reasons are not difficult to find. The natural fly is whirled over and over, and at the moment the fish is on the point of securing it, is as likely as not blown off the surface of the water. After a few of these unsuccessful attempts it finds it a less troublesome, and more efficacious method of appeasing its appetite to sink gracefully into the depths of the weed, and there continue feeding on the shrimps, snails, caddis, or other larvæ, their movement through the water not being affected by the sudden gusts of wind. Grayling are even less inclined to feed on the surface in tempestuous weather ;

in fact, they seem generally more affected by change of weather than trout. Of course fish taking during a gale of wind are more easily approached, will stand coarser gut, will take larger flies, especially when floating and cocked, and generally are more easy to get on terms with than in calm weather.

The notion prevails among angling authors, and even among entomologists, that the Ephemeridæ do not hatch freely in northerly, easterly, or north-easterly winds; and Pictet, whose work on this family is not only of the very highest literary character, but bears on every page the unmistakable impress of careful and truthful examination, states from his own observation, "Elles naissent peu lorsque règne le vent du nord."

My experience of the Test, and especially of the part of it fished by the Houghton Club, distinctly contradicts this assertion, and I think I may say without exaggeration that every abnormally large hatch of the smaller Ephemeridæ witnessed by me has occurred on days when the wind has been northerly or north-easterly. The Test is in this respect no exception to the general rule, as many anglers on other south country chalk-streams have made observations at my request, and their results confirm my own experience. It must be remembered however, that Pictet lived on the north coast of a lake.

Bright sun in calm weather is often fatal to success ; this is possibly due to gut being very visible in the strong light. Sometimes, however, even on a bright, hot, calm day, there is a chance of killing if the angler will use small flies on an extra long cast.

Bright sun as influencing sport.

It may be noted here that among the best modern exponents of the art the use of drawn gut has become obsolete. The finest natural, *i.e.*, undrawn gut, is at once fine enough to rise and strong enough to hold the large trout and grayling of the chalk-streams. It is, however, necessary to fish with longer casts, say, three and a half yards in ordinary weather, three yards when casting against a strong wind, and four yards in calm airs and bright sun. Very small flies, especially if sparsely dressed, never float well with a short cast. These remarks apply to surface fishing only, as probably with sunk fly the finer the gut the better the chance of rising and hooking the fish.

Drawn and undrawn gut.

During and after rain fish often rise well. For some days beforehand they appear to be waiting for it, and either do not rise at all, or if they do, indulge in an occasional peculiar *corky* sort of rise, not taking any fly on the surface, but coming up as if for air, and almost immediately turning over and diving down again. The moment the rain commences to fall the fish commence rising, and although, before

Rain as influencing sport.

the days of paraffin, it was difficult and hard work to dry the fly, it was worth the exertion for an angler really desirous of getting sport. Nothing is so deadly as a perfectly dry fly floating cocked over a rising fish in wet weather, and since the introduction of paraffin to waterproof the fly, the exertion of drying it has been minimised.

A bad light

And here I am about to embark on the most difficult part, not only of this particular chapter, but of the whole subject. It is, to my mind, so important, so little understood by my brother anglers, and so difficult to express intelligibly, that I feel almost constrained to ask forgiveness beforehand if my meaning is not clear. Among Scotch gillies it is not unusual to hear the expression, "The light's no good," used to prepare the fisherman for a day of despair and disappointment. What does he mean by this description which is best expressed in English by the words "a bad light?"

A peculiar state of the atmosphere intuitively tells him what from his own experience he has had many opportunities of verifying, viz., that the fish will not take. Without being able to offer any reason beyond mere conjecture, I can confirm the truth of his prediction, whether in a Scotch river or loch, whether in a Hampshire chalk-stream or a turbulent mountain-

brook, whether fishing in heavy pools for thirty-pound salmon or whipping for three-ounce Devonshire trout. It would not surprise me to hear that, even when bottom-fishing for roach or barbel, paternostering for perch, spinning for pike, or even bobbing for eels, the same atmospheric conditions would produce the same result, and that in this "bad light" all forms of fishing are alike unsuccessful.

Now what is a *bad light*? It is when the sky is of a uniform grey, dull, leaden colour; when the very light itself seems to have become imbued with this sad leaden tinge; when the water appears unnaturally clear, probably from its contrast with the dull tint of all its surroundings; when every object in the water, whether trout or grayling, whether banks of green weed or patches of gravel between them, is distinctly visible from an extreme distance. Such a day in early spring is cold, and in summer or autumn is oppressive, sultry, and productive of headache and other *malaise* in human beings. I have never seen a good hatch of duns on such a day, nor do I ever remember good sport to have fallen to my lot or to that of other anglers on the same stream.

Such a day is usually the precursor of a change of weather, and fish seem to go off the feed at the first signs of a change, and wait until the change has taken place before coming

on the feed again. Thus, too, after a sudden rise or fall of the barometer both trout and grayling seem for a day or two positively *glued* to the bottom of the river until the result of the warning barometric movement has developed. Occasionally, in the spring after a heavy forenoon with a *bad light*, at the first rift in the clouds when the sky begins to lighten, a change seems to come over everything. The flies commence hatching, and the fish, which were previously lying motionless on the bed of the river, come on the rise, and good sport ensues.

On days when small fleecy clouds are drifting in the sky, when the light is variable and the wind changeable, when one moment the surface of the stream is calm and lighted up by brilliant sunshine, and the next moment a little puff of wind ripples the water and the bright sunlight is dimmed by the shadows of the morning clouds, sport may be anticipated. On such days, however, the fisherman should crawl into position during a gust of wind, wait during the succeeding spell of sunshine, and cast to his fish during the next puff. This advice has been given before in this book, but as it is one of the golden rules to be observed by the dry-fly fisherman who wishes his efforts to be rewarded by success, I will not apologise for its reiteration.

Thunder is said to have the effect of putting

fish off the feed, and this is correct to the extent that when the sky is obscured by heavy thunderclouds rolling and piling themselves up in preparation for the great *dénouement*, there never is anything approaching a good rise. When the air is heavy, hot, and oppressive, when the thunderclouds are tinged with red and the sky has a lurid appearance, when flashes of lightning are seen over the distant hills and the ominous roll of thunder indicates that the storm is approaching, not a rise is seen to break the still surface of the water. At length the storm breaks, vivid flashes of lightning overhead are followed almost instantaneously by heavy claps of thunder, and the rain pours down in a torrent. During the very heaviest of the rain fish often rise well, and although not a pleasant time to fish, yet it is, as a rule, worth the fisherman's while to brave the elements and persevere.

With uniform grey cloud overhead and occasional light showers during the spring, fish generally take well; very often, too, when it is raining lightly throughout the day the best of sport can be had. In fact, in some parts of the Test and other chalk-streams it has become a cant expression that the fish are *silly* in rainy weather. A bright blue sky, with heavy banks of white cloud on the horizon, even if there is not much wind and

the clouds are almost stationary, does not indicate a promising day. It is always well to fish into the sun, and avoid the angler's shadow being thrown on the water. As the sun gets lower in the horizon, the shadows are thrown farther on the river, so that in the evening it is important to be on the eastern bank if possible. Casting up-stream into the wind is preferable to fishing down-stream with the wind, and the work is not appreciably harder.

Fishing
diaries.

It would be possible for anglers to compile a valuable set of data as to the days on which they have been successful or unsuccessful, but to do so it would be necessary for a number to collect and tabulate identical information on the same days in different places. The efforts of the Manchester anglers to induce their members to keep diaries and record circumstances worthy of note, besides information as to the state of wind, weather, barometer, thermometer, the different species of flies hatching, &c., &c., &c., are well directed, and have, I trust, been crowned by success. A useful adjunct to every angler's diary would be what is called the *Beaufort Scale*, giving to each letter of the alphabet a distinct signification of some particular state of the weather, and which is, or certainly was, in use in the reports issued from the Meteorological Office.

On some days fish apparently rise fairly at the fly, and the natural expectation of the angler is, at any rate, to hook a fair proportion, even if he is not successful in landing them afterwards. But no! On such a day, time after time he strikes seemingly at the right moment, and with just sufficient force to drive the barb home, and either has a short run or a turn or two, and away comes the hook; or else he experiences no resistance to the action of striking, indicating that he has not even pricked the fish. A number of men fishing the same or contiguous waters on the same day compare notes in the evening, and find that the experience of one has been the experience of all, with the slight difference caused by the various degrees of shyness of fish in diverse portions of the same stream, due to having been more or less frequently cast over. This unfortunate propensity of rising at the fly, and either not taking it at all or else handling it (or mouthing it) so gingerly as to be insecurely hooked, is technically called among dry-fly fishermen *coming short*.

Before considering the various causes and methods of *coming short*, it will be well to clear away certain delusions on the subject. How often one hears it said, "Confound the fish; I keep on missing them to-day." This is quite

a mistake. Once in a way a fish is missed through the fisherman's wits having for the moment strayed from the object on which he should be intent, and caused him to neglect raising his hand or striking at the rise; but these cases are few and far between, and when they do occur the pluck of the fish is usually distinctly felt. It is not that the fisherman has missed the fish, but that the fish, either by a miscalculation of the speed of the current or of *malice prepense*, has failed to take hold of the bunch of feathers and hook which we believe represents more or less accurately the natural insect.

Striking too quickly.

It is not safe to infer that whenever a fish gets away through being lightly hooked it is due to coming short, as too often the fault is in the angler himself striking too quickly, sometimes even before the fish has taken hold of the fly, and this mistake is usually attributable to nervousness. It is well to note that striking too soon is, like many other bad habits, when once acquired, difficult to correct, and the most phlegmatic and coolest of men are to be excused if they are more or less flustered at the rise of a big fish. The prevailing tendency is to strike too soon, especially with large fish; in fact, it may almost be laid down as an axiom that so long as the fisherman sees his fly it is very unlikely for him to be too late

in striking. I am quite prepared to find that there are many who differ from me on this point, but do not despair of their being converted to my view in the process of time. The discovery of the fact that the fly has been left in the fish's mouth is usually conclusive evidence of the action of striking having been too violent.

Coming short is an indication either of the fish taking badly on a particular day or of their being shy, or of a combination of these two disagreeable vagaries. Accuracy and delicacy combined in the first cast over a rising fish will generally obviate this ; at times, too, the use of very small flies will be found efficacious. Thus it will often happen that on one of these disappointing days, with a fly on an o hook, rising fish, one after another, come short ; but on changing to an artificial of the same pattern on a oo or even ooo hook, the fish will be found to fasten. The use of so small a hook as a ooo certainly does handicap the angler, and often cause him to fail to hook the fish. When once the barb is fairly home the hold of the smallest hook is as secure as that of the largest, and the former is not so apt to cut out as the latter.

A slow rise is generally an indication of ^{Rising slowly.} taking well, and, in the majority of instances, of a large fish. In the case of a slow rise or

large fish the advice cannot be too strenuously given not to hurry in striking.

Rising quickly.

A quick rise is usually made by a small fish, but occasionally by a very shy one. One is advised to strike quickly or half-volley in response to such a rise, although doubts are freely expressed by many of the past masters whether hurrying the strike does really tend to increase the probability of hooking the fish. Large fish take a fly leisurely and reject it slowly. while small fish, as a rule, snap at it, and spit it out almost as soon as they touch it, especially grayling, and more particularly in north-country streams, where they run small.

Coming short sometimes an indication of shyness.

Another prevalent form of coming short in waters that are heavily flogged, is when a fish, rising steadily to all appearances, comes up to and takes the artificial fly fairly and well in the mouth, and the strike either just scratches or does not touch it at all. A probable explanation is that the fish is highly educated and shy of the gleam of gut. It starts with the intention of seizing the fly ; when close to it, a glimpse of the gut or some other circumstance arouses its suspicion. Having given with its tail the necessary impulse to reach the surface it is unable to check itself and refuse the fly. If able to do so, it then turns short to one side, and in the act of breaking the surface drowns the fly ; but never having taken it into its

mouth, no action of striking can by any possibility hook it.

Sometimes, however, danger is not suspected until it is too late to turn to one side, when I firmly believe that a shy fish simply closes its mouth, and allowing the momentum acquired to carry it to the fly, sinks it in the act of going down. The effect of striking in this case is to miss altogether, or at best to hook it outside; and after losing a fish in this way a small scale is often found on the point of the hook. A confirmation of this theory is that these very small scales are only found on the back of the neck immediately behind the head.

Fish hooked outside when coming short.

I remember one evening hooking a 3-lb. trout, which rose much in this way. I could do nothing with it for a time, and quite imagined it was hooked in the tail or one of the fins. On landing it, however, the hook, a 00, was found firmly fixed outside the snout, fairly between the nostrils, and it would appear impossible that a fish taking the fly fairly in the mouth could be hooked in this remarkable position. A friend suggests two additional possible causes of *coming short*, viz., (1) playful rather than feeding humour of the fish, and (2) the smallest drag, which is imperceptible to the angler but noticed by the trout, and causes it when intending to take the fly either to miss it or get lightly hooked.

Grayling coming short.

Grayling are more hardened offenders than trout in respect to coming short, and it frequently happens that even when rising at the natural fly they fail to secure it. This is probably due to their remaining at a lower level when feeding and coming up almost perpendicularly at a fly, which may make it difficult to calculate the exact angle at which they must rise to reach the precise spot to which the insect has been carried by the force of the stream. Whether they have caught or missed the fly, they descend in a vertical direction to the same depth and the same position as they occupied previously. Another, and to my mind inexplicable, peculiarity of grayling is that for hours together every rising fish will come short, and very possibly not a single one be landed. Suddenly, without any variation of weather or other apparent cause to account for the singular change, every one will fasten, and the basket be filled in a comparatively short space of time.

Coming short in bright sun.

In bright sun and clear water fish are apt to come short, thus giving another proof of this provoking incident being due to shyness. A fish coming any distance to secure a fly, either natural or artificial, is usually an indication of feeding well; but sometimes a trout will drop, tail first, down-stream for yards with its nose almost touching the fly, and after all

refuse it, and return to its former position. This, again, is probably a case of shyness, or of suspicions having been aroused by some abnormal circumstance. In these cases it is suggested that the fish has generally satisfied itself that the particular pattern is a fraud. It may repeat the operation with a change of fly, and sometimes fasten after a dozen changes.

On a certain private piece of water on the Test, which was in those days not overdone with anglers, both the late Mr. Marryat and I found that the fish continually came unhooked in a mysterious manner, so much so that we gave to this particular style of losing the trout the name of the estate.

Rising fairly and slowly at the fly, and seemingly taking it well, the fish, when struck, goes off with a rush, and you congratulate yourself on being *well into it*; and just as you begin to hold it hard the hook comes away. If this happened once or twice, it would provoke no special comment; but when it occurred to both of us as many as twenty times in one and the same day, the inference seemed to point to its being a case of coming short. Further evidence of this contention is found in the fact that an examination of the hook often reveals the presence of a very small scale firmly fixed on the point, a proof of the fish having been hooked outside.

My good friend, Mr. W. H. Pope, has set out in brief his experiences extending over many years on the circumstances affecting the angler's sport. He writes :

Mr. W. H. Pope on "Circumstances affecting sport."

"The dry-fly fisherman's chance of sport depends mainly on (a) a sufficient supply of insect food on the surface; (b) a healthy and exhilarating condition of the river, upon which depends in a measure the good appetite and free rising tendencies on the part of the fish, and (c) an even head of water in the river.

"There are few days in the year when there is not sufficient fly on the water to cause a rise of fish, although the time of its appearance varies with the season of the year. But the best rises of duns at Dorchester, as elsewhere, have generally been in cool weather during light to moderate winds, from the N.E., E., or S.E., and at mid-day, even on cold days in spring, good hatches are sometimes seen. Occasionally excellent rises occur with moderate down-stream wind (which at Dorchester is from S.W.) on cloudy days with rain threatening.

"Mid-April, May, the first half of June and September, are generally the best months for duns; all the other usual forms of insect life being on the river more or less every day when the weather is seasonable. Chironomus, one of the midges found in swarms on the Lower Water at Dorchester, comes on about the last week in July and continues daily *en évidence* to the end of the fishing season if not later.

"In July, and generally during dry, hot, bright weather, there is a scarcity of duns in the day, though usually small flies (Diptera) are plentiful. When the sun gets off the water there is sometimes a rise of pale, watery duns, and the keepers frequently report good rises of fly early in the morning before the angler is about. During the heat of the summer the fish do not seem in feeding humour, although occasionally they come on to spinners, smuts, &c., in the evening.

“ I suppose the stale condition of the stream affects their
 “ appetites, as I have noticed that if the river chances
 “ to be frequently flushed by rain water in July or
 “ August some good sport has been obtainable.

“ Injudicious weed-cutting is a common cause of fly
 “ failure, notably among the Ephemeridæ. The worst
 “ days for sport with me have been hot, bright days in
 “ dry weather with a strong wind.

“ I have noticed that, from July 1st to the end of
 “ August, fish prefer small flies, such as smuts, curses,
 “ and other Diptera, to duns, although if there are duns
 “ on the water they often commence feeding on them
 “ and finish with small fly.

“ The fishing is usually good at the end of May in
 “ parts where the May-fly itself is not present, probably
 “ because at that time of the year there is an even head
 “ of water in the river again after being out on the
 “ meadows, and also because there is usually a plentiful
 “ supply of insects from morning to night.

“ I think fish certainly take fly with more confidence
 “ when the wind is down stream than when it is blow-
 “ ing up stream. Contrary to the experience of many
 “ fishermen, I have often had good sport among smut-
 “ ting fish in calm thundery weather, although they are
 “ apt to come short.

“ There are no rules or regulations which will help
 “ us to hit off the right day for fishing. To show the
 “ inconsistency of all data, instances are common in my
 “ diary when, under certain conditions of weather, such
 “ for example, as a cloudy, windy, threatening day, there
 “ has been a good rise of fly and fish. Two or three
 “ days later under precisely similar conditions there has
 “ been scarcely any fly and not a fish moving. And,
 “ again, I have seen the anomaly of a fair rise of fly but
 “ no fish feeding.

“ The fly-producing capabilities of different rivers
 “ vary much, some showing the best hatches in spring,
 “ others in early summer, and others again in autumn.
 “ Several of the Hertfordshire streams I have fished
 “ hardly muster a dozen duns *per diem* in summer, and

“after the Mayfly the fish are notoriously bad risers.
 “The question of fly food depends largely on the kind
 “of weed in the river, and where the American weed
 “(*Elodea canadense*) flourishes I believe fly is scarce.
 “It would seem, however, that celery, water crowfoot,
 “starwort, &c., always contain plenty of Ephemeridæ
 “laruæ, at least in all chalk streams where I have fished
 “in the South and Midlands.

“Trout often rise well in showery weather, but the
 “rise ceases during heavy rain. I have never had
 “much sport nor seen much fly when the water has
 “been lashed into waves by the wind. Good hatches
 “of duns often occur where the weeds are being cut
 “and floating down at intervals. Possibly the meta-
 “morphosis of the Ephemeridæ may be mysteriously
 “influenced by the stream drawing more freely through
 “the weed beds.

“The evening rise is always uncertain, but during
 “the last fortnight in June when the weather has been
 “right, I have seen some of the biggest shows of small
 “fly at Dorchester. After a week or ten days of favour-
 “able weather for evening fishing the spinners fall off
 “greatly in numbers, probably because no quantity of
 “fresh fly hatches and the old crop is exhausted.
 “Again, it sometimes happens that after a hot day
 “small fly may appear in the air in profusion, but not
 “fall on the water, and so the rise of fish is most
 “disappointing.

“The foregoing conclusions are drawn from a care-
 “fully compiled diary extending over a period of ten
 “years, which deals with my experiences on most of
 “our best chalk streams. It is probable that any un-
 “seasonable condition of the weather is prejudicial to
 “sport, and it is certain that the whole question of sport
 “or no sport at any given time can only be forecasted
 “on a very general basis.”

CHAPTER VIII.

SELECTION OF FLY.

THE diversity of opinion on this branch ^{The colour question.} of the subject among dry-fly fishermen is due in a great degree to their being divided on the question of the first principle which should guide them in making their selection. Some say that colour is the all-important factor; and of these, a large proportion give fish credit for the capacity of differentiating the most delicate gradations of tint. There are some observant anglers who have advanced the theory that trout are colour blind, and the majority of these seem to be of opinion that they have, however, the power of discriminating the degree of "light and dark" in the fly. There are also many who are unable to endorse what may be styled the *exact shade of colour* theory, and are equally reluctant to accept, on the evidence proffered, the dictum of those who aver that fish are colour blind. This third school comprises a number of dry-fly fishermen, who think that, provided the

artificial is fairly like the natural in colour, size, and form, the particular pattern or shade is of less importance than the method of presenting it to the fish.

Twenty years ago, like my late friends Mr. Francis Francis, Mr. Marryat, Mr. John A. Day, and many others, I was a firm believer in the *exact shade of colour* theory, *i.e.*, that the artificial selected should match the natural insect as closely as possible in the colour of the wings, body, legs, and even whisk. Mr. Francis Francis, unfortunately, died before we had much opportunity of threshing out the question. Mr. Marryat in the latter years of his life thought that "accuracy and delicacy combined in the first cast" affected success or non-success in a greater degree than the shades of colour in the artificial. Mr. Day quite changed his opinion on the subject and attached but little importance to the colour, except that being a born artist he could not put up with staring contrasts. He had, however, to the last a strong belief in the necessity of observing whether a rising fish was taking dark or light flies and selecting the artificial accordingly.

For myself I am not prepared to discard colour altogether, the evidence of colour blindness in fish not being to my mind conclusive. At the same time there does not appear to be

any convincing proof of the power of fish to discriminate delicate gradations of colour. No one having studied the question of the food of the non-migratory Salmonidæ can fail to be struck by the variety of insects, whether in larval or winged form, Crustacea, Mollusca, &c., present in autopsies, nor can the difference in colour of specimens of the same genera and species be ignored. Hence I must elect to be enrolled in the category comprising those who think that, while colour cannot be entirely disregarded, yet the judgment of the angler as to where, how and when to place his fly is of primary importance in reference to his chances of success.

I propose, however, to give for the benefit of my readers an epitome of the various arguments adduced in support of the different theories. I have taken Sir Herbert Maxwell as the exponent of the *colour-blind* theory, and Mr. C. E. Walker, the author of "Old Flies in New Dresses," as denying that trout are "normally colour blind." Two of my friends (Mr. B. W. Smurthwaite and Mr. E. Williamson), both experienced dry-fly fishermen, are firm adherents of the "exact shade of colour" principle. The former has, at my request, been good enough to collate his own and his friend's arguments in favour of this view, and these are set forth in his own words.

The theory of colour blindness in fish discussed

At one of these charming informal Thursday afternoon discussions at the Fly-Fishers' Club in 1894 the question "Are Trout Colour Blind?" was formulated by me. At my suggestion a number of scarlet flies were dressed for the purpose of trying experiments, which resulted in some trout being tempted to rise to these monstrosities and some being killed. Those of us who used these patterns did not, however, consider it safe to base a theory or rush into print on evidence adduced only as the result of a few days' trial by a few individuals.

Sir Herbert
Maxwell's
views.

Sir Herbert Maxwell explained in the *Field* of June 19th, 1897, that he had conceived some doubt as to the capacity of "fish in general, and salmon in particular, to distinguish difference in the colour of objects presented to their view," and made the following proposition with a view of putting his theory to the test:—

"Let some floating Mayflies be dyed of a bright scarlet; they will reflect about the same amount of light as the ordinary yellowish-grey imitations, and let some devoted searcher for truth use one in a southern stream what time the Mayfly is on and the big trout are sucking down the floating insects by scores. If it were found that the highly educated, nervous trout of an English chalk-stream showed themselves as ready to accept scarlet, pink, sky-blue, or yellow imitations as the ordinary green or grey drakes, one might surely argue thence that the whole theory and practice of fly fishing should be subverted."

Having enunciated this proposition, he then proceeded to try the scarlet and blue May-flies

for a single day on the Gade, a Hertfordshire stream, killed a good basket, and no doubt, as he suggests, could have killed more. Two days later, on another Hertfordshire stream, the Beane, the experiment was tried again, and again the angler was successful. Sir Herbert Maxwell sums up the position thus :—

“Next it may be asked, what is the general impression left on my mind by these experiments as far as they have gone? What light have they thrown on the problem of the perception of colour by fish? The fair inference seems to be this alternative—either fish do not perceive the difference between the coloured rays reflected from or transmitted through objects, or if they perceive them they disregard them. If the first alternative be accepted, then nothing is upset except the hypothetical belief in the colour sense of fish. If the second be preferred, then we come face to face with this difficulty, that the extraordinary acuteness of vision possessed by an educated trout is directed wholly to the shape, size, and degree of light or dark in its prey, and not all to its colour. For my own part, after carefully studying the behaviour of these trout in two different rivers, I would not hesitate to put a scarlet or a blue fly, correctly shaded to correspond with the markings on the natural insect, over a five-pounder taking the natural insect, with as much confidence as I should display a brown or a grey one. I do not pretend that there is the slightest advantage in doing so, save the trifling one that the angler is enabled to detect with greater ease his own fly floating down among the natural ones on the surface.”

These experiments are no doubt of interest to those who study the subject. They would have been far more conclusive if, instead of

being carried out on waters which are presumably private and very little fished, and in rivers of which the names only are known to the majority of anglers, they had been tried in chalk streams, such as the Test or Itchen, and on lengths which are flogged throughout the season. In any case, Sir Herbert Maxwell himself will agree with me that the experience of two days during the height of the May-fly season is manifestly an unsound basis on which to found so important a theory as *colour blindness* on the part of the fish.

Mr. C. E.
Walker's
views.

Mr. C. E. Walker, in "Old Flies in New Dresses," devotes a chapter to the consideration of "Colour Perception in Fish," and I would strongly urge all fly-fishermen to read it carefully. Referring to Sir Herbert Maxwell's theory, he cites the well-known fact that "trout have been known to rise at things on the water which were not only unlike in colour to any flies on the water, but also unlike them in shape and gradations of shade." Hence he argues that "the fact that these trout took an abnormally coloured fly is not a conclusive proof that they mistook it for the natural fly, particularly as this experiment was made during the May-fly season when the trout sometimes appear to be quite mad, but are at any rate always much less shy than at any other time of the year."

The probability of trout being able to discriminate colour is supported by the brilliant colouring generally assumed in the breeding season by the males of some genera and species of fish, probably as tending to render them more attractive to the females ; and also by the ability of fish to assume the colouring of their surroundings as an assistance in hiding from their numerous enemies. Mr. Walker further suggests that, if Sir Herbert Maxwell's theory is true, it would not appear to make the fly-dresser's task any easier, because of the difficulty of estimating "the exact relative shade values to this monochromatic eye of every colour."

After a carefully written dissertation on colour sensation and a comparison of the anatomy of the human eye with that of the trout, he arrives at the conclusion that "there is no reason to suppose that the trout is normally colour blind," and adds, "as Michael Forster so aptly put it, 'No man can tell what are the sensations of his fellow-man,' still less, I think, can man say what are the sensations of a trout."

The arguments of the advocates of the "exact shade of colour" theory, as adduced by Mr. Smurthwaite, are as follows :—

"In giving the opinions of Mr. Williamson and myself on the 'exact shade of colour theory,' I believe that Mr. Halford is of opinion that colour is

The "exact shade of colour" theory, by Mr. B. W. Smurthwaite.

"broadly important, but is sceptical as to the necessity for being very precise as to the shade. The two points are so closely connected that some reference to the general question of colour differences is necessary to illustrate my views.

"Sir Herbert Maxwell, in 'Salmon and Sea Trout,' appears to argue that colour is nothing and shade everything. While suggesting that no colour organ has been recognised in fishes' eyes, he quotes from Gunther ('Study of Fishes') a passage which he admits 'seems to indicate that there is an apparatus in the eyes of fish to transmit impressions of colour.' I am informed on high medical authority that the visual part of a fish's brain bears a much larger proportion to the whole *encephalon* than the same portion does to the brain of mammals, and the eye of a fish appears to have a much greater depth of focus. In referring to 'modulations of light or dark-red, blue, or whatever colour may be chosen,' it is not clear whether Sir Herbert means two or three shades, but probably he means more.

"Now let us consider the various shades of green in a forest in the height of summer. There would be say twenty or more, but if the wood were to be photographed you would probably not be able to distinguish more than four colourless shades. In admitting the necessity in part of shade variety the greater argument as to the unimportance of colour fails. I cannot understand how either a human being or a fish can appreciate niceties of shade as easily without as with colour.

"Apart from this, Sir Herbert does not establish a strong case for his main theory. As regards salmon flies, after emphasising the futurity of regarding anything beyond lights and darks, he tells us of his phenomenal success with his own fly, which with topping and Indian crow-tail, gold tinsel body, golden cock's hackle with crimson throat, and wing of tippet and jungle feathers, has very distinctive colours. Again, he says that the blue, purple, claret and

“silver Jack Scott do not kill as well as the parent fly, but surely, apart from colour, these will all appear the same to the fish.

“As regards his trout experience with red and blue mayflies, it must be noted that he used them in highly preserved water over fish mad for their annual treat; besides, blue and olive-green are hardly distinguishable at certain angles of light, and the spinner of the male mayfly is often red of various degrees of depth. How can he differentiate shades of red as he can those of green, seeing that fifty greens could be named to every five reds. In other words, if his colour theory is right, he cannot carry out his theory about shade. It is said that the fish cannot properly discriminate the exact colour of a fly between it and the light, but the cases where the fly is in this position and where there is no oblique ray of light on it surely do not predominate. Even where it does occur there is some light shining through the fly which accentuates colour. For instance, in a dark gold-ribbed olive with light shining through the hackle, the fish probably sees far more colour than the angler looking down at it.

“Why should ‘exact shade’ theorists be written down as cranks? The eye of a living fish in its native element is brighter than the brightest jewel, though when caught this brilliancy disappears. It is surely not too much to suggest that discrimination of shades of colour follows on brilliancy of the eye in all creatures.

“The circumstance of the very existence of fish points to their having very keen eyes, whether for colour, or for size and motion only, as some contend. If they could not differentiate animate from inanimate objects both on and below the surface, they would soon succumb to indigestion. Caddis, cases and all, are found in trout, but this is a choice of two evils; but I have neither seen pieces of straw or stick taken by rising fish, nor have I found them in the numerous autopsies I have made. Fish are said to rise occasionally at thistle-down and reject it at once, but

The "exact shade of colour" theory, by Mr. B. W. Smurthwaite.

"surely it bears a strong resemblance to a Jenny spinner.

"Let us consider the case of a fish with perfect eyes in the clear water of the chalk-streams, and under these conditions I contend that, whatever the light may be, precise shade is necessary. When I have been practically beaten, whether in the morning or evening, and have caught a brace or so, instead of the five or six brace I should have taken, nearly all my luckless victims have had one or both eyes dimmed by a whitish film.

"The argument that the 'exact shade' theorists cannot fish, or that they show themselves, or let the fly drag, is falsified by the fact of the best fishermen being beaten not only at chalk-stream fishing, but with wet fly on lochs and rivers, where good casting and manipulation are not so very important. The avoidance of drag and keeping out of sight, which are the essentials of wet-fly fishing as well as dry, are not very difficult, yet wet-fly experts are continually beaten when there is a good rise.

"A fly of the right size for the density and depth of the water, presented properly but not of the precise shade, will in all styles of fly fishing (especially with wet flies) rise and occasionally kill a fish. It is asked, if one fish is thus killed, why cannot we kill the next? The real test surely is whether the non-colourists are beaten as often as we are. Even the best fishermen are at times lamentably at fault in the result, and yet cannot impute failure to defect in casting or working the fly. A great deal is heard about fish rising for play and not feeding; but apart from bulging and jumping fish, not one in a thousand misses a natural fly—not even grayling coming up from a depth of two or three feet—unless there are two or more flies hatching and it is the species they are not taking; e.g., with a rise of large dark olives and a smaller lighter one, the latter is generally preferred.

"Short rises, we contend, are due to colour inaccuracy or a wrong pattern of fly. The latter is more frequent

“in wet-fly fishing, as the insect the fish are taking
“is not so easily distinguished. With dry-fly the
“general character of the insect can be readily deter-
“mined in the daytime, and in the evening it is usually
“one of the spinners, although a rise of duns does
“occasionally appear at night generally of a larger and
“darker species than in daytime. Red ants, black
“gnats, or other unusual surface food, are easily dis-
“cernible, so that the average man does not go wrong
“as to general pattern. Granted he can fish and is
“often at fault, his mistake must be either in size or
“colour. Considering the perfection of modern fly-
“dressing, the former may be discarded. If, then, it is
“colour, it must be the precise shade, for there is not
“much probability of an experienced fisherman offering
“a black gnat to a trout feeding on Ephemerae or
“making a radical whole-colour mistake. Some
“anglers fish hardly any patterns but red quill or
“gold-ribbed hare’s ear, but *they* are not uniformly
“successful.

“Mr. Sydney Buxton, in the *Nineteenth Century* for
“January, 1899, says that Sir Edward Grey fishes only
“red quill, grey quill and black spider, and that he
“(Mr. Buxton) uses olive dun, grey quill, Wickham,
“silver sedge or alder. Sir Edward evidently despises
“olives of all shades, and Mr. Buxton only goes in for
“one. If he uses one pattern and colour only for the
“various blue-grey spinners and the various blue-grey
“and blue-green newly hatched flies, and is never at
“fault, much of the ground is cut from under my feet—
“but I know no one else who is in this position.

“Colour is, of course, not everything. Thus Mr.
“Buxton’s ‘red spinners, well dried and cocked,’ and
“Mr. Dewar’s* double-winged red quill should be
“dressed with flat wings, as the spinners, whether spent
“ladies or moribund males, surely do not go down the
“stream like little ships as the newly hatched flies do.
“Mr. Dewar ridicules the ‘man with the paint box.’

* “Book of the Dry Fly,” plate IA, p. 93.

The "exact shade of colour" theory, by Mr. B. W. Smurthwaite.

"I have had long talks with this latter gentleman, and he has painted flies to alter the shade, and if once he gets his colours *fast* more will be heard of him. Mr. Dewar says (on page 150 of his book) that 'trout are much easier to deceive in dusk and semi-darkness than in daytime.' The deception can only be in colour, and hence when not deceived they discriminate colour. Mr. Buxton, although he only uses six flies, says that 'the exact counterpart of some insect that is, or might be, on the water,' should be used. I was in hopes that the word 'exact' referred to colour, but he says later: 'Limit your patterns as much as you can' and 'the standard pattern will serve.' Pray what is the *standard* olive?

"Go to half-a-dozen shops for red quills, and you will get six different shades of bodies and legs, claret, brick-red, terra-cotta, foxy, deep-ginger and ginger. Will all of these and the common red-spinner with crimson silk and gold ribbing (some with red tails, others with white tails), kill equally well when any spinner, not the jenny, is on the water? Such is not my experience, nor should it be expected unless fish are colour-blind. To convince the reader that they are not absolutely colour-blind let me refer to the number of times I have experimentally tried black gnats over fish rising at Ephemera at a time when there were no black gnats about, and could not stir a fish. The black gnat was selected as the greatest contrast in colour to the duns or spinners, A change to the wrong shade of olive would rise them short, while with the pattern which under a lens appeared the right shade I could catch them. On an evening after a big rise of iron-blues the jenny spinner and claret quill, spinners of the male and female iron-blue will be on, and in my experience you may as well throw your hat in as expect to catch them, say, with a foxy-red quill.

"Fish are, no doubt, at times killed with patterns of totally different colour to the natural one on the water. Thus with a hatch of olives I have only got

“ short rises to an inaccurate one, and killed perhaps
“ with a ‘ Wickham ’ or ‘ Head’s Fancy.’ There have
“ probably been Trichoptera on the water too, and these
“ patterns have been fair imitations of them.

“ Trichoptera vary in colour as much as the Ephe-
“ meridæ, and how often it happens that one is beaten
“ when the big fish are sucking in flies under the
“ reeds in *quasi*-darkness by using a silver sedge in
“ place, say of a red one !

“ The expression ‘ fancy fly ’ should never be used in
“ connection with dry-fly fishing, for probably a skilled
“ entomologist could find a natural insect the exact
“ shade of every pattern of killing artificial fly. One of
“ our difficulties is, that when a fish is killed with a fly
“ which is not a copy of the rising Ephemeridæ the
“ idea prevails that it represents nothing in nature and
“ that the fish are insensible to anything but gaudiness,
“ and the probability of the ‘ fancy fly ’ being a correct
“ imitation of one of the Trichoptera is entirely over-
“ looked. Much of this ‘ fancy fly ’ talk has probably
“ arisen from the use of tinsel, which I firmly believe
“ means transparency to the fish.

“ It is said that there is no great disparity between
“ the catches of the man who uses say three shades of
“ olive and one of spinner or red quill, and the special
“ colourists : but it is not so in reality. I have frequently
“ read reports in the *Field* that the fish in the Itchen
“ were all rising false, and a dozen rods perhaps only
“ killed a brace or so. On the same day friends of mine
“ have returned with three or four brace caught say by
“ a Little Marryat in place of a ginger quill used by
“ the others, or with an iron-blue, with amber tips to
“ the legs in place of all blue legs, or with a honey dun
“ hackle in place of a jenny spinner.

“ People say mayfly fishing is easy, and no doubt it
“ is at its early stage when the trout are ravenous,
“ but as its season advances the number of short rises
“ diminish in exact proportion to the care taken over
“ the colour. On the Itchen, during the fortnight which
“ is approximately its average duration, about seven

The "exact shade of colour" theory, by Mr. B. W. Smurthwaite.

"shades are required, and careful examination of the natural fly through a lens will show that it varies about every two days. I am not referring to such bold differences as between the newly hatched female and the male spinner or 'spent gnat,' but between the hatching flies. Did I catch more than others? This is not a fair question, but my friends say that my suggestions pay.

"Of the smaller Ephemeriidæ the books give dark medium, light, blue-winged, watery olives and a few, a very few, other shades. Medium olives bought at different shops are of different shades; each shade may be useful, but this inaccuracy is prejudicial to the development of the art, that is, if my theories are correct. The olives in an average fisherman's fly-box are of a dozen shades at least. It is an ill wind that blows no good, but the strange thing is that the devotee will select any of the dozen shades when he finds what he calls a medium olive on the water. If he kills with it the fish are not rising short. The next day the same shade of fly is up, and if perchance he does not select one of the same shade the fish *are* rising short. Why is it that one day every trout is hooked in the tongue and the next day every one only just pricked? I do not think Hampshire trout vary much in their degree of hunger.

"A fly-dresser has no excuse in straying from his pattern; but when he has to rely on an accurate description of the colour there is a way out of the difficulty. I would suggest to some enterprising member of the Fly Fishers' Club to name, say twenty different shades of flies by reference to the colours of natural objects. It is useless talking of grass-green, apple-green, olive, &c., as there are different shades of grass, apples and olives. Some colours in nature are unmistakable, such as a wall-nut-tree leaf, an olive (meaning the fruit), a swede-turnip leaf and many other natural greens, which appear in the Ephemeriidæ. The manuscript lately presented to the Fly Fishers' Club by Mr. Chol-

“mondely-Pennell supplies the means of making a good start. It contains the memoirs of a fisherman, written about 1794, giving some old and apparently very valuable descriptions of colours, as applied to flies then used, *e.g.*, russet, sheep’s colour, friars’ grey, crane colour, &c.

“Phelp’s olive, for example, seems inimitable by the average professional dresser, most of them putting too much yellow into the dye. From the same patterns each dresser gives a different shade, and probably each thinks his own correct—each would rise fish short, but none kill properly except the original. Similarly with the other olives, I find that a short rise is the result of my not having used the lens on the artificial in the box, and hence not matching the shade. There are many other shades with more yellow and red in them, such as wet sea-sand colour, oatmeal colour, new split-oak-wood colour and dry-sand colour, and yet, as before said, the Little Marryat perhaps will kill when the ginger quill or Flight’s Fancy will not, and *vice versâ*. One shade will kill, while the others only produce short rises.

“If my theory is right there should be no such thing as short rises; if the fly is wrongly presented the fish will not come up at all, and if it rises the size cannot be far wrong; hence the failures of those who can fish are due, in my opinion, to faults in colour and in the precise shade of colour. To sum up the question, the reader should put the frequent experiences of the fishing world as to short rises against the one or two happy moments of the scarlet mayfly man, and I submit the manifest conclusion will be that the latter theory, if persevered in, will lead to misery.

“I fear the question of colour in salmon flies does not come within the scope of *Dry-fly Fishing*. I wish it did, for I think it a crying shame that a lordly fish like the salmon should be put on as low a platform as the man whose eye for beauty of colour combination and taste in colour shades would not be offended if his wife put on the head-gear of one of Albert Chevalier’s

“*donas* in place of a Bond-street bonnet. I should like
“to argue for the fish.

“B. W. SMURTHWAITE.”

General re-
marks on
selection of fly.

Whether the angler, then, is convinced that fish are *colour blind*, or that they can distinguish the smallest variations of shades and colours, or if he holds one of the many opinions between these extremes, he will probably not be contented without a considerable variety of patterns in his book or box. In offering him advice as to his selection, one is confronted by the knowledge that each has his own particular fancy patterns. If one of these is successful it is another argument in favour of its efficacy. If it fails to rise fish excuses are not difficult to find; it did not float well, was not cocked, was not accurately placed, or the trout was set down by the first cast. On the other hand, when fishing a pattern which he does not affect, a moderately dry fly placed somewhere in the vicinity of the rise is sufficient to justify his declaring that, as he predicted, it is the wrong fly.

It must be clearly understood that I do not pretend to be able to predict that a particular pattern is likely to be successful under particular conditions. My object here is to give for what it is worth the benefit of experience gained during many years of dry-fly fishing on many rivers. I can be more precise

than most, having kept a fishing diary for nearly a quarter of a century, recording the weight of each fish, the fly which killed it, and frequently particulars of the insects on the water, the state of weather and other details. My readers must understand that, in reference to the "selection of fly," what is given is not advice, but the patterns suggested are those which in the experience of my friends and myself have proved efficacious under specified circumstances and at specified seasons.

The data are mainly derived from club or subscription waters, where the education of the fish has reached a high standard, probably from their having acquired from bitter experience a fair notion of the dangers lurking behind the seemingly toothsome insect. Opportunities of trying the more favoured localities, where a fisherman's visit is a rare occurrence and the flash of gut an unusual circumstance, have not been numerous. Where I have done so, it has ever appeared that the selection of fly has been of less importance, and accuracy and delicacy of greater importance, but that, above all, keeping out of the keen range of vision of the fish—whether the angler or his flashing rod—has been an absolute *sine quâ non*. In fact, it appears that the effect of education on the fish, or, in other words, the continual appearance of fishermen plying their art over them, is to

make them increasingly suspicious of the artificial fly or any mistake or drag, and more shy of gut, but more tolerant of the presence of man and the gleam of his accompanying rod.

I purpose dividing the remainder of this chapter into three sections—firstly, Selection of Fly for Spring ; secondly, Selection of Fly for Summer, in which I propose including the green drake or Mayfly, and incorporating with it something of the life-history of the natural insect, as well as hints as to how it should be fished ; and, thirdly, Selection of Fly for Autumn and Winter.

SPRING.

The trout-fishing season commences in some portions of the United Kingdom as early, I regret to say, as the 2nd of February, but the Hampshire rule has been never to open before the 25th of March, and even this date is too soon. In what condition the Devonshire trout may be in the early days of February, I have nothing but hearsay to guide me, but a Test fish at the end of March, if more than say a pound and a half, is usually far removed from what would be considered by chalk-stream fishermen as anything like good condition. I am convinced that the angler's sport would in the end improve if in Hampshire the fish were allowed to feed in safety until the middle of

April, say the 15th, not only because of the superior condition of the fish at that time, but from the fact of their having become accustomed to take the flies floating on the surface without danger. But I fear that no argument of mine will avail to induce the keen angler to abstain until so late a date; and, after a long winter, my own sympathies are perhaps to some extent with him.

As to fly, during April, one must not be very far wrong in the first selection if it is intended to get a fair day's sport, the rise being generally a short one. On a moderate day it may last from twelve o'clock till two, and after a frosty morning following a cold night, may not commence before one to half-past; so that within these limits there is not a great deal of time for experiment. Sometimes, even in cold weather, fish will commence feeding at a comparatively early hour—say eleven o'clock—and go on to four, or even five. On such a day the rise is not often fast and furious, but one can generally find a feeding fish, and if warm but not heavy rain is falling the day is usually a successful one.

Selection of
fly for April.

Yet at times all calculations are upset. The day is one which would be considered made to pattern. One goes out full of hopes, but from morning till night not a rising fish is seen. Perhaps one of the greatest charms

of fishing is this state of doubt as to what one is likely to achieve. For the early part of April, the best patterns are some of the darker olives dressed either winged or hackled, such as (No. 3)* the dark olive quill, or (No. 4) the hackled variety of it, or for a change a blue quill (Nos. 25 and 26). When we reach the middle of the month (No. 1) the gold-ribbed hare's ear, or (No. 2) the same fly dressed hackle, is perhaps the most successful of all, especially with bulging fish. If not taken well, and a change is thought desirable (Nos. 5 and 6), the medium olive quill, or (No. 7) the detached olive, for olives; or, when they are hatching, one of the various patterns of iron-blues (Nos. 18, 19, 20, 21 and 22), which are too often neglected by the south-country fisherman, may be put up. In fact, it is questionable whether any dun is so well taken when it is on the water as a really good imitation of this species.

The grannom
season.

Almost the first mild days after the middle of April will, in rivers where it is found at all, bring the first signs of the grannom. There are so many fallacies existing in the minds of even the highest authorities as to

* The numbers of patterns of artificial flies are from "Dry-Fly Entomology," where the dressings of all are described, and coloured illustrations given of the majority.

this fly, that I am constrained to criticise their dicta adversely. First of all, they say that the grannom is essentially a fine-weather fly. This is true as far as regards the old flies going out to lay their eggs on the water, these having undergone the metamorphosis from the pupal state some days previously, and become darker in colour than when first hatched. They are usually seen flying in clouds through the air; but are never voluntarily on the surface of the water, and naturally are not taken by the fish.

Then, again, we are told that at the first shower of rain not a grannom is seen. This, again, is true as regards the old hatched flies. It is a question whether every winged insect in existence does not seek shelter from rain to prevent its wings becoming sodden. But these are not the grannoms on which the fish feed. The fish sees rising through the water the pupa enveloped in a thin skin, or the imago on the water after it has emerged from the pupal envelope. Fish rising at grannom are taking that fly in one of the two above-mentioned states—either the pupa or the winged insect.

The symptoms are unmistakable in either case, as the fish cannot poise themselves in the same way as they do when taking duns, and quietly suck in the insect floating down

to them. They keep darting backwards and forwards after the active pupa under water or the fluttering imago on the surface; in fact, altogether the appearance resembles that of trout *bulging*. After the hatch of winged grannom has once commenced (and the commencement is certainly retarded by unseasonable weather) all this fair-weather theory is blown to the winds. Frequently on cold, wet, blustery days the fly is well up, the fish are taking it well, and, especially if the surface of the water is rippled by a moderate breeze, the angler has a fair chance of getting near his fish without being seen. Hence I venture to differ entirely from the theory that the grannom* should be used only in fine weather.

It is certainly a capital fly to fatten the fish, but it is as certainly only plentiful on a few streams, and is altogether a disappointing one to the anglers. On the days of its biggest hatch, when the river is one seething mass of struggling flies and empty shucks, and the fish are boiling in all directions, the angler does not know which fish to try. In such a commotion he cannot tell one from the other, and in his hurry he generally selects the small fry. If he should

* The Grannom is described and figured in "Dry-Fly Entomology," pp. 98-100.

hook a big fish, the result generally is a smash. The excitement of seeing so many trout rising and the disappointment of hooking small fellows one after the other, cause him to lose his coolness, and the natural result is too much power in the strike. Worse than all, perhaps, after a few minutes the fish are gorged and the rise is over for the day. Whenever, during the hatch of grannom, the trout are not taking it, try one of the greener-bodied olives.

The commencement of May is the end of ^{Selection of fly for May.} the grannom, sometimes the best of it, especially in cold seasons. We then come to a time of the year when the majority of the duns hatching are the pale watery dun,* which is paler and smaller than the common olive, and such patterns as the pale watery dun (Nos. 9 and 10), pale olive quill (No. 11), hare's ear quill (No. 13), or goose dun (No. 12), may be tried with advantage. On rough bright days the gold-ribbed hare's ear is the best and most reliable. In fact, this sentence may be written without exception on every month in the year, and if a Hampshire fisher had to select one fly, and one fly only, on which to pin his faith, he could not do better than take this.

Iron blues † when hatching are specially

* "Dry-Fly Entomology," pp. 58-60.

† *Ibid.*, p. 61.

successful at this period during the day ; and for the evening, although there is not much evening rise as early as this, yet sometimes, when calm, the various forms of red spinner (Nos. 35, 36, 37, 38, and 39), red quills (Nos. 33 and 34), detached badger (No. 40), jenny spinner (No. 45), and occasionally the silver sedge (No. 63), may be tried with advantage.

The olive spinners are often out, but as far as my experience goes the fish do not take the natural well, and the imitation, as may be expected, is taken still worse. For patterns to resemble it, the olive badger (No. 44) is the most natural, but perhaps a medium olive quill is quite as likely, if not more likely, to kill.

Commence-
ment of the
"curse"
season.

At the latter end of May the season of *curse*s commences. Perhaps this word may be taken in both senses, as these little Diptera are difficult to imitate and the artificial are on such small hooks as to make the landing of a hooked fish at best problematical. For patterns, those given in "Dry-Fly Entomology" (Nos. 57, 58, 59, 60, 61 and 62) for curses and black gnats are the best imitations. As stated previously, when fish are apparently taking minute flies, and the angler cannot discover the right pattern or see the insect itself, the orange bumble (No. 94) or furnace (No. 95) is always worth a trial. On some rivers smutting fish take a pink Wickham (No. 82), tied quite

small on a 00 hook, and in connection with this point rather a curious circumstance should be noted. It is not only on some rivers that smutting fish take a pink Wickham, and on other rivers that they refuse it, but on some parts of the same stream. And, as an example, Houghton is a piece of water on which trout seldom take the Wickham. On a small tributary of the same stream which I formerly rented it was almost always successful. This was not due to the fish being less shy, as I think, in no part of any stream, even including Houghton itself, had I found fish so shy and so difficult as on this particular piece of water. Sometimes, where they will not take the pink Wickham, a small red-quill, "green nondescript," or silver sedge may be successful, although it is a mystery why and for what these patterns are taken by fish which are palpably, as shown by actual experiment in the shape of autopsy, taking nothing but these little black Diptera.

I have seen sedges out quite early in May, and have not only seen them, but have killed with them. As an example, I note from my diary that on the 19th May, 1882, on a cold evening, with northerly wind, I arrived by train just before seven o'clock, and starting at once, killed with a silver sedge on a 0 hook a trout 2 lbs. 4 ozs. at the first cast,

Sedge flies in
May.

and subsequently lost and rose others. In the last days of May sometimes the first appearance of the green drake is noticed, with the accompanying Welshman's Button, sedge, &c. ; but these flies belong to June, and will be treated in detail under the section of Summer.

SUMMER.

The Mayfly
season.

With the commencement of June in ordinary seasons the first appearance of the Mayfly may be expected. Probably more inaccuracies and more misleading matter have been given forth to the public about this fly than on all other angling subjects. The Mayfly fortnight used to be described by the older school of authors as a sort of carnival—some, in fact, have canonised it by the name of St. Mayfly. To read their glowing sketches, one would fancy that it was only necessary to cast the fly in any slipshod fashion anywhere for all the big fish in the river to compete in a race to get at it. Anglers of the younger school, reading these exaggerated accounts, go down to the river buoying themselves up with hopes of great sport and easy fishing. Some even say that it is unsportsmanlike; in fact, a sort of poaching, as bad as the minnow, worse than the worm, and only on a par with the net. How soon they would be undeceived if they only tried one season on the Test! They

would find that it is far more difficult than any ordinary fishing, not only because of the labour of drying the fly and the increased difficulty of casting so big an object against the wind ; not only because of the long hours of daylight during which they stop out of doors and keep on fishing ; not only because of the heat of the weather, but in addition to all this, because, as the big fish are all on the move, every one's desire is to catch these monsters, and the wary old customers will not stand the smallest mistake.

Experienced dry-fly fishermen among southern anglers have, for many seasons past, raised a general wail of discontent at the bad sport they have obtained during the short fortnight of the Mayfly. Complaints on this score have increased year by year, and hence, perhaps, a calm judicial consideration of the circumstances tending to produce this undesirable result is not out of place here. It is said that trout do not take the natural fly as freely as was their wont in former days. This, I believe, is not the case, and the almost universal disappointment is due to a variety of causes, some natural and others preventable, brought about partly by want of experience and partly by the ever-increasing shyness of the fish, greatly augmented by excessive or injudicious casting over them at all times and seasons.

Decrease of
Mayfly.

It is only in exceptional years that these great rises of green drake take place, and even then it is not a daily event. In many rivers the Mayfly has much decreased in numbers, and in some it has altogether disappeared; it is said that in a few it has increased. The decrease is generally due to the mania for dredging out the mud. Taking out the black, slimy mud, which is the result of the decomposition of vegetable matter, and generally indicates the presence of sewage pollution, is no doubt of advantage because the Mayfly larva does not affect this filthy deposit. The pale, gritty, sandy *detritus* in which the larvæ love to burrow is, however, too often removed, and as a natural sequence the hatch of Mayfly must diminish.

Life-history of
Mayfly.

The life-history of the Mayfly has been exhaustively treated by many entomologists, notably by Pictet, and in later years by the Rev. A. E. Eaton; and a short *résumé*, as far as I have been able to verify the various statements from personal observation, may be acceptable to the reader.

Mayfly eggs.

The eggs, an illustration of which, magnified forty-six diameters, is shown in Plate XV. 1, when first laid in the water sink to the bottom and adhere to the soil or stones forming the bed of the river, where they remain until hatched into a small grub or larva. How

long this process of hatching takes is, more or less, a matter of conjecture. I can to a certain extent elucidate the question from positive experiments, as I secured eggs from about 120 impregnated females, and an enthusiastic angling friend hatched them in captivity in a small aquarium. These eggs were taken on the 9th of June, 1887.

They numbered, as nearly as could be calculated, about 800,000. This number may, at the first glance, appear to the reader to be an exaggeration, but the result of dissecting out and counting under the microscope the eggs from six females (three large and three small) gave respectively the following numbers: 6693, 6048, 7134, 5682, 5748, 7728; and these figures tally sufficiently closely to an average of 6,500 eggs per fly to show that this calculation is fairly accurate.

Average number of eggs laid by May-fly.

They were safely delivered into the hands of my friend (Mr. Hawksley), and deposited by him in certain vessels for the purpose of hatching. On the 15th August, or a little short of ten weeks later,* I received

Mayfly eggs hatched in captivity.

* Some doubt is cast on the accuracy of this experiment, as a keeper on the Test, a careful and reliable observer, tells me that he has collected thousands of Mayfly eggs and invariably hatched them out in about three weeks. Possibly the temperature of the water may be an important factor in connection with this point.

a most exciting telegram, "Cannot leave home ; Mayflies hatching." On the next day came a letter with full details stating that thousands had hatched, that the new-born larvæ were busy cleaning themselves and commencing to feed, that a certain number had been sacrificed in the cause of science, and were temporarily preserved in spirit.

Mayfly larva
just hatched.

Thanks to this forethought, I am able to give the accompanying illustration of the larva (magnified twenty-three diameters, in Plate XV. 2), when certainly less than one week old. Both Mr. Hawksley's and my own excitement about this time were very great. We were building hopes of at last (for we had previously hatched larvæ, but failed to rear them) working out in full detail the life-history of one of the Ephemeridæ. To provide as far as possible a fair imitation of their natural surroundings, I had brought up from Hampshire a quantity of mud taken from the bed of the river, and a number of various sorts of weeds growing there. These were carefully distributed in the various vessels.

The larvæ commenced at once to dig burrows into the sandy mud with their mandibles and powerful forelegs, which are armed with formidable claws for the purpose. We began to think that our experiment showed fair signs of being successful, especially as we knew

MAYFLY

Ephemera danica.



1

Eggs X 46.



2

Larva just hatched X 23.



3

Larva.



4

Nymph Female



5

Nymph Male

that throughout the immature stage the May-fly takes up its habitation in the mud. After a few weeks a close examination of one of the vessels failed to disclose a single larva. This gave rise to considerable anxiety, and we could not be satisfied with anything less than an exhaustive search, which, alas! proved that our worst apprehensions were only too well founded.

Excepting the small number of larvæ preserved in spirit, we could only find one other specimen. Our want of success was probably due to a variety of causes, notably ignorance of the natural diet of the insect, and the impossibility of producing in the circumscribed area in a small aquarium in a London greenhouse the same conditions, the same atmosphere, the same flow, and possibly the same pure water filtered through the chalk as in its native river.

Be that as it may, we failed, but some months later a number of eggs were found in the aquarium which had not hatched, and yet, under the microscope, gave no indication of decomposition. These eggs were treated in the same careful manner, but having shown no change whatever up to June, 1888, a period of twelve months from the date of being laid, we concluded that, from some unexplained cause, they were unfertile, and therefore reluctantly decided to destroy them.

Mayfly larva
and nymph.

Plate XV. 3 is a coloured illustration of the larva life-size, and Nos. 4 and 5 of the same plate are the female and male nymph respectively. The only apparent difference between the larva and the nymph is the appearance in the latter of two small oval-shaped excrescences of a dark colour, springing from the back of the thorax. These are cases in which the wings of the sub-imago are folded somewhat in the same way as an umbrella. There is some doubt in my mind as to the correctness, from a scientific point of view, of the use of these two names, larva and nymph, as indicating, one the immature insect *without*, and the other the immature insect *with*, the small wing-covers; but as their meaning is explained they are convenient terms, and scientific friends will perhaps forgive me if I am guilty of a misnomer.

Habits of the
Mayfly larvæ.

As the weather becomes colder the larva digs its way more deeply into the soil. In the depths of winter it is said to be immersed as much as a yard or more in the mud, and in more genial weather it is found usually at a depth of twelve to eighteen inches. As an illustration of this I may state that, in the month of March, 1887, my friend Major Turle sent me from Newton Stacey, his water on the Test, specimens found at a depth of from a foot to eighteen inches below the surface of

the mud. A fortnight later, when a sudden change of weather had caused a decided fall of temperature, he could not find any more when dredging to the depth of nearly a yard. Entomologists are somewhat vague as to the length of time during which the insect remains in the larval and nymph dresses. This is certainly not less than two and possibly extends to three years. In the second week of June larvæ have been found by me without any sign of the wing-covers, and not more than one-half the length of the full-grown nymphæ when the winged fly was prevalent on the water.

When the time to be spent in the immature state has come to a close, however long it may be, the nymphæ are found among the roots and the weeds in the gritty mud at a depth of about an inch. This fact, as noticed in the *Field* of July 2nd, 1887, was witnessed by me in person, and perhaps I may be excused for quoting the paragraph *in extenso* :—

“MAY-FLY METAMORPHOSIS.—In my May-fly notes of June 4th the following sentence occurs :—The larvæ of *Ephemera danica*,* from

Mayfly metamorphosis.

* In the original this Mayfly was named *Ephemera vulgata*, but I prefer to follow the nomenclature of the Rev. A. E. Eaton, the best modern authority on this family, who gave as its scientific name *E. danica*. The Mayfly of warmer rivers is usually *E. vulgata* (Eaton), or, more rarely, *E. lineata*.

the time of their first emerging from the eggs to about a month or so before undergoing the further metamorphosis to the sub-imago, burrow deeply into the mud, and there take up their habitations. My reason for excepting the period of a month or so before assuming the sub-imago state was because I could get no reliable information on this point, and had not been able to satisfy myself as to the habits of the nymphæ when approaching the transformation to a winged insect.

“ Fortunately, however, I met on one of the waters fished last week a remarkably intelligent keeper, who assured me that the nymphæ were then about an inch below the surface of the mud around the roots of the weeds. At my request he scooped out several bunches of weed with roots and mud attached, and after leaving them a few moments on the bank the head and shoulders of the nymphæ emerged from the soil, and I preserved several specimens for future observations.

“ The wing-cases were fully developed, and one nymphæ actually underwent the metamorphosis under my eyes, splitting open the larval envelope between the shoulders, then lifting out its head and legs then curving its body upwards and drawing it out, together with the setæ ; and lastly, unfolding the wings as they emerged from the wing-cases, it fluttered

away, to fall a victim to the open jaws of a hungry swallow. This information should be of value to owners of fisheries who are bothered by the various opinions expressed on the subject of weed-cutting just before the Mayfly season. They can now safely cut away all superfluous weeds, in full confidence of not hindering the hatch of drakes and spoiling their sport in the early days of June."*

This description of the process of metamorphosis to the sub-imago is, I believe, accurate, and I would only add that the powerful digging claws, the whole of the mouth appendages, and the branchiæ, are shed with the exuvium of the nymphæ; and the hairs with which the antennæ, legs, setæ, and parts of the body itself are fringed in the larval state are absent from the sub-imago. In all Ephemeriidæ the "branchiæ are arranged in pairs on seven or fewer of the foremost segments of the abdomen; and their function is considered to be the change of carbonic acid, introduced into the air contained within the tracheal system, from the fluid which serves

Mayfly sub-
imago.

* I may here acknowledge, with many thanks, the courtesy of the proprietors of the *Field* in according me permission to use this and other matter which has appeared in that invaluable sportsman's Bible.

as blood, for oxygen held in solution in the surrounding water." *

In a state of nature, as soon as the wings of the sub-imago or green drake are thoroughly dried, it flies to the shore. During the process of drying its wings it is frequently seen floating on the surface of the stream, using the nymph envelope as a supporting raft. When ashore the sub-imago rests on the under side of leaves or on blades of grass, selecting the shady side; in fact, at this period of its existence it seems to shun the burning rays of the sun. Nos. 1 and 2 of Plate XVI. are correct representations of female and male at this stage, drawn under the microscope and reduced to the natural size.

Mayfly
imago.

After about twenty-four to thirty-six hours, the time being, I believe, entirely dependent on temperature, the green drake casts the entire outer skin of its head, wings, thorax, and abdomen, as well as the thin coverings of the antennæ, legs, and setæ, the forelegs and setæ increasing very much in length, and the increase being relatively far greater in the males than in the females. The wings of the sub-imago are covered with small thorn-shaped spines all over the surface,

* "Dry-Fly Entomology," p. 72.

MAYFLY

Ephemera danica



1

Subimago Female.



2

Subimago Male.



3

Imago Female.



4

Imago Male.

and hairs along the edges, but the wings of the imago or perfect insect are smooth and free from these excrescences, which are shed with the sub-imaginal envelope. The imago, male and female, are shown in Plate XVI., figs. 5 and 4.

It is curious to note that the clouds of *Spent gnat*. imago rising and falling in the air are exclusively collections of males. As the sun gets low in the horizon and the air begins to cool the males come out in clouds, congregating together ; and, dancing up and down, lie in wait for and catch each female as she flies out into the open in the imago state. Sexual intercourse takes place in the air, and shortly after the female drops her eggs on the water, and the act of reproduction being complete, falls almost lifeless on the surface of the stream, with wings extended and lying flat, and their bodies mere empty shells. They are at this stage, by a strange misnomer, called by anglers the *spent gnat*.

A retrospect of the life-history of the May-fly shows that the larvæ and nymphæ while burrowing in the mud cannot to any large extent serve as food for the fish. Hence the first stage at which it is possible for the trout to feed on them freely is that of the nymph rising to the surface of the water as a preliminary to the change into the winged

insect. Thus, from an angler's point of view, the consideration of the subject divides itself into the three states of nymph, sub-imago, and imago.

Fish bulging
at Mayfly
nymphs.

In the first of these states what is usually, but erroneously, called the hatch of the Mayfly has just commenced. The first of the nymphæ are swimming upwards, and the faculty of memory possibly not being sufficiently developed to extend to past years, the trout are scared at the sight of this strange and large creature. After a time curiosity impels them to try it, from a gastronomic point of view, and the first mouthful proving tasty is soon succeeded by others, until at length all over the stream the fish are feeding ravenously on the succulent and nutritious nymphs. The evidences of this are unmistakable—a noisy splashing *floop* continually recurring, with frequent changes of position as the hungry trout chase the active nymphs; but there is very seldom an actual breaking of the surface except when the nymph reaches the top of the water and splits the shuck at the very moment the fish is in the act of taking it, when it quickly secures either the winged insect or the empty envelope. It is a strange circumstance, too, that the fish often take the empty shuck in preference to the nymph itself.

The above is what happens in a river neglected by man. In civilised parts the first appearance of the fly is rapidly communicated by letter or telegram from the zealous keeper, and spread far and wide by the sporting press. Everywhere the cry, "The fly is up," is raised; every angler renting water or having the privilege of fishing on club or private ground is off by the next train, anxious to be first on the spot. The fish, long before they have settled down to feed on the fly—in fact, often before they are thoroughly sure of the flavour of the nymph—are cast over, time after time, pricked whenever a mistake is made, and a certain proportion killed. They are scared by the sudden influx of people on the banks of the stream's comparatively deserted at other times, until the natural result is to render them preternaturally shy and drive them off surface food for very fear of their lives.

Advice to abstain from fishing trout bulging at Mayfly nymphs.

In private waters the remedy is simple, and in the owner's hands. He should himself abstain from fishing until the trout have become accustomed to the winged fly, and the abstinence he practised himself could not be a great hardship to his friends. In subscription or club waters, however, this is impossible, for although, as a class, anglers are unselfish and considerate towards their *confrères*, there

would, I fear, always be some one or more greedy members who would strive to get a start and distance their more considerate fellow-members. If, therefore, obliged in self-defence to try the fish in this stage, there are a few simple rules which should materially increase the bag of the fisherman.

Patterns for
fish taking
Mayfly
nymphs.

For the fish when feeding on the nymphæ a pattern (No. 47, "Dry-Fly Entomology") was evolved by Mr. Marryat. It is dressed without wings, with Egyptian goose hackle, either undyed or dyed a pale olive-green, body of pale maize - coloured floss silk, ribbed with a strand of peacock's herl, which is of pale cinnamon at the root. The pale portion of the herl is worked at the shoulders so as to show about three turns of the dark metallic bronze at the tail end of the body, which fairly represent the darker marking on this portion of the natural fly. The tail is of gallina, dyed darkbrown. It is a difficult fly to dress, owing to the stubborn nature of the stem of the Egyptian goose-hackle.

If this pattern is not available, either the brown or green champion (Nos. 51 and 52) should be used. In any case the fly should be dry, and when using the winged patterns it is desirable to fish them with the wings flat upon the water and not cocked. Any experienced fisherman can, after a few trials, manage

this, and I would refer the novice to a previous chapter, which will indicate the best method of delivering the fly so that it shall not be cocked. This is done by either casting over hand, which perhaps is not desirable, or putting a little superfluous force into the throw. Two or three accurate casts delicately made, and the fly placed well above the fish, are sufficient. To go on flogging after this is simply to educate the trout, and ruin your own sport, as well as that of others.

If after two or three casts the fly is not taken, wait, rest your fish, let it get the flavour again of a few naturals, then give it the artificial two or three times. If still unable to tempt it, crawl back from the bank so as not to show yourself and scare it, and go and find another fish, returning to your old friend in half an hour's time. If the river has been left alone until the fish are well on the sub-imago or green drake, then great sport may be expected for some days during the prevalence of the fly. It is well to note the hour at which the rise takes place, and in olden times it used to be a general rule that the rise became later from day to day. Of recent years, however, the hour of the hatch of green drake has become very irregular, some days the advanced guard is seen at 5 or 6 o'clock, on others the rise does not

occur until it is nearly dark, and then perhaps the next day the best of the hatch will be before 11 in the forenoon.

Fish taking
Mayfly sub-
imago.

When trout are taking the green drake there can be no doubt about it. The fly is floating down in great numbers, fish take up their positions and suck them in one after another without splash or disturbance, and this is the time to make a bag. A small mistake, however, is enough to set a rising fish down, so that the well-known and oft-repeated maxim of *accuracy and delicacy combined in the first cast* is essential, and a dry cocked fly a positive necessity to ensure success.

Patterns of
Mayflies.

As to patterns, "their name is legion." Perhaps the best are (Nos. 51 and 52) the Brown Champion and Green Champion, but all of those given in "Dry-Fly Entomology" (Nos. 47 to 55) inclusive, are good, and no fisherman with a stock of these patterns in his book can blame the artificial if he does not "fill a sack."

Size of arti-
ficial Mayflies.

Professionals, as a rule, dress Mayflies on hooks many sizes too large and out of all proportion to the natural insect. Compare a Champion on a No. 2 hook with a live fly, and it will be seen that it is quite as large as—in fact, a trifle larger than—the male green drake; and one on a No. 3-long is exaggerated as to size when compared with

a large female. It is true that fish will rise at these colossal specimens of the fly-dresser's art. It is equally true that they rise shyly and without confidence, *floop*, and do not take, or are only pricked, and spoiled for hours if not for the whole season. Modern anglers should purchase May-flies dressed on small hooks, Nos. 2 or 3, and thus cure professionals of this mania for turning out disproportioned imitations.

Weather is credited with having too much effect upon this as well as all other classes of fly fishing. In rain it is difficult to dry the fly, although the use of paraffin has reduced this difficulty. On the other hand, the fish take better in cloud or gloom than in sunshine. To cast so large a fly with more than, say, two to two and a half yards of gut against a strong down-stream wind is impossible.

An up-stream wind lifts the natural fly off the water as soon as it is clear of the shuck, while with a down stream wind it sails along steadily, and the fish of course take better. As remarked in a previous chapter, too, it is easier to cock the fly when casting against wind. Again, the advice is repeated not to keep on hammering away at a rising trout. Keep out of sight, crouching well down on approaching the bank, and while fishing or retiring. Use the under-handed cast invariably, and although fine gut.

is affected by some, it is not recommended, because comparatively large flies do not work well with fine gut, just as very small flies never float satisfactorily with coarse gut.

Occasional
success of
other flies
during hatch
of May-fly.

One other hint. Sometimes the fish are not taking the natural May-fly well and yet rise occasionally. Under these conditions it is better to try first with (No. 8) Flight's Fancy, or some such small fly. Very few casts will tell whether these are likely to be successful, and if not, do not hesitate for a moment; put up a Welshman's Button (No. 72), which is almost invariably found on the water at the same time as the May-fly, frequently appearing say half an hour before the rise of the green drake.

If neither of these is successful, a sedge will often prove of service in converting an unfavourable into a favourable day's sport. Of the efficacy of the Welshman's Button I had curious evidence some years ago when fishing on a piece of private water. Mr. Marryat, who was with me on that occasion, had been trying a fish rising on the edge of a run for some time, fishing scientifically, and with his usual skill. When I arrived on the spot he was grumbling at not being able to get a rise, and exclaiming that possibly our host had pricked or hammered the fish on the previous day. A few moments before I had

killed a fish with a Welshman's Button, and as the trout had previously refused a Champion, suggested a change to the Button. Always an advocate for sticking to the fly on the water, and not seeing any of these particular insects, he said, somewhat scornfully, "You had better try him yourself." The first cast was not an accurate one, as my fly was coming down on the extreme right-hand side of the run, while the fish was rising on the extreme left; yet the trout came right across the run, seized the fly, and was killed in a few minutes—a good specimen of about $2\frac{1}{2}$ lbs.

During the hatch of the May-fly, especially Red sedge. the earlier portion of it, there will often be seen of an evening a number of large red sedges. This is known as *Phryganea striata*, and is, with the exception of a very similar insect (*P. grandis*), the largest of the British Trichoptera. The well known Kimbridge, of which two patterns are given in "Dry-fly Entomology" (the winged No. 67 and the hackle pattern No. 68), was brought out to imitate this caddis fly. It has proved so successful in killing large fish during the evening rise, and sometimes too in the middle of the day, when the May-fly itself has not seemed to tempt the trout, that I think it worthy the attention of my brother anglers.

A trout feeding on the spent gnat or imago Trout taking
"spent gnat." in the final stage of its existence is usually

close to the surface, swimming leisurely along with its nose almost out of the water, and quietly sucking in every fly drifting down. It is usually late in the afternoon or evening, perhaps nearly dusk ; the wind has died away ; everything is calm and placid. The deep, slow, reaches of the river are covered with dying and dead insects, and the fish, and frequently the very largest ones, submerged only a few inches, are slowly cruising backwards and forwards with their fins above water taking fly after fly with a loud chopping noise. They are continually moving ; hence, if neither the trout nor its projecting fin is visible, it is necessary to watch the wave, and thus ascertaining the direction in which the fish is moving, cast about a foot above it. Under these conditions it is not surprising that the smallest splash, the least curl in the gut, the shadow of the moving rod, or the slightest suspicion of anything abnormal, is sufficient to show a danger-signal which promptly moves the trout gorged with food to seek safety in a quick retreat.

The late Mr. Marryat's pattern of spent gnat.

As to the imitation, no spent gnat pattern can be considered in the same category as that invented by Mr. Marryat as the result of life-long study. It is given and illustrated in "Dry-Fly Entomology" (No. 56), and dressed as follows :—

“*Wings.* Four dark grizzled, blue dun-cock hackle points set on horizontally.

“*Hackles.* A grey partridge in front, and a badger cock hackle close behind it.

“*Ribbing Hackle.* A badger cock hackle.

“*Body.* A strand of condor, dark at point and white at root, the white part worked in at shoulder to show two or three turns of the dark colour at the tail end of the body. Body ribbed with fine silver wire.

“*Whisk.* Gallina, dyed in diamond dark-brown.

“*Hook.* 3-long.”

When to cast is an important point. The natural fly usually floats down in a string of twenty or more close together. A fish will take every one of such a series, and then go down to swallow the mass. The artificial should, therefore, be thrown at the moment the string of natural flies is approaching, so that it will lead the file. If it is not taken the first cast, wait and let your fish take another lot of the natural before trying again. If this is unsuccessful, a cast a foot to the right or left of the drift of natural flies may tempt it. Above all, do not keep on casting over the same fish. It is utterly useless, and only tends to render a shy fish still more suspicious.

The largest fish are killed with spent

When to present the spent gnat to a trout.

gnat when they do take it; and as an example, some years ago one of 8 lbs. was secured with it on the Test, and the following season one of 7 lbs. in very nearly the same spot. The most aggravating feature of it is that the fish are soon gorged, and after a few minutes the rise usually ceases altogether, and it may well be described as the most disappointing style of fishing. Perhaps, as a consolation, we may think it just as well that the big fish only take it freely at rare intervals; otherwise, with the present plethora of sportsmen, the race would in many rivers soon be extinct. Occasionally the trout take the spent gnat well in the morning, especially after a great show of green drake over night; so after the first few days with the fly it is always worth while to try it when unable to get a rise with the May-fly itself.

Occasional use of artificial after the natural May fly is over.

One more hint. If you happen to be fishing on a stream a week or so after the May-fly is over, and cannot succeed in tempting a fish rising at duns or other small insects, do not hesitate to give it one cast with the May-fly or spent gnat, preferably the latter. The memory of the taste seems to linger in their minds for some short time.

Selection of fly for June.

June is generally a good month on rivers where no May-fly hatches, or where they are not sufficiently plentiful to make the fish feed

on them. One of the hackle red spinners (Nos. 36, 37, 39) or detached badger (No. 40) will often secure a rising fish in the forenoon. Not so often, but yet occasionally, the jenny spinner (No. 45). During the day-time, if there is any small fly rise, Flight's Fancy, medium or pale olives, iron blues, sometimes orange bumbles, and furnaces will take. The alder (Nos. 73, 74) is a fly worth trying, on most rivers, from the middle of May to the middle of June. Although, as pointed out in "Dry-Fly Entomology," in the chapter on the Sialidæ, the natural insect is never voluntarily on the water. In the evenings patterns to be recommended are red spinners, detached badgers red quills, badger quills, and after dark, various sedges, or our old friend the Kimbridge, mentioned when speaking of the May-fly, or imitation of the large red sedge, which is only seen at this time of the year. Hammond's Adopted (No. 89), and Artful Dodger (No. 90) are good evening flies for a change.

Of July there is not much to be said. It ^{July fishing} is perhaps the worst month in the year for killing trout in the day-time. In rivers where the May-fly is plentiful they have scarcely recovered from it. They are fat and lazy and generally shy, and in all rivers, whether those where there is or is not much May-fly, duns are scarce. If there is any rise at all the flies

are small, and must be dressed on 00 or 000 hooks. At this time of the year the weeds are thick and strong, the fish, in the pink of condition, have a strong tendency to go to weed and to smash the angler when there, and it is not easy to hold them ; hence the general disappointment experienced by fishermen is not surprising.

Grayling in July.

Sometimes grayling take well in July, but they should not, to my notion, be killed earlier than the middle of the month. The fact that they do feed well in July is an argument in favour of having them in streams with trout, providing the stock of food is plentiful. If this supply of insect life is insufficient to provide food for both trout and grayling, and the river will only support a certain head of fish, the effect is not satisfactory, as the grayling, which increase more rapidly than trout, seem to take an unfair share of the food and crowd out the *salmo fario*.

Selection of fly for July.

The grayling take red tag (No. 97), macaw tag (No. 99), orange tag (No. 98), orange bumble (No. 94), furnace (No. 95), curse (Nos. 57, 58, 62), black gnat (Nos. 59, 60, 61), Wickham (Nos. 81, 82, 93), small silver sedge (No. 63), green nondescript and many other fancy patterns.

In the early evenings both trout and grayling sometimes rise well, taking all sorts of

red spinners, detached badger, jenny spinner, blue-winged olive (Nos. 30, 31), when it is out, and its imago, the sherry spinner, which is best imitated by a pale-bodied red spinner or detached badger. When almost dark, grayling do not, as a rule, take, and rising fish may be generally considered to be trout. They should be tried with silver sedge (No. 63) on a 0 hook; if this is unsuccessful, a hare's-ear sedge (No. 65) of the same size; as it gets darker, either the silver or hare's-ear sedge on a No. 2 hook; and when quite dark, the hare's-ear sedge or the dark sedge (No. 66) or Kimbridge (No. 67), dressed on hooks about No. 4. A day's dry-fly fishing, however, should terminate when the angler is unable to see his own fly. It may be slightly prolonged by fishing a big sedge and putting it on the water rather heavily. This will not prevent a rising trout from taking it, and the splash will enable the fisherman to see where the fly pitches.

AUTUMN.

To include the month of August under Autumn is perhaps not strictly correct. I do so advisedly, because the style of feeding on the part of the trout begins in that month to partake of the character which I would describe as specially appertaining to this season. They

Selection of
fly for August.

are certainly in better appetite and less shy than they were in July in the day-time. Small flies dressed on 00 and 000 hooks, such as pale watery dun (Nos. 9, 10), ginger quill (Nos. 16, 17), little Marryat (No. 14), quill Marryat (No. 15), and cinnamon quill (No. 43), are the prevalent patterns. In calm, sultry weather the black and red ants (No. 76, 77, 78) are useful flies during the heat of the day, especially the red. In hot weather a shy fish rising in slow water is often secured by waiting until it takes a natural and then at once dropping your artificial close to its nose in the ring of the rise. As to evening fishing, it is distinctly good, and the night fishing, if I can call the period just after dusk so, even better.

The sedge
season.

Success or non-success in fishing after dusk depends entirely on the presence of sedge flies, and the later we are in the season the more prevalent are the natural insects; I think perhaps there are more to be seen in October than any month in the year. Fine gut is quite unnecessary; in fact, coarse gut works better with large flies, and evidently there is no advantage in handicapping yourself when it is nearly dark. No place need be passed over on account of the natural difficulties of landing the fish when hooked, as even in parts overgrown with weed, with mere patches between, trout may be frequently killed, as they seldom

go to weed after dark. This is probably due to the fisherman being invisible until the fish is almost tired out and practically in the net ; and weeding is, in many cases, the result of a scare on the part of the trout from seeing the fisherman or feeling the strain of the rod.

In September the trout, especially the large ones are in good fettle, and take well from morning to night. It is doubtful whether the policy of killing them during this month on early rivers like the Test is a wise one. After, say, the 15th, proprietors of fisheries would be doing good by ending their season. This assertion is based on a careful study of the subject. Some years back I suspected, and since then continual examination has convinced me, that the majority of fish killed in the latter half of September are females getting heavy with roe. The result of killing any great number of these must obviously be to unduly decrease the stock of fish likely to spawn at the end of the year.

The flies for trout in September are exactly as in August. The grayling run a good average, fight well, are in good condition, and take from sunrise to sunset. They are always difficult to please, and require great variety of fly. It is surprising how a little perseverance and continual changing of pattern will enable one angler to make a good day among

Trout in
September.

Selection of
fly for Sep-
tember.

them, while his brother anglers on the same stream who are sticklers for using only a good imitation of the natural fly on the water, get little or no sport. Of the various duns, the red, blue, olive, and cinnamon quills, little Marryat, quill Marryat, Wickham, and small silver sedge are about the best. The black gnats, curses, various patterns of red and orange tag, and bumbles, are all good for a change. Occasionally, grayling takes the sedge well just at dusk. On hot days, at times, they will take it comparatively early in the afternoon.

Trout in
October.

With the end of September at the latest trout fishing should close on every southern stream ; in fact, Francis Francis's "Anathema Maranatha" on those who will kill grayling in June is not half scathing enough for those who kill trout in October. No matter in how perfect a condition they may seem to be, within an hour of their being dead they are flabby, dark-coloured, and loathsome objects. and for the table they are useless. Some sportsmen salve their consciences by declaring the trout they kill in October are barren ones. I have a vivid recollection of such a case when a trout was killed on the assurance of three anglers and an under-keeper that it was a barren female, and to this the head keeper rejoined that it was certainly a female and

probably full of ova. I opened this fish and found it was a male in good condition and full of milt, of course not ready for breeding purposes. Certainly one provoking feature is that the trout rise well, and take well, and when a trout is landed in October it is generally a large one for the stream. All who wish their stock of fish to have a fair chance of multiplying and being fruitful should make a rigid rule of returning them in this month. Fish rising close under the banks should be avoided when grayling fishing, as they are generally trout.

Grayling are not only in the best condition, and fight better, in October than in any other month in the year, but all of them, from the largest to the smallest, feed freely. Thus the best sport may be anticipated by the fisherman who determines to treat grayling fishing as a serious branch of the subject, who uses small flies and fishes dry over rising fish, and who avoids the dreadful theory perpetuated by our northern friends that grayling fishing consists in throwing at haphazard two sunk flies down-stream anywhere. All the usual grayling patterns are good in this month. The adjutant blue (Nos. 23 and 24), perhaps, is the best, and very nearly allied to it are the autumn dun (No. 28) and blue quill (No. 25). Tags, bumbles, Wickhams, and even blacks

Selection of
fly for Octo-
ber.

are sometimes successful. The little Marryat, quill Marryat and cinnamon quill, are reliable standards in Hampshire; and on rare occasions the willow fly (No. 79). This elegant member of the Perlidæ family is said to be a favourite with grayling elsewhere, especially in Yorkshire, Derbyshire, and other parts of the Midlands. It is not an easy insect to imitate. To appreciate the difficulty it is only necessary to note the difference in appearance between two specimens, one flying through the air with its four wings extended and fluttering, and the other crawling up a post or over a bridge, and looking like a fragment of annealed iron wire, whence probably the north country name for it of *needle brown* is derived. Late in the afternoon, red quills, red spinners, and silver sedges are possible chances for sport.

Selection of
fly for Novem-
ber and De-
cember.

In the two concluding months of the year, November and December, the larger grayling are not generally rising, and those which rise often take duns, gold-ribbed hare's ear, or blue quill for choice. Sometimes there is an off chance with Indian yellow (No. 32), little Marryat, Wickham, adjutant, or autumn duns. When the fish are rising and no flies can be seen on the water, it is well to try tags, bumbles and such fancy flies, but they are not generally as successful as duns at this season of the year. Cold weather does not prevent

the grayling from rising well. I had heard this assertion many years ago, and misjudged the sportsman who made it; but experience has since taught me that he was not far wrong. My own doings of two days, the 28th and 29th November, 1884, may be of interest as tending to show what sport one may have on such days. I killed on the 28th, a comparatively mild day, nine grayling weighing 9 lbs. 13 ozs. At sunset it became cold and cloudy. After a time snow began to fall, and continued throughout the night.

In the morning the ground was covered to a depth of nearly a foot. It was bitterly cold, and snowing off and on until midday. It then cleared up, but was still very cold, although the sun broke through occasionally. About one o'clock a few large olives were hatching; but it was still freezing; indeed, I think it froze all day long. About half-past one the fish began rising, and within twenty minutes, fishing with a gold-ribbed hare's ear, I killed six grayling, weighing together 8 lbs. 7 ozs., the best and last one of $2\frac{3}{4}$ lbs., and lost five or six more; and such sport, I think, as this would be sufficient to tempt any angler, even in a severe frost.

I am told that grayling rise well on mild days up to Christmas, although I have not fished as late as that. After that date the

river should be rested until the opening of the trout season. The trout as soon as they have done spawning are hungry, and whenever there is anything like a rise of fly they naturally feed and get pricked; some perhaps are hooked and returned, and so made even more shy than usual. In fact, I doubt whether after the end of November it is worth trying excepting on particularly favourable days. It is also well to give keepers time to attend to various details on the water, such as repairing bridges, renovating planks, and generally making improvements in the state of the fishery, and the time between Christmas and the opening of the trout season is, to my mind, by no means too long for that purpose.

CHAPTER IX.

EVENING FISHING.

AS the days lengthen the water usually gets lower and brighter, and the trout from day to day become more and more shy. They generally rise badly and take smaller and smaller flies, until at last it becomes almost impossible to do any good in the day-time except on an occasional cloudy, rainy, or windy day, or on streams or parts of streams where the fly fisherman is a *rara avis*. The quantity of Ephemeriidæ hatching also decreases, for they do not, as a rule, change from the nymph to the sub-imago stage in great numbers in the heat of the sun. This may be to some extent due to instinct, as the sub-imago appears unwilling to expose itself for any length of time to great heat.

The best chance of getting sport under these Evening rise. conditions is during what is called the evening rise. This evening rise is divided into two sections, the evening rise proper, or the time during which the fish are feeding on Ephemeriidæ in the sub-imago or imago stage, and the

sedge rise, or time during which the fish are taking the sedges which belong to the family of Trichoptera or caddis flies. The true evening rise, that of the small fly, commences about the time when the lower limb of the sun touches the horizon. It begins earlier on parts of the river where there is a hill on the western side, or a high bank producing a sort of artificial acceleration of sunset. This rise continues until it is barely possible to see the artificial fly when thrown towards the light. About this period there is often a lull for a quarter of an hour or so, during which the fish apparently are not taking much surface food. After this they come on to the smaller caddis flies, and still later on to flies of the larger sedge class on the evenings when they appear in great numbers.

“Tom Fool’s
light.”

The small fly rise, during what is usually styled at Winchester “Tom Fool’s light,” from the supposed facility with which fish can be killed, cannot, under the most favourable circumstances, last much more than half an hour. Fish during this period are almost as particular as during the daytime. Whether a fish’s power of discrimination of colours is to any extent impaired by partial loss of light, is a moot point. As before indicated, the degree to which they can differentiate colours in broad daylight is a question on which great

differences of opinion prevail. Seeing the short time this rise lasts, it is evidently an essential point that the first selection of fly should not be far out. Red spinners of various sorts, such as red quill, detached badger, brown badger, &c., and some of the yellow-bodied duns are the most useful.

There is occasionally on hot evenings a little ^{“ *Cænis*.”} white fly, somewhat similar both in colour and shape to the jenny spinner, but smaller, and with wings distinctly more rounded in shape. It is much smaller than the jenny spinner, and on the evenings when it hatches comes out in tremendous swarms. As far as my personal experience goes, and as far as I have been able to check it by the experience of others, there is not an authenticated instance of its being taken by the fish. At the same time, I think it is quite likely that they do take it. The reason why this fly has not been found in any autopsy is probably that it is rapidly digested, or that fish feeding on it will take nothing else, and no imitation of this minute insect having been dressed, it has not been possible to tempt them when taking it. This fly is one of the genus *Cænis*, probably either *Cænis rivulorum* (Eaton) or *C. lactea* (Pictet). Many Hampshire fishermen labour under the singular delusion of believing that it bites. A greater absurdity than this cannot be imagined because,

like all the Ephemeriidæ in the winged state, the mouth organs are so atrophied as to be quite useless. These flies are credited with this propensity no doubt because they remain for a short time in the sub-imago state, and, wanting to change their coats, settle on the nearest object, whether it be a man's hand or his face, and as they alight dig their claws into the substance on which they have settled for the purpose of fixing the claws of the sub-imago exuvium, to enable them to wriggle out of it and emerge an imago.*

Red spinner
for early even-
ing rise.

Possibly flies of the red spinner species kill well during the early evening rise because the majority of Ephemeriidæ on the water are in the imago state. It is possible that the cooling of the air after a hot summer's day kills or weakens them, and it is well known that the hotter the day, as a rule, the better is the evening rise, provided there is no mist. Another and perhaps the best reason for the presence of great numbers of spinners on the water in the evening is that, having laid their eggs, and thus fulfilled their province of reproduction, their life is at an end, and they fall on the water with their wings flat.

This flat-winged state in which they appear on the water is to my mind one of the strongest

* "Dry-Fly Entomology," pp. 75-76.

arguments in favour of dressing spinners hackle or buzz fashion. They should have plenty of hackle, yet, although hackle flies float very much better than one would think, they are a little more difficult to see. As for time of year, June, July, August, and even September, are the best months for this style of fishing.

The smuts are strong on the water on some evenings, and although they are not, as a rule, used by anglers, it is possible that they might be with advantage. My reasons for expressing this opinion may perhaps be justified by an incident which happened to me on the 1st August, 1887. On the mill pond at the lowest part of the Houghton Water were a number of fish rising. My friend was sure they were dace, that is, after he had made a few casts and failed to obtain a rise from any of them, and suggested going on. I said, "No; I should be sorry to be contradictory, but I do not think those are dace." The natural rejoinder was, "Well, try them yourself."

Smuts for evening rise.

I was fishing a detached badger with which I had been killing fairly for the previous evening or two, and crept up into position below the lowest fish. The fish were rising one below the other in the same run. About the second cast I hooked a fish, and at the first rush I suggested to my friend that the dace in

these parts were of somewhat colossal dimensions, and eventually he netted for me a grayling over a pound and three-quarters. The very next cast I hooked and killed a second grayling over two pounds. My friend, encouraged by this, thought he would have a try at these dace, and killed a grayling just under one pound and three-quarters; and by this time I think that we had set down the remainder of those which had been rising.

We walked up a short distance, when I saw a fish rising close under the opposite bank. My friend somewhat dared me to try it, and although perhaps it was not good judgment, as it was a longish throw and a draggy place, I did throw, and was fortunate enough to put the fly right, after the second or third cast, and killed a trout just under one pound and a half. When at home I spent some time in making an autopsy of every one of these fish, and with the exception of a few larvæ and a beetle or two in the grayling, the whole undigested contents of their stomachs consisted of smuts of different sorts and sizes.

Blue-winged
olive.

The blue-winged olive* is a fly which, although frequently out of an evening, especially from about the last week in July, is not, as a rule, successful, because the fish do not

* This insect is described and illustrated in all stages in "Dry-Fly Entomology," pp. 63-68.

take it freely in the sub-imago stage. It is not an easy fly to imitate, the colour of the body being a curious blue-green olive; and the majority of imitations are not dyed to that shade. It is known to entomologists as *Ephemerella ignita*.

Its imago, which anglers have named the sherry spinner, is imitated moderately well by a pale or faded detached badger. The natural fly carries a bunch of eggs of a blue-green colour at the penultimate section of the abdomen, holding them in position by its three setæ, which being turned forwards under the body, are barely visible. When flying in the air carrying their eggs they look like winged ants, and until we caught them we fancied they were ants. They generally head up-stream, and when they are seen in great numbers it may be taken as a sign of an extra good rise on the part of the fish, and a light basket on that of the angler. From an entomological point of view it is an interesting insect, being the only member of the Ephemeridæ family which carries its eggs in a ball in this way.

It has specially lent itself to experimental hatching of the larvæ in captivity, owing to the facility with which the eggs can be taken without injury either to them or to the fly itself. In 1886 we took a considerable

Sherry spinner.

Hatching blue-winged olives in captivity.

number of these eggs. On July 16th we placed them in water on stones. They at once adhered to them. These stones were carefully taken up to London and turned into various vessels in aquaria in the greenhouse of my friend Mr. Hawksley.

They were there followed and studied from day to day under the microscope, with the result that the gradual development of the embryo in the egg was noted ; and although on many occasions friend Hawksley was inclined to despond, and to think that they never would hatch, yet after perseverance, by February 18th, 1887, most of them had hatched out. From our want of knowledge of the necessities, surroundings, and possibly food, also perhaps because the water did not suit them, the majority of the London larvæ only survived a few weeks, and the last ended its existence at the comparatively early age of three months.

Patterns for
early evening
rise.

The evenings when the fish seem to be madly on the rise are generally the most disappointing ones. Just as the light is fading every trout in the river has apparently settled down to feed. It is too dark to distinguish a small fly on the water, and the angler is usually too excited and desirous of making a bag to take the trouble of collecting specimens of the insects to examine them at home at his leisure. He keeps on making cast after cast, first over

one and then over another fish, probably in his hurry not covering them with any degree of accuracy or delicacy, and as a rule meets with no success. If perchance he should kill a fish, he is too keen on making it a brace to waste time in examining the contents of the fish's mouth.

Whether under these conditions it is good policy to be continually changing flies during the short evening rise is at best a moot point. Many experienced dry-fly fishermen advocate the use of such patterns as the red quill, various dressings of red spinners, detached badger or occasionally jenny spinner. If there should be a great hatch of pale watery duns on any evening, its imitation or the ginger quill, little Marryat or quill Marryat, may be tried. If neither of these is successful perhaps one of the fisherman's curses may be put up as an off-chance, and if this is not taken a return to one of the red quills or red spinners, or better still, a trial of one of these over another fish may be efficacious. I have often in despair tried every imaginable fly—curses, duns, spinners, sedges—and all to no purpose, and yet the fish seemed to be rising in all directions and taking everything.

Mr. E. Williamson, who has devoted a considerable amount of time to the study of the subject, is to some extent at issue with me in

Mr. E. Williamson on
"Patterns for
the early evening rise."

reference to smuts and smutting fish. His opinion, formed after long and keen observation, is that what are styled smutting fish are more frequently taking spinners than the various forms of Diptera classed by the angling fraternity as smuts. The transparent outspread wings of the spinners floating down are not visible to us, and when, as in many of the males, "the greater portion of the body is also" "transparent the closest observation only" "shows a minute particle of colour." He used to be told that these were smuts and that it was no use trying to imitate them; but this is, in his opinion, "a fallacy and by using" "a spinner even in a bright sun you can rise" "and hook a fair proportion of these fish. A" "gauze net and a microscope are necessary to" "put up the right imitation." I am to a certain degree in accord with him, because autopsy has often taught the lesson that so-called smutting fish have been taking a number of spinners during the evening rise. On the other hand, however, there are evenings when practically all the insect food found in the fish has consisted of small Diptera.

He has found that this mad rise occurs generally just before, or at, sunset, when the spinners are plentiful, and that of these a large proportion are males. He has, with the assistance of George Holland of Winchester,

worked out a number of new patterns of spinners and has had success with many of them. He does not consider that his experiments have yet proceeded far enough to warrant his giving a decided opinion on their comparative merits. He is, however, pursuing the question, and whenever he obtains decisive results will not fail to publish them for the benefit of his brother sportsmen.

I am of opinion that during the evening rise the fish take better in deep water than on the shallows. Level runs of medium depth should be selected in preference to shallows, on which the fish are more often bulging or tailing, and feeding on larvæ, shrimps, &c., than on fly. When you do hook a fish, kill it as quickly as possible. There is no time to waste, and one must remember that, if everything goes off well—that is to say, if you hit upon the right fly, the right fish, the right place, the right moment, and they all *connect*, and you are not broken—the outside sport you can achieve is not likely to exceed two brace of good fish. If anything goes wrong, it is an inconvenient light by which to effect repairs of your tackle.

Deep water preferable to shallow for evening rise.

At the end of the small-fly rise, that is, just at dusk, no fly is so successful as a small sedge dressed on a No. 0 hook, either the silver sedge or hare's-ear sedge. Comparatively still

Small sedge.

places in deepish water are the best to select. A fish under your own bank is far more likely than one in the middle of the stream or by the opposite bank, and altogether the fish are not quite so particular. A dry fly is certainly an advantage, although there are some who are not particular as to this. You can get comparatively close to your fish, and the fault committed by the majority of anglers is not getting close enough. If you are very close the under-handed cast is a decided advantage, because, no matter how dark it is, the fish looking up from the water can in all probability discern a moving object above the surface of the water against the sky. Changing your fly at this time of evening, or even later, presents no great difficulty. If you cannot, by holding the eye of the hook up to the light, get a sufficiently clear view to pass the gut through the eye once, strike a match and do so. Having once passed the gut through the eye, if you use Major Turle's knot it does not require sight; it is only a question of feeling to tie it.

Large sedge.

We now come to the last stage, namely, that of fishing with a large sedge when it is almost dark. I am strongly of opinion that this particular class of fishing should be prohibited. It only serves to render the fish, if possible, more shy in the day-time than they

are now ; it is not to my mind, as a rule, the finest of sport, because it is only in special circumstances and under special lights that one can see one's fly. As remarked in a previous chapter, the dry-fly purist should terminate his day when he cannot easily distinguish his own fly. The angler ought to be, if possible, on the eastern bank, looking up into the light towards the portion of the horizon behind which the sun has set. On moonlight nights, however, he should place himself in such a position as to be looking into the moon. In the opposite direction his shadow, being on the water, is likely to scare the fish. Stout gut may be used with advantage.

The floating fly is, I think, as necessary as at any time during the day ; and for patterns, all the sedges are good—the large silver or the orange, or the hare's-ear sedge, dressed upon a hook of about No. 2, or the artful dodger, or Hammond's adopted, or a large Wickham on a No. 4 hook. Pattern, however, is not all-important ; if the natural fly is dark, select a dark one, and if light a light one. You must not expect many rises, When you have seen a fish rise in this light mark down the spot as correctly as possible. Get within ten yards if you can do so, or even nearer ; throw accurately, do not throw too frequently, and be most particular to dry your

Patterns of
sedge flies.

fly. Cast either up or across and partly up the stream, and above all do not drag your fly. At the slightest suspicion of a rise strike gently, but not too quickly, because fish take a large fly more slowly than a small one; and having hooked your fish, give no law.

Do not be afraid of weedy places. Trout seldom weed at night, possibly because they do not see the angler, and grayling very seldom take well as late as this. The moment you are sure that the fish you are trying is set down leave it and go on to another. Do not, above all, waste time, because the rise is a short one and soon over. If you are in doubt as to whether there is a tangle or a hitch in the gut, run your hand down the cast from the point of your rod to the fly and see that it is all clear. It is not a bad plan to carry a spare cast round your hat with a large sedge attached, because if there is anything of a tangle it is difficult to disentangle it at night, and the better plan is to take off the old cast and knot on the new one. Of course in changing your fly you will, as mentioned in an earlier part of the chapter, use Major Turle's knot. It certainly is not worth the trouble of changing your fly excepting to vary the size.

Splashing at
sedge.

One often hears the expression "splashing at sedge." Do not believe it. Fish do not

splash at sedge. I had long suspected this, but the experience at the end of May, 1885, described in a previous chapter, "Studies of Fish Feeding," confirmed this suspicion.

Sometimes after a long spell of dry weather a wet night turns out a good one for this class of fishing. I have vivid recollection of one such on July 21st, 1884, when, only starting after half-past seven o'clock at night, I hooked in one meadow six fish, and succeeded in losing five of them in different ways, none of them, however, broken, although the place was very weedy. The only fish I killed was over three pounds, and, curious to say, hooked in the anal fin.

I can recall one evening in 1886 which, to my mind, was so pre-eminently a good one for sedge-fly fishing that I feel tempted to give some personal experience. On July 5th, after a hot, dry day, with little fly and no sport beyond returning a few undersized grayling, I started somewhat late, made the best of my way to the eastern bank of the river, and slowly commenced moving up-stream, looking out for a rise. I was not long in finding one, and the first cast—which was, to my mind, passing fair and clean—with a detached badger set it down at once. I retired, imagining that it would come on the rise in another moment or two. However, I saw no more of

it. Walking a few paces up-stream, a similar thing occurred. Changed my fly to a smaller and lighter one; saw another fish rise. Put the fly to it. Again set down; and so on with fish after fish; so that, having walked some distance, and finding a convenient bridge to cross the stream and make my way home, the case seemed so desperate that I had every desire to thus beat a retreat. It was nearly dark, the small-fly rise was over. I had not had a single rise, although trying fish after fish, and I must confess to having felt somewhat down-hearted. I crossed over to the western bank, and walked down slowly, of course peering out into the darkness (and practically it was darkness, looking from that side of the river), in hopes of seeing a movement on the surface. At the upper part of North Head shallow, the sound of a rising fish caused me to stop and take a general observation. It was about dusk, and an extraordinary number of sedge flies were moving about in the sedges along the margin of the stream. I stepped gently down close to the bank, and found myself surrounded by them; it was like a swarm of bees. I listened, and again heard the rise. After a time I managed to spot the exact position of it, and kneeling down, judging as well as I could the length of the line, had a cast over it. A small move-

ment aroused my suspicions, and the next moment I found a good fish careering down the shallow in front of me. Without much hesitation I jumped into the water to get past an awkward stile, and had to take the fish almost down to the bottom of the shallow, where I netted out a nice-looking fish just over two pounds and three-quarters.

After this, feeling somewhat consoled, and having arrived at a bend of the river where the light was good when looking up-stream, I put up a fresh fly one size larger, dark sedge, and presently saw a quiet rise—so small a rise that I at once felt certain it was either a small fish or one of the wary old customers which frequent that shallow but are not often seen feeding on it in the summer excepting at night. The first cast was a fair one; the fly landed perhaps two feet above where I had seen the rise; and looking up into the light I could see it floating down distinctly. Another small rise, an instinctive strike, a pause and a rush up-stream with the line flying off my reel at such a pace as to make me feel nervous, was almost the first indication I had of having hooked a fish. I had to jump into the water again to get round the fence, as the stile is set some distance back.

By the time I got on to the bank immediately above that place, I found myself all alone,

with no assistant to handle the net, and with a large fish twenty yards from me just above the head of the island, apparently with every intention of plunging down on the far side of it. I steadied it for a moment or two, and managed to get the better of it to the extent of a few yards. Again it took a few more yards of line, and I was on the point of jumping into the water to follow it to the other side of the island. However, after persevering—the fish in trying to get on the other side of the island, and I in taking every inch of line I could get—I commenced to get on terms with it and eventually brought the trout in near me.

In time I had a comparatively short line on the fish, and then for the first time it showed itself. I had all along suspected that it was not a very small one, and, I confess, felt nervous when I saw its broad side as it leapt out of the water. I had very little time to think, as with a rush it was off again down-stream; so back I stepped into the water, round past the fence end, and ran along as quickly as I could. Getting below and fighting every inch of the way, and stopping it every moment from plunging into the various beds of weed, I eventually dragged it down to the lower end of the shallow and into the deep water below, where, getting out the net after two or three unsuccessful attempts, I succeeded in guiding it into it, and lifted out a heavy fish.

It was too dark to weigh it there and then, but on my way home I met my friend Marryat, who enquired as to my sport. I told him one fish over two and three-quarter pounds, and another good one. To his enquiry, "How big?" I said, "Oh, about four pounds." He said, "Let me see;" and added, "No; that is a well-conditioned fish, but it will not go four pounds." However, when we reached home and weighed it, we found that, although a short fish, it was in such perfect condition as to turn the scale at and slightly above four pounds and nine ounces. This fish, which I believe is as handsome a specimen of a Test trout as has ever been killed, is now the property of the Fly-Fisher's Club.

CHAPTER X.

HOOKING, PLAYING, AND LANDING.

THE previous chapters have led up to, and included, the point of rising the fish, and we have now arrived at the stage when, having risen the fish, we must consider what is necessary in order to hook it.

Striking.

Two apparently distinct sets of opinion exist on this subject—one that the policy is to strike, and the other not to strike. I describe these as only *apparently* differences of opinion, because it is a moot question whether they are not one and the same, though expressed in different language. The advocates of the striking policy do not advise giving a snatch or a sudden jerk, and thereby running a grave risk of breaking the gut and leaving the fly in the fish's mouth. The advocate of the non-striking policy does, in all probability, slightly and slowly raise his hand just to tighten on the fish when it takes. Hence the argument is not only an unprofitable one, but is based on a mutual misconception of each other's meaning. When the rise is seen and the fly is taken, it is necessary to raise the hand and

forearm with the object of fixing the barb firmly in the fish's mouth. I am inclined to call this action *striking*; and the non-striking fisherman must not imagine that I am at variance with him, unless he means to argue that no motion of the hand at all is required, and that the fish must either hook itself without any tightening of the line, or that if it should fail to do so, no action of the fisherman will tend to produce this result.

There is a considerable difference in the manner of taking a fly by large or small fish. A small fish comes up to it with a dash, takes it quickly, finds out the mistake quickly, and ejects the bundle of feathers with which it has been deluded equally quickly. In this case it is necessary to strike at once. A large fish raises its head leisurely in the water, slowly sucks in the insect floating down, and quietly turning its head goes down to swallow the tasty morsel. The effect of striking quickly in this case would be either to pull the fly away before it gets fairly hold of it, or if the fly is just in its mouth, merely to scratch and scare it. It is difficult for a fisherman to preserve his equanimity at the moment of a large fish taking his fly. To fail to do so, and in his excitement either to drag the fly away before the trout or grayling has secured it, or to scratch it, is to upset all previous calcula-

Advice to
strike slowly.

tions, and at the very moment that success is in his grasp to undo all the work he has previously efficiently performed. A quite appreciable pause should intervene between the moment of a large fish taking and the tightening of the line on the part of the fisherman to hook it. It may be safely inferred that a surprisingly large proportion of the cases of so-called *coming short* are blunders on the part of the angler in striking too soon owing to impatience to secure his prey. It is a golden rule to give time and not strike too quickly. If the fish is a large one it is barely possible to be too slow. If it is a small one and the fisherman is perchance too late, it should not be a source of poignant regret that he has failed to hook an undersized trout or grayling which he would have returned to the water.

Force to use
in striking.

Of equal importance with the precise moment when to strike is the precise degree of force to be employed in striking; it is astonishing how little is requisite, and any excess is worse than useless, and only too likely to produce a smash.

Striking from
the reel.

One golden rule may be laid down, namely, *strike from the reel*,* *i.e.*, do not put your hand

* Mr. W. H. Pope says: "A man possessed of unsteady nerves should strike from the reel, but I think that the man who strikes from the hand has better immediate command over a fish in a critical spot. He can pull

on the line so as to hold it when striking, but let the force of striking come on the line and the click of the winch. In this way many a smash is saved and a good fish secured, which would otherwise go away with a sore mouth, and an inclination to get rid of the hook in its mouth rather than to feed again. The resistance of the check in a properly made winch, as before remarked, should be slight, so that if too much power is put into the strike the line comes off the winch, and saves breaking the gut.

Your fish being properly hooked, the first ^{Butting a fish.} thing is at once to obtain command of it by getting the rod-point well up; this position is technically called *butting* a fish. By this is not understood what Francis Francis aptly styled middle-jointing the fish, or raising the rod and placing it inclined backwards over your shoulder. In such a position a considerable risk of straining the rod is run, and what is more likely to militate against your

the fish down stream the moment it is hooked and before it realises its position, whereas striking from the reel involves two movements, namely, that of the reel on striking, and the motion of clasping the line immediately afterwards. Before the latter is executed the fish may have run its head into a weed bed. No doubt when using very fine gut it is safer to strike from the reel." I give this *in extenso*, but with all due deference to my good friend, cannot endorse his opinion on this point.

ultimately killing your fish, practically losing control over your rod. If your fish makes a sudden rush or a spring into the air with the rod in this position, it is barely possible to get the rod-point down quickly enough to save a break, and if it runs in under your feet, you cannot assist your efforts to keep a tight line by getting the rod-point farther back.

When butting the fish the rod should be at an angle of sixty degrees with the water-level, and it is only at the critical moment of netting the exhausted fish that it should be in a more perpendicular position. The reel should be put on the rod so that its handle is on the left side when the rings are turned downwards. Immediately after the fish has been struck the rod should be transferred from the right to the left hand, and in the act of transferring it be turned over, so that the rings are upwards, and the reel-handle in position for the right hand to control it. The effect of this is to correct the tendency of rods, when much used, to get bowed and set in a curve with the rings on the concave side.

Playing the
fish.

If the fish at its first rush starts up-stream, let it take out line freely. It is not necessary for the fisherman to follow it unless there is danger of its getting out of control or exhausting the line on the reel. It is preferable for the angler under all conditions to be below his

fish while playing or netting it. If it runs down-stream he should get below and keep below it, and always as far as possible drag it down with the current. Obviously the hold of the hook is more seriously endangered by the pull of the rod against the stream than with it. If it hangs about in the same place or seems inclined to work down-stream, get below it and drag it down as quickly as you can. Keep well below it on a short line, and keep dragging it down for some distance; in fact, as a golden rule, *use your heels to save your reel*. In this way you keep on taking it farther from home into a strange country, where every obstacle, weed, post or pile is unknown, and hence the fish is unable to entangle you in them with that degree of decision and certainty exercised when close to home. In addition to this, you are every moment taking more out of it in the most efficacious way, and rapidly drowning it.

It seems anomalous to speak of drowning a fish in its native element, yet it is not altogether an inappropriate expression, as the coroner's verdict in such a case would be "death by suffocation." The normal respiration of a fish is effected by taking in water at the mouth and ejecting it through the gills, during which action the oxygen required is absorbed from the water. With its head

Drowning a fish.

directed up-stream the natural flow of the current assists this function of nature, but when the position is reversed and the fish's head turned down-stream the water passing *in* at the gills and *out* of the mouth, whenever it opens them to breathe, causes an insufficient supply of the necessary oxygen and consequent suffocation, and the faster the stream and greater the pace at which it is pulled down the more rapid is this action. Another golden rule laid by our forefathers, and one never to be neglected, is to keep a hooked fish on as short a line and as much under the rod point as possible.

Strain on rod
while playing
a fish.

While playing a fish, as full a strain as the rod and tackle will conveniently bear should be kept steadily on it, and many experienced anglers would probably be astonished if they realised how little force this represents. Few full-sized salmon-rods can lift a dead weight of two pounds, and an ordinary single-handed trout-rod cannot exert a pressure exceeding, say, half, or at most three-quarters, of a pound when playing a fish. With large fish the best policy is to put on as much strain as possible at once. A considerable proportion of lost fish owe their escape to getting out of control by a want of prompt decision when first playing them.

Some anglers are unnecessarily hard on fish when playing them. Unless there is special reason for putting on a heavy strain by reason of proximity of heavy weed-beds, or to prevent fish from getting into an awkward corner, there is no reason for running the risk of pulling the fly out of the fish's mouth or straightening a badly tempered hook. Many a lightly hooked fish has been landed by an angler with *good hands and judgment*, and many an one lost by a clumsy performer.

Good hands
and judgment
when playing
a fish.

If all is smooth sailing, if your fish does not succeed in getting into weeds or winding the line round a post, &c.—and you can, to a great degree, prevent this by keeping its head well on top of the water—there is no difficulty in killing the largest fish. If it jumps, and as often as it jumps, at once lower the point of the rod until the fish is back in the water, to prevent the full momentum of its falling weight coming on your tackle. As soon as it is back in the water the rod should again be returned to an angle of sixty degrees.

The principles of playing fish as just described are no doubt sound and likely to succeed in an open river free from weeds, partially submerged boughs, roots, snags, or other obstructions to foul the line either accidentally while the fish is running, or, as often happens, of *malice prepense* on its part. To

kill a free-running three-pounder under such conditions is the *beau ideal* of sport, but in the present day to find such a stream, or if found to rise and hook a large fish in it, is indeed a problem.

All chalk streams must have a plentiful crop of weeds, if only to provide the necessary food for the trout or grayling, and the result of mowing down the weeds wholesale is infallibly to render the fish shy and unapproachable. It may be urged that our ancestors fished in weedy rivers and killed, if the somewhat meagre records can be believed, far greater bags than we can even hope to secure. When, however, one of their fish did go to weed, their plan was to pull and haul at it first, and then, if the trout could not be moved, set to work with a stick, rake, scythe, or other instrument to cut or break away the weed round the fish, resulting in the loss either by fracture, cutting of the line, or getting unhooked, of at least three out of every four so treated.

Effects of
slacking a
hooked fish.

The effect of slacking under exceptional circumstances is not so serious as might be imagined from the importance attached to it by the old school of angling authors. Many years ago, on the Shannon, at a place where there is a fall, over which the *cots*, or flat-bottomed boats used in the district, could not follow a hooked fish, the experiment was tried

of slacking salmon that seemed bent on shooting the fall, with the result that they usually turned and ran up-stream the moment the downward pull of the slack line in the current was felt. It was also found that in the majority of cases the hook did not fall out, and the fish was duly gaffed and added to the bag.

The same policy was adopted later by trout fishers of slacking, or even letting out line, and casting it by a modified switch below the running fish whenever it was necessary to turn or stop it in its downward course. Sometimes, in a dangerous position, such as immediately above a bridge or weir, where the angler could not follow his fish down, he would start ahead and try to pull it down-stream, and this procedure again generally caused the trout to head up-stream. As a natural sequence it became the custom to slack in difficult places, and it was found that trout, instead of rushing down-stream, usually stopped and gave the fisherman time to get on terms with his hooked fish from below.

Policy of slacking hooked fish in awkward places.

A curious instance of this happened to me on a well-known Hampshire water. There was a pretty shallow which curved down and contracted in width to pass under a skew railway bridge carried over a river in a single arch. A short distance above the bridge there

was a steep and awkward fence, and the sides of the high railway embankment close to it only added to the difficulties of the position. One September morning the keeper pointed out three good fish rising on the shallow, and volunteered the information that the local fishermen usually avoided the place, as they were invariably broken by the fish running down and through the bridge.

To fish the shallow from below the fence was almost impossible, as the fast water made the fly drag, and accordingly I settled down a few yards above the fence. The first cast with a Wickham rose and hooked the nearest fish: at once I slacked, leisurely clambered over the fence, and asked the keeper if he would like to net the fish. He laughed, and sagely opined that the fish had got off, as the rod-point was down and the line slack. After some persuasion, however, I induced him to get over the fence and come down with the net, and led into it a good trout of 1 lb. 9 ozs. To show him it was not mere luck, I returned to the shallow, hooked and killed the second and third trout of 1 lb. 6 ozs. and 1 lb. 9 ozs., pursuing in each case the same tactics.

Playing trout
in weedy
places.

If a fish takes the fly and is hooked in a weedy place, the best policy to adopt is the bold one of reeling up the line without a moment's hesitation until the trout is on the

top of the water, and once there, without regarding its struggles and splashing, it should never be allowed to get its head down again, but brought along on the surface until it is in the net. It sounds dangerous, but it is astonishing how great a strain gut (even the finest) will stand under such conditions, and how helpless a trout is with its fins half out of water.

Sometimes it is impossible to hold the fish, and it plunges head first into the weeds. Formerly the plan adopted under such circumstances was to get below the fish, keeping a tight line and trying, by jerking and sawing with the rod, to get it out. If this was unsuccessful, then to slack altogether, and then, as a last resource, either to cut away the weeds around the fish, or, if the water was shallow, wade in and try to drive it out, or even net it among the vegetation. Such measures were, however, always deemed desperate and foredoomed to failure.

Mr. Marryat at one time advocated the plan of getting well below a weeded trout, letting out plenty of line, sinking the point until the rod was nearly in a horizontal position, and trying to get the fish out by a gentle swaying motion. He explained this to me, but misunderstanding his directions, I thought that his swaying motion was effected by the

hand on the line without the use of the rod. Strange to say, the experiment was so successful as to lead to his invariably adopting this method himself, besides, of course, communicating it to others.

Tactics to pursue with trout when weeded.

Thus, when a hooked fish is well weeded, the rod point should be dropped and everything left slack; to keep pulling is only to impel the trout to bury itself more deeply in the weeds, or even to wriggle in and out between the stems so as to escape the strain. Let out plenty of line well below the fish, then laying down, or spearing the rod, or holding it in one hand if preferred, take the line between the thumb and forefinger of the other hand and apply a gentle strain, accompanied by a backward and forward or swaying motion. After a time the presence of the fish will be evidenced by movement. If this movement is up-stream, all must be left slack again, or the fish will only weed more deeply. If down-stream, the line should be dropped, the rod resumed, and the fish be reeled down to the net. If it weeds a second time, the same tactics should again be pursued, and it may be laid down as a rule that a weeded trout firmly hooked will inevitably in time succumb to this treatment, while a lightly hooked one will, with this or any other procedure, probably escape.

Right-handed fishermen, as before noted, usually put their reels on *left-handed*, *i.e.*, with the handle on the left side, when the rings are turned downwards. When a fish is hooked the rod is transferred to the left hand, turned over so as to bring the rings upwards and the reel handle to the right hand. My good friend Mr. Lloyd fancied that one of his rods had been partially crippled when playing a heavy fish with his reel in this position. With the view of equalising the strain on his rod, he reverted temporarily to the old plan of putting the reel on right-handed. He foresaw that, in the excitement of hooking the fish, there would possibly be a difficulty in remembering this, and, as anticipated, he failed to find the handle after striking the first trout.

Mr. Lloyd's
experiments
on playing
trout.

The following description of what then occurred is in his own words: "There was a considerable quantity of weed in the stream, and, with the view of not *irritating* the fish, I at once dropped the rod point so as to slack the line. On reeling up I was surprised to find that the trout had only gone a couple of yards and not into weed. As, however, it was deep down in the water, and hence could not be held hard under control, and, imagining that the springy pull of the rod would scare it, I tried to lead it very gently into more open water. The rod point was only just *feeling its mouth*, and it came quietly down into the net.

Mr. Lloyd on
hand playing.

“The next fish hooked went first into a patch of weeds, so I speared the rod and took hold of the line between the thumb and fore-finger. It came out of the weed at once, and, just for a *lark*, I tried to draw it gently to the net by hand. To my utter astonishment, I found it allowed itself to be towed down quite quietly, and even at my feet did not appear frightened but stupid.

“The third trout was struck rather hard, rushed through a bar of weed ten or twelve feet thick, across a broad gravel patch, and into the middle of a heavy mass of weed. The fish had taken out over twenty yards of line, and the case altogether looked hopeless; but here again I towed it gently through the weeds and down to the net. The next brace of fish behaved in similar fashion, and the five trout averaged over $1\frac{1}{2}$ lbs. in weight.

“The following day I hooked a fish in a wide and fairly open bit of water, and slacked line at once. This time the fish swam steadily down stream, where it could not be followed on account of a tree on the bank. It appeared as if it would never stop, but, having taken out some thirty-five yards of line, it turned round and went into a weed-bed. A worse position, from the angler's point of view, could scarcely be imagined—a trout thirty-five yards below the fisherman, buried in the weeds, with

its head up-stream. The rod being speared, I was surprised to find that a very little pressure on the line held between the thumb and forefinger brought the trout up to the net."

Similar experiments on the system of hand-playing having been carried on during several seasons by Mr. Lloyd and other friends, and by myself, the results can be given in the following five propositions: (1) That when the line is slack trout do not usually run any great distance, and although they weed, and in some cases weed deeply, do not take a turn round the weeds; (2) That no matter how dense the growth of the weeds, and even if the trout threads its way through one weed bed and a gravel patch into a second weed bed, it can usually be towed out by gentle hand-playing; (3) That, although the method is more convenient and more generally successful when the angler is below the fish, it does not necessarily fail if the trout is below and has to be towed up-stream; (4) That the trout, once clear of weeds, can be played with greater ease and certainty by hand than by the rod, but if it should rush off the fisherman must slack at once; (5) That it is quite as easy to net the fish playing from the hand as from the rod.

Inferences
from Mr.
Lloyd's
experience.

It is only fair to add that, while on some days this plan is uniformly successful, there are other days on which it seems to fail in nearly

every case. This is not altogether surprising, as it happens with all modes of playing, and is probably due to the fish coming short and not being firmly hooked, or to some other cause which would equally prevent successful playing by any other method. One point, however, for consideration in connection with the question is the absence of the sport of playing a fish with a well bent rod and reeling it up, splashing on top of the water, to the landing net. Is the probability of landing trout in places and under conditions where, by the more usual method, the angler is foredoomed to failure, sufficient to counterbalance in his mind the loss of this pleasure and excitement?

Playing trout
among heavy
banks of weed.

A fish hooked among heavy banks of weed can often be prevented from hanging you up by a somewhat summary process, which must be adopted immediately after it is hooked. The moment your fish is hooked, put on a strong strain and get its head well up alongside the bank of weeds, or even on it, keep your eye on the fish, and once having got its head up, never let it get down again. Each time it tries to do so, take a couple of turns of your reel-handle, the effect of which will be to draw its head up again. The more it struggles the more quickly it propels itself on the top of the weeds towards you. It is astonishing how fish after fish can at times be killed in such a place

by resolutely and immediately following these tactics.

At night trout do not often weed ; if they do, Leading a hooked fish. at any rate they do not weed deeply, and this is probably due to the angler not being easily seen. In the same way, if the fisherman in daylight keeps well out of sight of a hooked fish, it can often be killed in the midst of heavy weeds without once attempting to get into them. Moreover if the angler lies low he can *lead* his fish on a tight line past any dangerous obstructions into open water. He must take care when leading that the fish is allowed to make its way voluntarily in the desired direction. In fact, it must be effected by persuasion rather than force on the part of the fisherman. Grayling do not as a rule go to weed as often or as resolutely as trout, and scarcely ever really entangle the tackle in it. If a grayling does go to weed, by waiting with a moderately tight line it can generally be persuaded out of them.

A fish hooked above a bridge or a hatch will on its first rush make a bolt down, and occasionally through. As before noted, in the case of the bridge they usually only run down under it, and do not go through, but remain in the shade beneath the bridge. In such a case too much strain should not be put on when running down, but a steady

and severe strain maintained when the fish is under the bridge will usually in time bring it up again. If the bridge is a narrow one, or in the case of a hatch, the rod may be passed through and the fish killed at leisure below.

Sometimes a fish running up or down, but more often down, towards a dangerous spot may be turned by the angler getting in front of and pulling it *towards* the place of danger which the fisherman wants him to avoid. Owing to natural "contrairiness," it will often turn and go in the opposite direction, and when once clear of danger it is as well, if possible, not to let it get back to it.

As long as the angler is playing a fish he should try to keep a uniform strain on the rod. He can usually avoid putting on too much strain by looking at the curve made by the bowed rod, if necessary easing to it a trifle. A fish hooked at the end of a long line will sometimes run straight in under your feet the moment it feels the hook, and then it is impossible to get in your line fast enough to avoid slacking. If this should happen do not be in a hurry or flurry; if the fish was lightly hooked it is gone; and if, on the other hand, the barb is fairly home, it will simply go down in the weeds, or near the bottom of the river, and sulk. Meanwhile you can leisurely reel in your line, and proceed to play the fish as soon as it is taut again.

An uncomfortable feeling is produced when Jiggering fish. a hooked fish indulges in what is called *jiggering*. This expression means a series of quick, short, jerky pulls followed by an equally quick slacking of the line. If the fish is visible you will notice that it is going through a curious set of antics, wriggling about and doubling itself up in a strange way. How to account for it I do not know. Salmon are perhaps more given to it than trout or grayling. Some angling authorities have said that it is a lightly hooked fish; but if allowed to judge from my own experience, I cannot recall many instances of having lost jiggering fish. Altogether, however, it does make one feel nervous and uncomfortable.

Sometimes a fish seems to dive in under your own bank, or to be trying to find its way into rat-holes or under a ledge. The object of these tactics is to try and fray the tackle against the ledge or other projection, and it is necessary for the angler to keep his rod in a horizontal position, with a good strain on the fish. Some years ago a curious instance of a somewhat similar occurrence happened to me when fishing a small Hertfordshire stream. I had hooked an undoubtedly good-sized fish which at once ran in under my own bank, and, to my astonishment, continued running line off the reel. I imagined that the trout had run

Hooked fish running in under the fisherman's bank.

round a post and was back in the stream. With a view of disentangling the line from it, I stepped up to the place, and found at right angles to the course of a stream a large drain-pipe, up which my fish had bolted, it probably being its usual hiding-place when not feeding. Keeping the rod in a horizontal position, and standing immediately over the mouth of the pipe, I continued playing this fish, my chief, in fact my only care being to prevent the line from coming in contact with any portion of the circumference of the pipe. This performance lasted some minutes; to me it seemed some hours; and at length inch by inch I recovered line, and eventually had the satisfaction of landing a four-pound trout in perfect condition. This happened in the morning, and, strange to say, the only other fish I killed that day was a three-pound fish hooked at the same place in the evening, which pursued the same tactics, and eventually succumbed to the same treatment.

Use of the
landing net.

Having tired your fish, keeping still below it, place the landing-net in the water below it. The net should invariably be held in the lower hand; that is to say, if you are on the right-hand bank, looking up-stream, in the left-hand; and if you are on the left-hand bank in the right. The position of an angler landing a trout is illustrated in the frontispiece,

which is a reproduction of a drawing made from a photograph taken by Messrs. Elliott & Fry.

Keeping the net still and well sunk, and judging the length of the line accurately to bring the fish to the net, draw it down and drop it into the net. Remember that the test of a fish being ready for the net is its turning on its side. When the fish is in the net do not lift it, but draw it to the bank. Take the fish out of the net, if undersized unhook it gently and return to the water. Do not dash it down and stun or kill it but drop it quietly.

If you find it is sick and disposed to turn on the side or back, nurse it, holding it in its proper position with head up-stream, in a place where the current is not too strong, and in ninety-nine out of a hundred cases it will in a few minutes recover and swim away. If sizable knock it on the head to put it out of pain, and remember that one smart blow on the right spot is sufficient. The right spot is at the summit of the spinal column where the head joins the body. Straighten it out, lay it in your basket on dry rushes or grass or nettle, or in a linen bag, or wrapped up in a towel. As soon as it is stiff, if you want it to look well, close the mouth and bend it down bellywards to hog its back, as this always makes fish look more shapely.

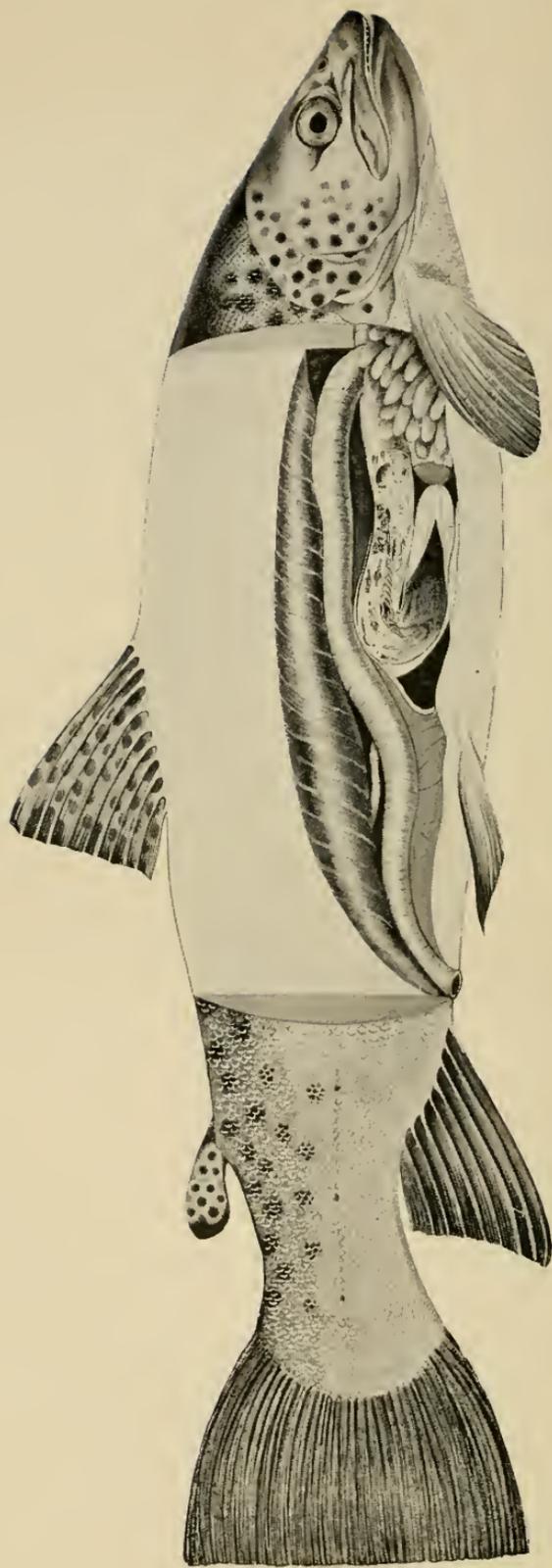
CHAPTER XI.

AUTOPSY.

The advantages of autopsy.

ONE of the first objects of a sportsman should be to study and observe the habits and habitat of his quarry, so as to acquire an intimate knowledge of the class of food most affected by it and best calculated to sustain and improve its condition. A considerable amount of attention has been paid to this branch of the subject in reference to birds preserved and even bred entirely for sporting purposes. Considering the paramount importance of this point to the fly-fisherman, whose only lure is an imitation of the fish's natural food, it is surprising how persistently he deludes himself and others by neglect of the simplest plan of observation, viz., that of examining the contents of the trout or grayling's stomach, and thus ascertaining for a fact the nature of the meal on which its appetite has been assuaged. The continual complaint of not being able to discover the species of insect on which the fish are feeding, or worse still, the confident tone in which one is assured

PLATE XVII.
AUTOPSY.



E. Kemp, del.

TROUT (*Salmo fario*).

that the angler could see the trout taking iron-blue or olive duns, and yet could not persuade them to look at the best imitation, becomes tedious from its frequent reiteration. Yet it never seems to occur to the large number of grumblers who indulge in these vain laments that, provided they can succeed in catching a feeding fish—not always an easy feat—the remedy is in their own hands, and a few moments devoted to an autopsy will solve the problem.

Having caught your fish, and killed it by a smart tap on the head, hold it in the left hand with back downwards, and with a sharp knife, inserted at the vent, edge upwards, so as not to cut into the entrails, make one incision right up to the gills. Turn the flanks outwards, and pull the whole of the internal arrangements upwards and clear of the fish, except, of course, just at the throat, where a clean cut is required to sever the tube, and thus separate the entrails from the remainder of the fish. Plate XVII. is a longitudinal section of a trout, showing the digestive organs, air bladder, pyloric appendages, &c. A portion of the stomach is cut open to show the undigested food it contains. The tube leading from the stomach to the vent, which contains only digested food, can be discarded. Commencing at the gullet end, the throat and stomach should be slit

How to
autopse.

down longitudinally, and the contents turned out into a small vessel containing water.

Perhaps, if the fish are rising freely, many anglers will think they would never have the patience to perform this operation deliberately. It certainly is not a waste of time to do so; but one's sympathy must be with the ardent sportsman, who, having secured one, burns to achieve the further distinction of making it a brace. But if you cannot have the patience, there is often an easy way of getting a part of the information you require by opening the mouth of the fish and taking from it on the point of a knife a few of the last insects it has seized but not yet swallowed. Turning these into a vessel of water, and examining through an ordinary magnifying-glass will, after some experience, tell the fisherman whether they are insects, and if so, further study will enable him to determine the order, family, genus, and perhaps species to which they belong, and the stage in which they are being taken by the fish.*

Floating por-
tion of
autopsy.

However, to return to the contents of the vessel into which the undigested food has been turned. The first thing that will strike an

* The angler desiring to study this branch of the subject is referred to "Dry-Fly Entomology," the first part of which is devoted to the classification, description and life history of the angler's flies.

observant student is, that one portion of the food is lighter than water, and therefore floating on the surface, but that a far larger proportion, being of greater specific gravity, sinks to the bottom. The floating portion consists of winged insects and nymphæ just on the point of assuming the winged state. It may be asked how this last fact is to be ascertained, and any one taking the trouble can prove it to his own satisfaction.

Let him take two or three of the floating nymphæ, and as many of the sunk ones, and soak them for a few minutes in water in which is dissolved a small piece of ordinary washing soda. The addition of the alkali is necessary to counteract the action of the digestive fluid of the fish, which is strongly acid, and if neglected, digestion will continue for some time. After washing thoroughly in water to free from soda, these nymphæ may be kept in methylated spirit for any length of time without apparent change. To clear them sufficiently for microscopical examination, they should be immersed for some days in oil of cloves. When perfectly transparent they should be placed on the stage of the microscope under a low-power objective, such as 3 ins. or $1\frac{1}{2}$ in., which are equivalent to magnifying powers respectively of about 15 and 30. A great contrast will be at once

apparent between those that floated and those that sank. In every one that floated it will be seen that inside the setæ or tails of the nymph are plainly visible the setæ of the sub-imago which is just about emerging from it; and in the same way, in each of the six legs, in the head, in each antenna, and even in the abdomen itself, the distinct outline, with every detail of the corresponding limb or organ, of the sub-imago may be seen.

In general appearance, the nymph just before changing to the winged insect consists of two distinct portions, the inner or solid-looking portion being the sub-imago complete in all its parts excepting that the wings are folded up inside a pair of oval-shaped covers. This sub-imago is, however, entirely enveloped in a thin covering, which is perceptibly larger than, and projects beyond the outline of, the insect itself. Attached to this apparently loose covering are all the organs which are especially provided for the larva living in the water, and not required for its subsequent or winged stage, and these organs are, without exception, shed with the larval envelope. Among these the most prominent are the various mouth organs, and the *branchiæ*, or external portion of the breathing apparatus.

The less developed nymphæ, which sank in the water when the autopsy was originally

performed, have, however, quite a different appearance. There is no indication of the larval covering being loose. The setæ and legs are solid-looking limbs, the latter often armed with formidable claws. The mandibles and other mouth organs are prominent, and firmly attached to the head. In fact, there is nothing to suggest an impending metamorphosis. In considering the deduction to be drawn from the comparison between the proportionate quantity of sunk and floating nymphæ in the autopsy, it must be remembered that all of the floating specimens were nymphæ rising to the surface for the purpose of emerging from the envelope in the sub-imago state, and hence were taken in mid-water, while the sunk ones were down among the weeds or on the gravel, and must be considered as *bottom* food.

The remainder of the floating portion of the autopsy will, at the first glance, be thought to consist entirely of winged insects. Some are, in fact, so, among which must be classed *curses* or little black Diptera of various sorts, winged ants, beetles, aphis, any of the winged Trichoptera, and a portion of the residue, which at a superficial examination will look like winged Ephemeridæ. Such of these as are in the imago state are easy to separate, and, of course, represent floating flies taken by the fish.

Of the duns or Ephemeridæ, apparently in the sub-imago stage, it will be found by microscopic examination that a considerable proportion have their wings still folded up along the longitudinal nerving ; but the transverse folding has become extended, owing to fracture or decomposition of the wing-covers. A further examination will often bring out the fact that the abdomen is still enveloped in the nymphal shuck with the *branchiæ* attached. Hence it may be inferred that these, again, when taken by the fish were nymphæ, and were not on the surface of the water. In fact, the tendency of careful scrutiny of the contents of the stomachs of both trout and grayling is all in one direction, viz., that of showing how small a proportion of the fish's insect food is taken when floating, and how large a proportion belongs to the middle and lower depths of the stream.

Sunk portion
of autopsy.

Considerable space has here been devoted to the smaller or floating portion of our original autopsy, as this is essentially the part requiring study by the votary of the dry fly. A brief outline of the probable composition of the solid mass of sunk animal matter, forming by far the greater portion of every autopsy, will not be out of place. Apart from small, semi-digested or detached pieces, the predominating larvæ found in stomachs of fish killed in chalk

streams are those of the smaller and medium-sized Ephemeriidæ, both in the early or larval stage and in that of the nymphæ. As before remarked, the nymph immediately before the metamorphosis to the sub-imago is not found among the sunk portion of the autopsy.

The immature larvæ of the Mayfly, living in burrows excavated in the mud, are, as might be expected, rarely found in the fish's stomach. I have never discovered any of the *flat* larvæ of Ephemeriidæ in either trout or grayling. These are the immature forms of the genera Eceyurus and Heptagenia, of which the March Brown and Yellow May Dun are the best known British species. They live on the under side of stones in swift shallow water. They adhere closely to the stones, and, after covering themselves with sand or other fine *detritus*, are so like them in colour that it is questionable whether the fish would notice them at all; and if they did, it is even more questionable whether they could detach them from the stones. As a general rule, a considerable number of shrimps are present, as well as a few caddis in their cases, stones which are probably the undigested residuum of other caddis-cases, often snails, and not infrequently water bugs (*Corixæ*), which are referred to in a subsequent paragraph.

Plate XVIII. is a reproduction from micro-

scopic drawings taken from life, in which 1, 2 and 3 are Ephemeriidæ—1 and 2 immature nymphs, and 3 another nymph just on the point of changing to the sub-imago state; 4 is the fresh-water shrimp (*Gammarus pulex*), and 5 and 6 are *caddis* or larvæ of Trichoptera with their cases. Sometimes there are a few larvæ of the smaller Perlidæ, and, rarely in the Test, minnows or bullheads. During the autumn grains of corn are found in grayling, but not, as far as my personal experience goes, in trout, and, altogether, the contents of the grayling's stomach may perhaps be described as more heterogeneous than that of the trout.

From a scientific point of view, it is desirable that fly fishermen should prosecute steadily from day to day, and from season to season, the study of autopsy. It will, however, be of little avail unless they well and truly "mark, learn, and inwardly digest" the results of their study, and work out for themselves the ultimate teaching which will tend to assist them in selecting patterns likely to be acceptable to the feeding fish.

Theories
deduced from
autopsy.

It has been shown that the larger proportion of the contents of the stomach of a trout or grayling consists of larvæ, nymphæ, caddis, shrimps, &c., which are invariably in the middle and lower depths of the water, from which fact the inference may be drawn that

AUTOPSY

Baëtis
Nymph



1

Ephemerella ignita
Nymph



2

Baëtis
Nymph



3

Chironomus
Gammarus pulex



4

Caddis



Larva Case

5

Caddis



Larva Case

6

the major part of their food is taken below the surface. A natural deduction from this would be that the sunk fly would be more likely to tempt than the floating one. The sparsely dressed patterns used in the North for wet-fly fishing are probably taken for some forms of larvæ, water-bugs, or in some cases water-beetles, and it has been confidently said by north-country anglers that an adept of their style could work sad havoc on some of the well-stocked shallows of the chalk streams. The disciples of the dry fly do not as a rule understand the art of fishing with sunk fly, which may account for the fact that, tried in the Hampshire streams, it has not proved successful in their hands.

It would tend to elucidate this subject if a first-rate performer would pay a visit to one of the chalk streams and try the sunk fly thoroughly. It must not be in private water, where the trout are unsophisticated, and when on the feed take anything looking like an insect, but on one of the well-whipped waters of the Test or Itchen. I have very little doubt as to the result. Judged by any attempts heard of up to the present time, it is foredoomed. If, on the other hand, previous failures have been due to want of knowledge or experience on the part of the fisherman, it might revolutionise fly-fishing as practised in

Hampshire. If, however, as I am inclined to predict, this should be a *fiasco*, the natural question is to inquire whether it is possible to take these wary fish when feeding under water with an imitation of their natural food.

The nymphæ have been successfully imitated by patterns which have occasionally done well. Strange to say, however, on the days when they have done well, fishermen on the same waters have also done well with the dry fly. It has generally been in the early spring, when the trout are comparatively easy to catch, and no one would seriously advise the use of a sunk fly on a day when the floating would kill as well. At other times of the year there is no record of the sunk fly having had any chance on such waters, and occasionally the dry-fly is certainly somewhat efficacious. It must be remembered, too, that the presence in an autopsy of nymphæ just on the point of changing to the winged state indicates that the fish, although, as a rule, under such conditions looking downwards, has yet followed the active nymphæ towards the surface. If one of them should succeed in reaching the surface, and splitting open the nymphal shuck struggle out into the winged state, it is not unlikely that the trout or grayling would seize and swallow it. If perchance at this moment the angler's very best imitation should be

floating down towards its nose lightly cocked and sailing jauntily along, it is also not unlikely that the two birds will be killed with one stone, or, if all goes right, a good fish added to those already in the basket.

Autopsy shows that the diet of grayling is more various than that of trout. This may account for grayling being, as a rule, less difficult to catch than trout. In addition to grains of wheat and oats, it is not uncommon to find a number of different sorts of water-bugs, insects looking like large house-flies, cowdung-flies, and other forms in both larval and perfect stages, besides, of course, the usual number of larvæ and nymphæ of the smaller Ephemeriidæ, shrimps, &c., in the capacious paunch of a single grayling. This seems to indicate a love of a meal in many courses, or possibly a sort of feminine curiosity, and to this cause may be attributed the success of fancy patterns, such as red tags, orange tags, green insects, coch-y-bonddhu, bumbles, Wickhams, &c., with *Salmo thymallus*. Generally speaking, it may serve to encourage the fisherman to persevere with a feeding grayling, and try pattern after pattern, no matter how unlike anything he may see on the surface of the stream, in hopes of at length chancing on some combination of feathers, tinsel and silk or quill which will tempt the fish to rise and take the

Diet of grayling more various than that of trout.

glittering object in its mouth, without any suspicion of the barbed sting lurking unseen among the fibres of the hackle.

Lessons to be
learned from
autopsy.

The study of autopsy has taught me one lesson, viz., that the precise shade or tint of the artificial and the exact imitation of the natural fly most plentiful on the water are not so all-important as many fly-fishermen seem to imagine. The contents of the stomach of a fish almost invariably comprise many different species of the same genus, or many varieties of the same species. Insects belonging to different families, or even different orders, are often side by side. The larvæ and nymphæ closely packed together in the gullet and stomach are, when separated and examined, found to differ in colour from the palest primrose to the deepest olive, from a light buff to a deep chocolate-brown.

Some are so small as to be scarcely visible to the naked eye, others are nearly three-quarters of an inch in length. Some are in the most rudimentary condition, and others again are just about to undergo the metamorphosis to the sub-imago and change from a grub living in the water to a winged insect. Now fish, feeding as they do almost continuously, will take all and every one of these insects, no matter what colour or in which stage, no matter whether small or com-

paratively large—Ephemeridæ, Trichoptera, Diptera, Perlidæ, as well as Mollusca and Crustacea—it cannot be so much the question of what fly or which pattern is offered to them.

Reasoning from this point, what is the secret of fish in some rivers being so difficult to tempt? The logical deduction seems to be that a combination of bright clear water and frequent flogging must be one cause. Probably the presence of a great quantity and variety of suitable food in the river, as tending to enable the fish to satisfy their appetites with very little exertion, is another cause tending to render them particular, and not easy to beguile with any artificial, no matter how good an imitation of the natural insect.

To carry the reasoning a little further: What, then, must the angler learn and attempt if he wishes to achieve success on a difficult water? The longer one lives and the more the subject is studied, the more forcibly are the lessons impressed upon one's mind. The fish being frequently cast over get to know the appearance of gut, and to be suspicious of all flies—sometimes even the natural ones. The finest gut is no more successful than moderately stout gut. The greatest care must be taken that the artificial fly is placed on the water lightly and that it is perfectly dry and cocked. It must be so placed on the stream as to float

down without the smallest semblance of drag or check, following precisely the natural run of the current.

In addition to all of these points, one is that all the above conditions should be fulfilled in the first cast, and before the shyest fish can have the slightest suspicion that it is being deluded. This sentence has in substance been written many times before in this book, but it is so essentially the most important factor in determining the success or want of success of the angler that no apology is needed for its reiteration. It should be impressed over and over again on the mind of every dry-fly fisherman; in fact, he might be tempted to say, in the immortal words of Molière, though very differently applied by him, "Je les veux faire graver en lettres d'or sur la cheminée de ma salle."

The experience of any angler who has persevered in the practical study of the food affected by trout and grayling must tend to prove that when thoroughly on the feed they are not over nice or particular in their choice, and are, like their human congeners, fond of change and variety. Some of the forms of animal life found may be fairly described in the above words, and besides, the eloquent lessons taught as to the habits of the fish must prove of considerable interest, not only as mere entomological

specimens, but also as conveying a faint idea of the marvellous numbers and sorts of larvæ, beetles, crustacea, &c., living in the water.

In a previous chapter a curious, though certainly not unique, result of an autopsy was referred to. In this case, one evening at the end of May, the fish were apparently rising furiously and splashing heavily, and yet the only one killed had been regaling itself chiefly on water-snails, or *Limnææ*. Any one fishing that evening would, judging from the ordinary dicta of writers on the subject, have been certain that they were taking some large Caddis fly, and kept on changing one sort of sedge fly for another, probably trying larger and larger patterns, until at last he arrived at some monstrosity about the size of a grilse fly. If he had by any chance succeeded in rising, hooking, or killing a fish with any particular pattern, he would have been convinced that it was the pattern, colour, or size which had achieved this success. An examination of the contents of the stomach would, however, have entirely dissipated this notion, and shown him that it was, after all, an accident, brought about by a passing humour of the trout or the chance circumstance of the fly floating close to its nose at a propitious moment.

In July, 1886, Mr. Marryat and I were wandering rather than fishing on the Test in

Snails in fish.

Corixæ in fish.

the middle of a hot, calm afternoon, when we noticed a fish rise quietly and apparently take some small insect. This was repeated several times, not exactly at one spot, but over an area of perhaps two or three square yards. The rise was too deliberate for either smutting or bulging, and yet did not look as if the fish was taking duns or spinners, of which, by the way, there were very few on the water. A cinnamon quill on a 000 hook tempted the fish—a good one, nearly 2 lbs.—at the first cast, and setting to work immediately after landing the trout we proceed to make an autopsy.

Of undigested food there was not much, and what there was consisted of, say, thirty to forty specimens of one and the same species. It was a small water-bug with short broad head and beautiful purple eyes. The elytra or wing-covers were artistically marbled in a deep purple colour on a neutral ground. Under these was a pair of fine transparent flying-wings. The hind-legs were fringed with hairs all over, and in the lowest joints these hairs were spread out into a perfect paddle. Fortunately, Mr. Marryat knew the insect at once as one of the *Corixæ*,* a small water-bug about a quarter of an inch in length, which remains under water for a time, but has to come to the surface occa-

* "Dry-Fly Entomology," p. 144.

sionally for air, and can fly as well as swim. This creature had not been found by me in a previous autopsy. In 1888, when writing the first edition of this book, I added that, strange to relate, since then I had only found it on one occasion, and that during the summer of 1887 in a trout of about 3 lbs. caught in the same part of the same shallow. Since then, however, I have continually found it in autopsies of fish killed on the Test, Itchen, Kennet, and other streams, and it is a common insect found in all the chalk streams I have fished, but not affecting very rapid water.

One evening in the early autumn of the same year, in another part of this stream, there was a very fine show of the sherry spinner, the metamorphosis of the blue-winged olive (*Ephemerella ignita*). A fish was rising freely at the lower end of a deep hole, just where the stream began to flow rapidly. Naturally the first fly to try was a pale-coloured detached badger, followed by various patterns of red and ginger quills, none of which procured any response. A short rest and a change to a hare's-ear sedge was successful in deluding it, and after a sharp but determined fight a handsome trout of 3 lbs. 2 ozs. was safely in the landing net.

Full-grown
crayfish in
trout.

Following the maxim of never attempting to make an autopsy in the dark, we waited

until we arrived home. The fish was in perfect condition and colour, but its belly seemed abnormally full. In its mouth and all down the gullet was a compact mass of sherry spinners, and even after extracting this the lower portion of the stomach seemed much distended. Further manipulation then extracted partially digested remains of five fully-grown crayfish, the largest of which would, when extended, have measured fully four inches in length. Just imagine the powers of digestion of a trout to dissolve not only the interior soft portion but the hard calcereous shell of these crustacea. Besides, only consider the appetite of a fish able and willing to take thousands of sherry spinners with this mass of undigested food in its capacious maw. Is it surprising that with a plentiful supply of food they grow so rapidly and reach such major proportions?

Vegetable
matter in an
autopsy.

When autopsing a trout in the spring of 1887 I found a small quantity of weed, and as this was the first time I ever found free vegetable matter in a trout's stomach, it was only natural to make a microscopic examination. The weed contained a considerable number of small larvæ and pupæ enveloped in smooth, tapering cocoons, and these were pronounced by the Rev. A. E. Eaton to be larvæ and pupæ of one of the Diptera known as *Simulium reptans*. It is to be inferred that neither the weed nor the

case was taken as food by the fish, but that in its attempts to secure the succulent grub it had to include these unconsidered trifles.

On the 8th October, 1887, a fine and genial day, after killing two brace of grayling— $6\frac{3}{4}$ lbs.—with a Wickham, I happened to notice a rise in a deep hole just inside a swift run. The Wickham, which had killed previously, landed right at the first attempt, and the fish rose slowly and steadily, was fairly hooked, and in the first dash succeeded in getting away with the fly. Finding that the fine end of the cast was frayed, I devoted a few minutes to tying on a fresh point, and before knotting on a fresh fly, a quiet rise in the run about four to five yards above the place where the fish had just been hooked and lost attracted my notice.

It looked liked smutting, as there did not seem to be any quantity of fly visible on the water, yet every few minutes another quiet rise was to be seen at the same spot. Selecting a female black gnat on a 00 hook, and fishing with caution, casting only occasionally once or twice, and then resting the fish altogether for some minutes, I persevered, especially as no other feeding fish was visible. At length it made a mistake, and was duly killed—a grayling, 2 lbs. 14 ozs. Suspecting that it was the fish which had broken away just before, a

search was instituted to discover either the Wickham or the mark of the hook, but neither could be discerned.

Willow flies
in grayling.

A considerable number of willow flies* in its mouth, however, tempted me to make a careful autopsy on our return in the evening, especially as the Perlidæ in the winged state are seldom found in Test grayling. The whole of the stomach, gullet, &c., were taken out, cut away below the gills and removed altogether from the fish. I then slit the gullet and turned a mass of willow flies into a saucer of water, and with a spatula commenced selecting a few of the best specimens for preservation. The spatula struck against something hard in the saucer, and the Wickham was there and then taken out of the water and dried, to be preserved with the remainder of the contents of the stomach. This was evidently the very grayling which had previously broken me. It was feeding on the natural willow flies and yet rose at and took a Wickham, was hooked, broken, and within a short time met its end with a black gnat. Strangest of all, however, it must have swallowed the artificial fly bodily *after* breaking away, for the gullet had been cut off below the gills and with the

* *Leuctra geniculata*, "Dry-Fly Entomology," pp. 107, 108.

remainder of its entrails removed entirely from the fish.

What a strange answer to the charge of cruelty brought against fishermen, that a fish should succeed in unhooking itself, then swallow the hook, and a few minutes later take and fall a victim to another artificial, neither of the patterns in any way resembling the natural fly on which it had been continuously feeding !

CHAPTER XII.

TROUT OR GRAYLING.

Sporting
qualities of
the grayling.

THE question treated in this chapter is that of attempting to guide the angler in discriminating from the rise or its position whether the fish is likely to be a trout or a grayling. I must premise that there are conflicting opinions as to the desirability of introducing grayling into trout streams. Many first-class fishermen say that they do not care for grayling fishing, possibly because they have never really tried it, or equally possibly because they are not quite—I will not say straightforward—but ingenuous and candid in the opinion they are giving. Then they quote Cotton, who wrote that extraordinary sentence about the grayling being the dearest-hearted fish that swims. Cotton certainly never killed a three-pound grayling on a Test shallow; if he had, with his power of discrimination and strong desire for truth, he could not have written that sentence. Some fishermen have been heard to say that they wished the last pike in the Test might be choked in the act of

swallowing the last grayling. This, however smart it may sound, is childish and selfish, as many fishermen consider that grayling is quite as good in its way as trout fishing, and with these I wish to be numbered.

A grayling of equal weight is a more difficult fish to kill when once hooked than the trout. With the single exception, that it very seldom weeds you with that pertinacity exercised by the trout, it tries the tackle more, and is more often lost unless it is hooked in the leathery ring forming the outer margin of the mouth, in which case the hold is better than any part of the trout. Even when hooked there, grayling have a nasty habit, if they can once get below the angler, of boring down-stream and hanging the whole of their weight on the line, and hence as soon as they are hooked it is more essential even to get below them than it is with the trout. When they catch sight of the fisherman their rush is as brilliant and as prolonged as that of any trout.*

Advantages and disadvantages of grayling in trout streams.

The difficulty of distinguishing between the rise of a trout and of a grayling is no doubt great as to the rise, *per se*, unless a glimpse

Distinguishing trout from grayling when rising.

* In "Making a Fishery," Chapter X. is devoted to a detailed consideration of the arguments for and against the introduction of grayling into a trout stream.

is caught of the dorsal fin, which is so prominent a feature in the grayling. With regard to tailing fish, it is barely possible to be certain whether it is trout or grayling, and considering the marked difference in shape between the forked tail of a grayling and the straight or slightly convex one of the trout, this is somewhat surprising. The tail of a grayling, although distinctly tinged with yellow, is, I think, lighter and more silvery than that of the trout, which always appears to me a sort of dark-brown hue when standing out of the water.

Position of
rising trout
and grayling
compared.

In attempting to distinguish trout from grayling when rising, the point to be considered is the position of the rise rather than the nature of it. I mean its position with regard to the character of the water and the time of the year, modified by the fact that grayling are, as a general rule, less prone to rise close to the bank than trout. In the early spring, before the trout have taken up their positions, and are rising more or less all over the stream, when the grayling, just having spawned, are also feeding, it is difficult to be certain which is rising. The best judges are then often mistaken, whether it be on a shallow or on a smooth glide above a shallow, or anywhere, in fact, excepting deep still water. Towards the end of the summer—the end of July and August, when both fish are in good condition,

the rule of guidance to be observed is, that the trout are generally under the banks, and the grayling more frequently in the middle of the stream.

Long stretches of smooth water of moderate ^{Dubs.} and uniform depth with a fairly steady current are usually styled by our northern friends *dubs*. A good number of rises in these *dubs* generally indicate grayling. When a grayling rises near the bank it may be taken as an extra heavy one, and very likely an extra wary one, and it will rise at shorter intervals than a trout.

One particularly aggravating feature about both trout and grayling is the pertinacious way in which they will feed at the time when they are just out of season. The number of grayling that have to be returned in the spring, and the extraordinarily large ones too, and the number of trout, and large trout too, taken in October and sometimes November, are certainly most annoying. There is, however, a consolation in returning these large fish. If they are handled with care there is no doubt of their being in the stream, and later on the chance of catching them may fall to your lot. Perhaps this would not console our pot-hunting friends much.

Trout when feeding, and feeding steadily, keep very much in one spot. They do not as ^{Reasons why grayling shift their positions when rising.}

a rule travel far, and if they do they generally travel up-stream. Now a feeding grayling is in quite a different position. It ranges over a considerable area. It deviates from right to left, up and down, but is seldom a persistent traveller. The reasons for these peculiarities when rising are not difficult to find. A small amount of study of the fish and its habits are sufficient to elucidate the reasons. A rising trout is poised near the surface of the water, so that to take in the fly it is only necessary to raise its head and open its mouth. Hence it takes up a position where a continuous stream of fly is floating down, and if it should shift its position, it will probably be up the particular run where it can see this apparently unending string of insect food.

With the grayling the case is different. A grayling even when rising well is, as a rule, not less than two feet below the surface, and in some instances much lower down. Anatomically examined, it does not appear to have been constructed with an idea of feeding on surface food at all. The position and shape of the mouth of a grayling seem better adapted for picking up an object from the bottom of the river than for feeding on the surface.

Our grayling is, as before stated, at a depth of about two feet below the water, and out of its curious pear-shaped eyes it is carefully

scanning every object floating over its head. Presently it sees within the limited area of its vision—and there is good reason to believe that the area of vision of all fish is somewhat limited—what appears like an insect of the sort it affects as food.

It rises towards the surface, and, if the distance has been calculated to a nicety, secures its prey. The smallest miscalculation, however, in rising through that depth of water will cause it to miss the object, and this is the reason why grayling so frequently rise falsely, whether at the natural or at the artificial fly. Having taken or having missed the fly, it again retires to the comparative depth at which it was lying, until attracted by some fresh passing insect. A small amount of consideration will show that the rays of light entering the eye of the grayling at the lower depth will spring from a larger area than those entering the eye of the trout comparatively near the surface, and the grayling will therefore see flies covering a wider area and be like to take them. There is often a kind of flash or flick caused by the dorsal fin of a grayling when rising, although the fin itself is not visible. This particular kind of rise is eminently characteristic of grayling, and of those comparatively small or medium-sized, say from a pound to a pound and a half; the

Reasons why grayling so often rise falsely.

larger specimens affect a slow, subdued rise, much more like that of the trout.

Although there are many places in which the angler must be doubtful as to the probability of a rise being that of a trout or a grayling, there is one place where he may be almost certain that it is a grayling. This place is the final portion of a smooth glide above a rough run, just where the water is breaking, or in a similar position at the point where the smooth water pours over a short fall. In this latter case it seems almost impossible for a fish to remain in such a position. Yet grayling do so, and sometimes rise well there. Of course, except in the act of taking the fly, they are comparatively deep down in the water where there is little or no current. As may be expected, this is another position in which they often miss the natural or artificial fly. The faster it travels the more likely they are to miss it, and the advice can fairly be given that so long as it does not drag it is impossible for it to go too slowly. To borrow from the salmon fishermen one of their phrases, which admirably describes it, it is well where possible to *hang* the fly in such a position. Grayling when rising do so more frequently than trout, and although they cannot be said to be less shy, they certainly are more tolerant of being fished for, and when only lying in

position comparatively deep down in the water can sometimes by a pertinacious angler be worried into taking the fly.

There are many reasons why grayling should be introduced into trout streams, provided there is plenty of food for both, and from an angling point of view the strongest is that it practically gives three extra months of fishing without doing the trout any particular harm. Trout and grayling are not, as a rule, at the same time in the same class of water. The grayling take to the stream when the trout are dropping out into the deeper water after spawning, and *vice versâ*. As to the destruction which each causes to the other, there are many points to be considered. Grayling very possibly eat trout ova in considerable numbers, but so do many other living things which are tolerated by those who strictly preserve rivers, notably some of the water-birds, such as ducks and swans, not forgetting our so-called harmless friend the dabchick. If these birds were exterminated from trout-streams we should hear less of the destruction of ova wrought by the grayling. On the other hand, the trout not only eat the ova, but the young fry of both their own species and that of the grayling, while the grayling only feeds on the ova, and does not, as far as is known touch the trout alevins. The trout themselves are therefore

Introduction
of grayling
into trout
streams.

possibly more destructive of their own species than the much-maligned grayling.

Grayling's fear
of the landing
net.

There is one marked peculiarity of a grayling when hooked, viz., that it seems to have a far more wholesome dread of the net than trout. Hence it not infrequently happens with large ones that when, to the fisherman's notion, they are apparently tired out, the angler, holding his net in the water, gives the grayling a view of it, and it seems to get a sort of new lease of life. Off it starts, with so rapid and brilliant a rush as frequently to eclipse all former efforts. This is certainly a very dangerous position. It seems so surprising that the fish, which has been almost on its side, and apparently at the mercy of the angler, should all of a sudden muster courage and strength for so determined a prolongation of the struggle, that, if the angler has to any degree lost his presence of mind at the suddenness of it, a catastrophe is imminent.

Of course if, in his excitement, the fisherman should by chance have tightly gripped his line to the rod for the final *coup* with the landing-net, the effect will be disastrous—either a break, or the fish will come unhooked and wobble down-stream on the surface of the water, so done up that if the angler has a friend with him who can use a net, he can very often get the fish out of the water after it has escaped from the hook.

This has happened to me with grayling twenty times at least in the course of my experience, and yet I cannot recall to memory a single instance of having succeeded in taking out with a net a trout which had once managed to get clear of the hook.

In conclusion, I would proffer a few words of advice to all honest anglers. Fish fair, never take undersized or ill-conditioned fish, never refuse to brother angler a day's fishing or a pattern fly. Give, as freely as I have endeavoured to do, the benefit of any discovery you have made or experience you have gained in the great cause of "Angler *v.* Fish."

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