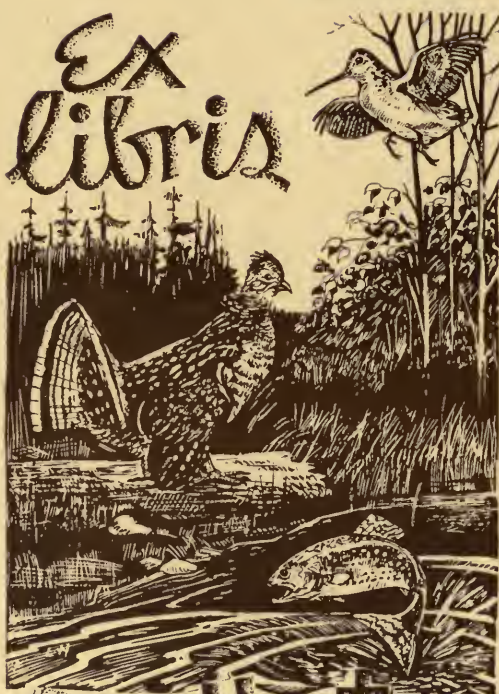


TROUT
FLY-FISHING
IN
AMERICA



Charles Zibeon Southard

EX
Libris



Don Horter

TROUT FLY-FISHING IN AMERICA

TROUT FLY-FISHING IN AMERICA

BY
CHARLES ZIBEON SOUTHARD

ILLUSTRATIONS AND COLORED PLATES
BY H. H. LEONARD



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1914

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TO
JOHN LANSON PHILBRICK
OF
RANGELEY, MAINE

For many years my guide, companion and friend, to whom
I owe more than I can express of pleasure and information in
the art of fly-fishing.



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PREFACE

As a fly fisherman, with more than a quarter century's experience behind me—years in which I have caught trout on many lakes and streams—I have become convinced that there is a large number of young anglers who will find in the book I have written something to interest and help them.

And if any of my older brothers of the rod may think I have dealt in some chapters at too great a length on what seem to them elementary matters connected, perhaps, with the necessary equipment, I ask them to cast backward to a day when they, too, were beginners at the game and unfamiliar with its very alphabet. They will remember surely that a few words of friendly counsel by an experienced fly fisherman may save the tyro many disappointments and give him a knowledge which otherwise could only come with the experience of many months.

I am very glad to notice that each successive season brings more aspirants for angling honors to those beautiful lakes and streams—homes of game fish—which our country has to offer in abundance.

And if my little work helps any of these young fly fishermen—anglers destined to fill our shoes when we older men have laid our rod aside forever—and aid them

P R E F A C E

in understanding what a glorious sport it is and how with a moderate-priced outfit, some observation and normal intelligence they may attain a reasonable degree of skill in it, I shall not mind if those who disagree with my views chuckle at the fact that their enemy has written a book.

And I am not without hope that some of the older and more skilled among fishermen will also find chapters that will interest them. They have been written by a practical man who started fly-fishing with an open mind, no axes to grind and no pet theories to hamper him. What knowledge I have gained of trout, their habits, haunts, and the best way of catching them, has been based on a careful study of their ways, which has grown keener every year.

I have not written with the intention of provoking controversy, because I am assured that brother anglers should, for the best interests of their pursuit, dwell together in unity whether they be tireless advocates of the dry-fly, or contented disciples of the wet-fly. But I have been constrained, however, to point out instances of what has seemed to me lamentable lack of fairness found in the writings of certain dry-fly enthusiasts. Fortunately I am too strong a believer in the fair-mindedness of anglers as a body to suppose that dry-fly men considered as a whole feel as bitterly toward that great majority who employ the wet-fly method in their sport as those dry-fly writers would lead the casual reader to infer.

That a minority of less than five per cent. should en-

P R E F A C E

deavor to impose their views on the ninety-five per cent., who hold other opinions speaks better for their zeal than for their sense of proportion.

But I think—and many good sportsmen all over the country uphold me—that it is high time the dry-fly zealots calmed down and remembered that we of the wet-fly are no less careful than they that the etiquette of fly-fishing should be observed in the strictest possible manner and every unsportsmanlike manner of killing game fish reprobated.

No modern writer on fly-fishing for trout could fail to be indebted to such authors as Doctor David Starr Jordan, Professor Barton Warren Evermann, James A. Henshall, M.D., Henry P. Wells, William C. Harris or Frederick M. Halford, and I take pleasure in acknowledging it here. Among other authorities I have quoted I might mention Mary Orvis Marbury, Samuel G. Camp, George A. B. Dewar and Emlyn M. Gill.

Groton, Massachusetts.

To the Publishers and Authors who have kindly granted me permission to quote from works produced by them I wish to express here my appreciation and thanks. The Publishers, Authors and Works are as follows:

Doubleday, Page & Company,
"American Food and Game
Fish," by David Starr Jordan
and Barton Warren Evermann.

Outing Publishing Company,
"Favorite Fish and Fishing," by
James A. Henshall, M.D.;
"The Fine Art of Fishing,"
by Samuel G. Camp.

Field & Stream Publishing Co.,
Taken from Articles in issues
of "Field and Stream," "The
Dry-Fly in America," by
George M. L. La Branche;
"Caught with the Dry-Fly,"
by Walter McGuckin; "Dry-
Fly Fishing with A. W. Dim-
mock," by Emlyn M. Gill.

Henry Holt & Company,
"Fishes," by David Starr Jordan.

Harper & Brothers,
"Fly-Rods and Fly-Tackle," by
Henry P. Wells.

E. P. Dutton & Company,
"The Dry-Fly Man's Hand-
book," by Frederick M. Halford.

Charles Scribner's Sons,
"Practical Dry-Fly Fishing,"
by Emlyn M. Gill.

Houghton, Mifflin Company,
"Favorite Flies," by Mary
Orvis Marbury.

The Macmillan Company,
"Salmon and Trout," from part
entitled "The Trouts of
America," by William C.
Harris.

The Century Company,
"Sport with Gun and Rod," ar-
ticle by Edward Seymour.

Adam & Charles Black,
"The Book of the Dry-Fly," by
George A. B. Dewar.

All of the books and publications mentioned above
deserve a place in every fly-fishing angler's library.

CONTENTS

CHAPTER		PAGE
	Preface	vii
I.	Trout Found in American Waters	1
II.	The Art of Fly-Fishing	40
III.	A Comparison of the Merits of the Wet and Dry-fly Methods of Fly-Fishing	60
IV.	The Fly-Rod and Its Function	75
V.	For the Beginner at Fly-Fishing	88
VI.	The Rod, The Reel, The Line, The Leader and The Fly	99
VII.	The Habits of Trout	123
VIII.	The Coloration of Trout	133
IX.	The Sight and Hearing of Trout	157
X.	A Few Words About Casting the Fly	169
XI.	How to Fish the Wet-Fly	179
XII.	How and When to Strike Trout	183
XIII.	When to Fish Dark and Light-Colored Flies	190
XIV.	The "Expert" Fly Fisherman	199
XV.	How to Make Your Own Leaders	206
XVI.	Trout Fly-Fishing in the Rangeley Region	217
XVII.	Wet-Flies Used in Various States	225
XVIII.	Dry-Flies Used in England and America	246
XIX.	List of Wet-Flies	251
XX.	Miscellaneous Matters	256
	Glossary	275
	Index	279

LIST OF ILLUSTRATIONS

	OPPOSITE PAGE
1. Outline of a trout showing different parts	15
2. Three different water bottoms	155
3. Showing how a rod should be held in the act of casting	91
4. Showing how a rod should be held in the act of casting	95
5. Diagrams showing position of a rod when making the "forward" and "backward" cast	171
6. Showing how to disjoint a rod	225
7. Showing how to disjoint a rod with four hands . . .	241
8. Plate A. Leader Knots	211
9. Plate B. Leader Knots	213
10. Plate C. Leader Knots	217
11. Plate D. Jam Knot and Tiller Hitch Knot . . .	269
12. Plate E. Jam Knot and Turle Knot	273

LIST OF COLORED PLATES

		Opposite to page
1	The Brook Trout (Adult Male)— <i>Salvelinus-fontinalis</i> —(show- ing bright or early Fall coloration).....	1
2	The Brook Trout (Adult Female)— <i>Salvelinus-fontinalis</i>	13
3	The Rangeley Trout (Adult Male)— <i>Salvelinus-ouquassa</i>	17
4	The Sunapee Trout (Adult Male)— <i>Salvelinus-aureolus</i>	33
5	The Dolly Varden Trout (Adult Male) <i>Salvelinus-parkei</i>	49
6	The Steelhead Trout (Adult Male)— <i>Salmo-rivularis</i>	65
7	The Rainbow Trout (Adult Male)— <i>Salmo-irideus</i>	81
8	The Red Throat Trout (Adult Male)— <i>Salmo-clarkii</i>	97
9	The Tahoe Trout (Adult Male)— <i>Salmo-henshawi</i>	113
10	The Golden Trout (Adult Male)— <i>Salmo-gilberti</i>	129
11	The Brown Trout (Adult Male)— <i>Salmo-fario</i>	161
12	The Great Lake Trout (Adult Male)— <i>Christivomer-namaycush</i>	177
13	The Golden Trout of Soda Creek, California (Adult Male)— <i>Salmo-gilberti-whitei</i>	193
14	The Golden Trout of Volcano Creek, California (Adult Male)— <i>Salmo-gilberti-roosevelti</i>	209
15	The Brook Trout (Adult Male)— <i>Salvelinus-fontinalis</i> (showing dark or early Spring coloration).....	133
16	The Brook Trout (Adult Male)— <i>Salvelinus-fontinalis</i> —(show- ing subdued or early Summer coloration).....	139
17	The Brook Trout (Adult Male)— <i>Salvelinus-fontinalis</i> —(show- ing bright or early Fall coloration).....	145
18	The Brook Trout (Adult Male)— <i>Salvelinus-fontinalis</i> —(show- ing brilliant or breeding season coloration).....	153
19	Popular Wet Flies.....	257
20	Favorite Dry Flies.....	251



THE BROOK TROUT (ADULT MALE) *SALVELINUS-FONTINALIS*
(Showing bright or early fall coloration)

TROUT FLY-FISHING IN AMERICA

CHAPTER I

TROUT FOUND IN AMERICAN WATERS

THE greatest fly-fishing trout waters in the world are undoubtedly found in North America, and while in certain sections the trout streams have become sadly depleted, owing to changed conditions created by what some writers are pleased to term advancing civilization, there still remain many well-stocked fishable waters which will afford pleasure for years to come for all followers of the gentle art of angling.

The streams of Pennsylvania, New Jersey, New York and the New England States, with the exception of Maine, have suffered most so far as the native Brook Trout is concerned. And it is greatly to be regretted that the changed conditions are such in most of the depleted trout streams that restocking of them, except with the Brown Trout, amounts to little and in the large majority of streams to nothing at all.

The depletion and, in many cases, the complete extermination of the Brook Trout are really due to a number of causes, such as the cutting away of the trees, bushes and foliage along the banks of both large and small

TROUT FLY-FISHING IN AMERICA

streams; this, in turn, has reduced the flow of water, making it shallow and of a much higher temperature than formerly; in many cases these streams which years ago were plentifully supplied with clear, pure water are to-day polluted to such an extent that the Brook Trout can no longer live and propagate in them.

Conservation of our natural resources and the protection of our streams from pollution came too late in many instances to prove of any real value to the Brook Trout and the disciples of Ike Walton.

While our governments, both National and State, cannot restore the natural conditions that existed forty years ago on and in the streams where the Brook Trout and other species were plentiful, they can make wise laws which will protect for the future generations, if rigidly enforced, the waters that have not as yet been depleted of these game fish and polluted by factories along their banks; and it is sincerely hoped that such work as has already been begun will progress with dispatch and wisdom and be continued with energy and thoroughness.

This alone, however, will not suffice without the aid of the anglers themselves, who must realize that in order to have their sport continue not one trout should be killed unless to be eaten, or for some scientific purpose. Personally, I should like to see the various States having trout waters within their boundaries enact identically the same laws as to the number of trout one angler could legally kill in one day during the open season.

The number of trout caught on the artificial fly which

TROUT FLY-FISHING IN AMERICA

an angler could *kill* in any one day should not exceed ten, and it would be much wiser if the limit were placed at a lower figure. The law, however, should permit the fly-fishing angler to *catch, and not kill*, as many as his ability or skill permits.

It would also be a good thing if all fishable trout waters, except small brooks, were restricted solely to fly-fishing with the artificial fly.

There are two groups of game fish found in North America which have been indiscriminately called *TROUT*; they both belong to the SALMONIDAE (The Salmon Family): one is the genus *Salvelinus* (The Charr), the other the genus *Salmo* (The Trout).

That these two groups have been called *TROUT* is largely, if not entirely, due to anglers who, in years gone by, have known little or nothing about the different species and sub-species, as their time was given up almost entirely to catching, not studying, the fish.

Undoubtedly, the name *TROUT* will always be given alike to the *Charr* and the *real Trout* by anglers in this country, and it matters little whether this is so or not; but for those who have any desire to know the facts about these game fish the following may prove of some interest.

There are distributed over the different sections of North America some thirty-six or more native game fish which are called trout, most of which will rise more or less readily to the artificial fly.

In addition to these there has been imported from Europe two other trout, one is a species and the other a

TROUT FLY-FISHING IN AMERICA

sub-species, and they are now found in many lakes and streams of the eastern and western sections of the United States.

Writers on the subject of trout, in many instances, do not agree as to whether or not certain forms are species or simply sub-species and it is not strange that such is the case when so many different features have to be taken into consideration in order to arrive at a proper and reasonably correct conclusion; such as anatomy, coloration, geographic location, environment, isolation, intergrading, etc.

On this account two classifications are given, one by noted Ichthyologists and the other by the Author, but either will probably give to most angling sportsmen such information as they desire.

Of the many forms I have classed ten as species; four of them belong to the genus *Salvelinus* (The Charr), and are red-spotted fish; six of them belong to the genus *Salmo* (The Trout), and are black-spotted fish.

The Brown Trout is the "brook-trout" of Europe, and is not a native of America; it was brought here from Germany and England. It has been extensively used for a number of years past in restocking streams and lakes in the eastern part of the United States where the native Brook Trout, owing to changed conditions, has become greatly depleted and, in some cases, nearly exterminated.

The Brown Trout and the Brook Trout have been transplanted from eastern waters to western waters, and the Rainbow Trout and the Steelhead Trout have been

TROUT FLY-FISHING IN AMERICA

transplanted from the waters of the west to the waters of the east.

The Brown Trout and the Brook Trout have thrived and propagated in the western waters, while the Rainbow Trout and the Steelhead Trout have not done so in the eastern waters, except in a very limited degree.

The species belonging to the genus *Salvelinus* do not break water when hooked, while the species belonging to the genus *Salmo* almost always do so.

Although the Charr is a red-spotted fish and the Trout a black-spotted one (and the spots form a distinguishing characteristic), nevertheless the Brown Trout has some few small red spot markings, but they are not at all like the red spots found on the Charr.

The Charr has teeth on the upper and lower jawbones as well as on the tongue, while the Trout has teeth only on the rim of the tongue, except the Red Throat, or Cutthroat Trout has in addition "a narrow band of small teeth on the hyoid bone at the base of the tongue," and these differences also are distinguishing characteristics.

The Ichthyologists' Classification of Trout Native to the Waters of North America.

THE CHARR-TROUT *SALVELINUS*

Species: The Brook Trout, *Salvelinus-fontinalis*.

Sub-species: Dublin Pond Trout, *Salvelinus-fontinalis-agassizii*.

Species: The Rangeley Trout, *Salvelinus-ouquassa*.

TROUT FLY-FISHING IN AMERICA

Sub-species: Lac de Marbre Trout, *Salvelinus-oquassa-marstoni*.
The Naresi Trout, *Salvelinus-oquassa-naresi*.

Species: (Not recognized), *Salvelinus-alpinus*.

Sub-species: Long-finned Trout, *Salvelinus-alpinus-alipes*.
Greenland Trout, *Salvelinus-alpinus-stagnalis*.
The Arctic Trout, *Salvelinus-alpinus-arcturus*.
The Sunapee Trout, *Salvelinus-alpinus-aureolus*.

Species: Dolly Varden Trout, *Salvelinus-parkei*.

Sub-species: (None recognized.)

THE CHARR-TROUT CHRISTIVOMER

Species: The Great Lake Trout, *Christivomer-namaycush*.

Sub-species: The Lake Trout of Lake Superior, *Christivomer-namaycush-siscowet*.

THE TROUT, SALMO

Species: The Steelhead Trout, *Salmo*- $\left\{\begin{array}{l} \text{gairdneri.} \\ \text{rivularis.} \end{array}\right.$

Sub-species: The Kamloops Trout, *Salmo-gairdneri-kamloops*.

Long-headed Trout of Lake Crescent, *Salmo-gairdneri-bathoecetor*.

Blue-back Trout of Lake Crescent, *Salmo-gairdneri-beardsleei*.

Speckled Trout of Lake Crescent, *Salmo-gairdneri-crescentis*.

Species: The Rainbow Trout, *Salmo-irideus*.

Sub-species: The Rainbow Trout of West Oregon, *Salmo-irideus-masoni*.

TROUT FLY-FISHING IN AMERICA

The Rainbow Trout of McCloud River, *Salmo-irideus-shasta*.

Kern River Trout, *Salmo-irideus-gilberti*.

The Nissuee, No-shee or Stone's Trout, *Salmo-irideus-stonei*.

The Golden Trout of Mount Whitney, *Salmo-irideus-aquabonita*.

The Golden Trout of Soda Creek, *Salmo-irideus-whitei*.

The Golden Trout of Volcano Creek, *Salmo-irideus-roosevelti*.

Lower California Rainbow Trout, *Salmo-irideus-nelsoni*.

Rio Santa Ana Rainbow Trout, *Salmo-irideus-evermanni*.

Species: The Red Throat Trout,	}	<i>Salmo-mykiss</i> .
The Cutthroat Trout,		<i>Salmo-purpuratus</i> .
Rocky Mountain Trout,		<i>Salmo-clarkii</i> .
Black Spotted Trout,		

Sub-species: The Yellowstone Trout, *Salmo-clarkii-lewisi*.
Columbia River Trout, *Salmo-clarkii-gibbsii*.
The Utah Lake Trout, *Salmo-clarkii-virginalis*.
The Rio Grande Trout, *Salmo-clarkii-spilurus*.
Colorado River Trout, *Salmo-clarkii-pleuriticus*.
The Waha Lake Trout, *Salmo-clarkii-bouvieri*.
The Green-back Trout, *Salmo-clarkii-stomias*.
The Yellow-fin Trout, *Salmo-clarkii-macdonaldi*.
The Salmon Trout of Lake Sutherland, *Salmo-clarkii-declivifrons*.
The Spotted Trout of Lake Sutherland, *Salmo-clarkii-jordani*.
Lake Tahoe Trout, *Salmo-clarkii-henshawi*.
The Silver Trout of Lake Tahoe, *Salmo-clarkii-tahoensis*.

TROUT FLY-FISHING IN AMERICA

IMPORTED SALMO TROUT

Species: The Brown Trout, *Salmo-fario*.

Sub-species: Loch Leven Trout, *Salmo-fario-levenensis*.

8 Species, 34 Sub-species. Total, 42.

The Author's Classification of the Species of Trout Found in North America, Giving the Common and Scientific Names.

SALMONIDAE (The Salmon Family)

GENUS SALVELINUS (The Charr)

Species

- | | | |
|-----|---|-----------------------|
| (1) | The Brook Trout,
The Square Tail,
The Speckled Beauty, | } fontinalis. |
| (2) | The Rangeley Trout,
The Blue-back Trout,
The Oquassa Trout, | } oquassa. |
| (3) | The Sunapee Trout,
American Saibling,
The Golden Trout, | } (alpinus) aureolus. |
| (4) | Dolly Varden Trout,
The Malma Trout,
The Bull Trout, | } malma parkei. |

TROUT FLY-FISHING IN AMERICA

GENUS SALMO (The Trout)

Species

- (5) { The Steelhead Trout, } gairdneri.
 { The Salmon Trout, } rivularis.
- (6) { The Rainbow Trout, irideus.
- (7) { The Golden Trout, gilberti.
- (8) { The Red Throat Trout, } mykiss.
 { The Cutthroat Trout, } purpuratus.
 { Rocky Mountain Trout, } clarkii.
 { Black Spotted Trout, }
- (9) { The Tahoe Trout, henshawi.
- (10) { The Brown Trout, }
 { The German Trout, } fario.
 { The Von Behr Trout, }

GENUS CHRISTIVOMER (A Charr)

- (11) { The Great Lake Trout, }
 { The Mackinaw Trout, } namaycush.
 { The Lunge, The Togue, }

GENUS SALVELINUS, The Charr

Species: THE BROOK TROUT, *Salvelinus-fontinalis*
(Mitchill).

Sub-species: Dublin Pond Trout, }
 The Gray Trout, } *fontinalis-agassizii* (Garman).

Species: THE RANGELEY TROUT, *Salvelinus-oquassa*
(Girard).

TROUT FLY-FISHING IN AMERICA

Sub-species: Lac de Marbre Trout, *oquassa-marstoni* (Garman).
The Naresi Trout, *oquassa-naresi* (Gunther).

Species: THE SUNAPEE TROUT, *Salvelinus-aureolus* (alpinus) (Bean).

Sub-species: The Greenland Trout, *alpinus-stagnalis* (Fabricius).
The Long-finned Trout, *alpinus-alipes* (Richardson).
The Floeberg Trout, or American Arctic Trout, *alpinus-arcturus* (Gunther).

Species: THE DOLLY VARDEN TROUT,
Salvelinus- $\left\{ \begin{array}{l} \text{malma (Walbaum).} \\ \text{parkei (Suckley).} \end{array} \right.$

Sub-species: (None recognized.)

GENUS CHRISTIVOMER, a Charr

Species: THE GREAT LAKE TROUT, *Christivomer-namaycush* (Walbaum).

Sub-species: The Lake Trout of Lake Superior, *namaycush-sisco-wet* (Agassiz).

SALMO, THE TROUT

Species: THE STEELHEAD TROUT,
Salmo- $\left\{ \begin{array}{l} \text{gairdneri (Richardson).} \\ \text{rivularis (Ayres).} \end{array} \right.$

Sub-species: The Kamloops Trout (Jordan).

The Crescent Trout or
The Speckled Trout
of Lake Crescent, $\left\{ \begin{array}{l} \text{rivularis-} \\ \text{crescentis} \end{array} \right. \left\{ \begin{array}{l} \text{(Jordan} \\ \text{and} \\ \text{Beardslee).} \end{array} \right.$

TROUT FLY-FISHING IN AMERICA

The Beardslee Trout
or The Blue-back
Trout of Lake Cres-
cent,
The Long-headed Trout of Lake Crescent, rivu-
laris-bathacetor (Meek).

} rivularis-
beardsleei { (Jordan
and
Seale).

Species: THE RAINBOW TROUT, *Salmo-irideus* (Gibbons).

Sub-species: West Oregon Rainbow Trout, *irideus-masoni* (Suck-
ley).

McCloud River Rainbow Trout, *irideus-shasta*
(Jordan).

The No-shee Trout,
The Nissuee Trout, } *irideus-stonei* (Jordan).
or Stone's Trout,

Lower California Rainbow Trout, *irideus-nelsoni*.

Rio Santa Ana River Rainbow Trout, *irideus-ever-*
manni (Grinnell).

Species: THE GOLDEN TROUT, *Salmo-gilberti* (Jordan).

Sub-species: The Golden Trout of South Fork, Kern River, or
The Golden Trout of Mount Whitney, *gilberti-aqua-*
bonita (Jordan).

The Golden Trout of Soda Creek, *gilberti-whitei*
(Jordan).

The Golden Trout of Volcano Creek, *gilberti-roose-*
velti (Evermann).

Species: THE RED THROAT TROUT,

Salmo { *mykiss* (Walbaum).
purpuratus (Pallas).
clarkii (Richardson).

Sub-species: Colorado River Trout, *clarkii-pleuriticus* (Cope).

The Rio Grande Trout, *clarkii-spilurus* (Cope).

TROUT FLY-FISHING IN AMERICA

The Utah Lake Trout or The Great Basin of Utah Trout, clarkii-virginalis (Girard).

The Green-back Trout, clarkii-stomias (Cope).

The Yellow-fin Trout, clarkii-macdonaldi (Jordan and Evermann).

The Waha Lake Trout, clarkii-bouvieri (Bendire).

The Spotted Trout of Lake Sutherland, clarkii-jordani (Meek).

The Salmon Trout of Lake Sutherland, clarkii-declivifrons (Meek).

The Yellowstone Trout, clarkii-lewisi (Girard).

Columbia River Trout, The Silver Trout, clarkii-gibbsii (Suckley).

Species: THE TAHOE TROUT, Salmo-henshawi (Gill and Jordan).

Sub-species: The Silver Trout of Lake Tahoe, henshawi-tahoen-sis (Jordan and Evermann).

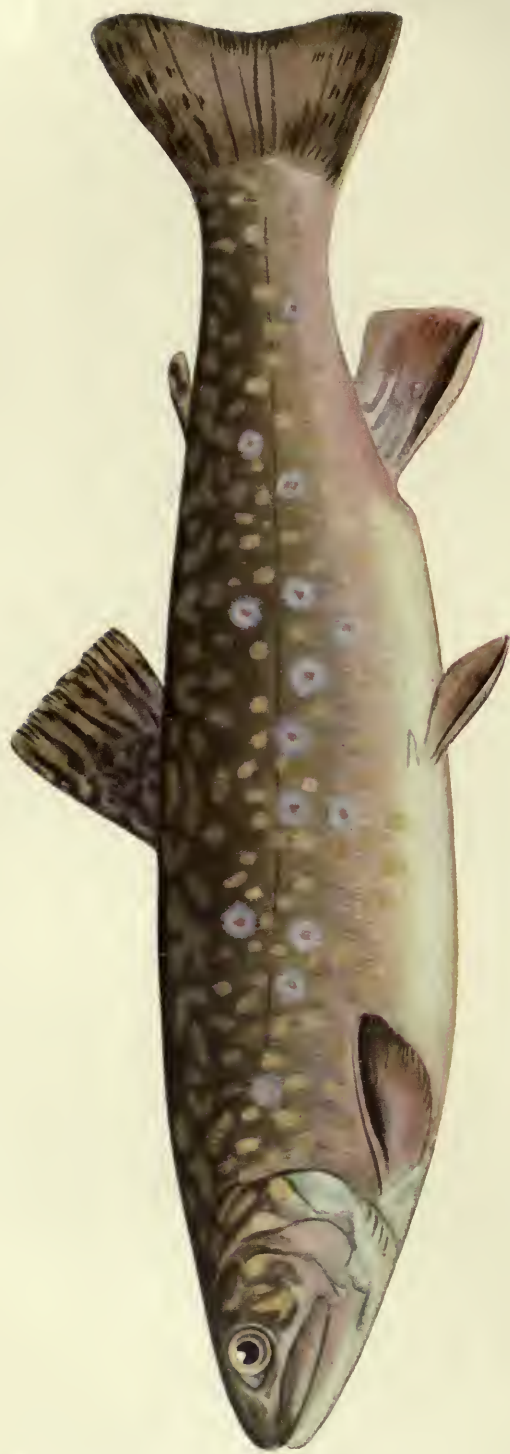
Imported Trout, not natives of the waters of North America.

Species: THE BROWN TROUT, Salmo-fario.

Sub-species: The Loch Leven Trout, English Brown Trout, fario-levenensis.

Recapitulation

(1)	Species: The Brook Trout	Sub-species: 1
(2)	Species: The Rangeley Trout	Sub-species: 2
(3)	Species: The Sunapee Trout	Sub-species: 3
(4)	Species: The Dolly Varden Trout	Sub-species: 0
(5)	Species: The Steelhead Trout	Sub-species: 4
(6)	Species: The Rainbow Trout	Sub-species: 5
(7)	Species: The Golden Trout	Sub-species: 3
(8)	Species: The Red Throat Trout	Sub-species: 10
(9)	Species: The Tahoe Trout	Sub-species: 1
(10)	Species: The Brown Trout	Sub-species: 1
(11)	Species: The Great Lake Trout	Sub-species: 1
<i>Species: 11</i>		<i>Sub-species: 31</i>



THE BROOK TROUT (ADULT FEMALE) SALVELINUS-FONTINALIS

TROUT FLY-FISHING IN AMERICA

The Tahoe Trout, here called a species, undoubtedly belongs to the Cutthroat series, but on account of its marked characteristics has been separately classified.

The Golden Trout belongs to the Rainbow series, but it also has been separately classified because of its marked and peculiar characteristics.

The Sunapee Trout, because it best represents the species *alpinus* of all charr-trout found in this country, is classified as a separate species.

A marked characteristic of the SALMONIDAE family is the presence of the *Adipose Fin* and some of the characteristics of the *Charr* and *Trout* are as follows:

Body somewhat oblong or elongated.

Body covered with small scales having a circular form varying in size with the different species and sub-species.

Those having the largest mouth usually having the largest and strongest teeth.

The Dorsal Fin is of moderate length, placed about midway of the body on the back.

The Caudal Fin or Tail is forked in most species, but in some it is truncated or square.

The Anal Fin is moderately long.

The Ventral Fins are almost median in position.

The Pectoral Fins are inserted quite low on the sides near the gill cover.

The Lateral Line is present and well defined.

The Outline of the belly is rounded and the Vertebræ are in large number, generally about sixty.

TROUT FLY-FISHING IN AMERICA

Names of the different fins:

A	Dorsal Fin	(1)
B	Adipose Fin	(1)
C	Caudal Fin	(1)
D	Pectoral Fins	(2)
E	Ventral Fins	(2)
F	Anal Fin	(1)

Names of different parts and lines of trout:

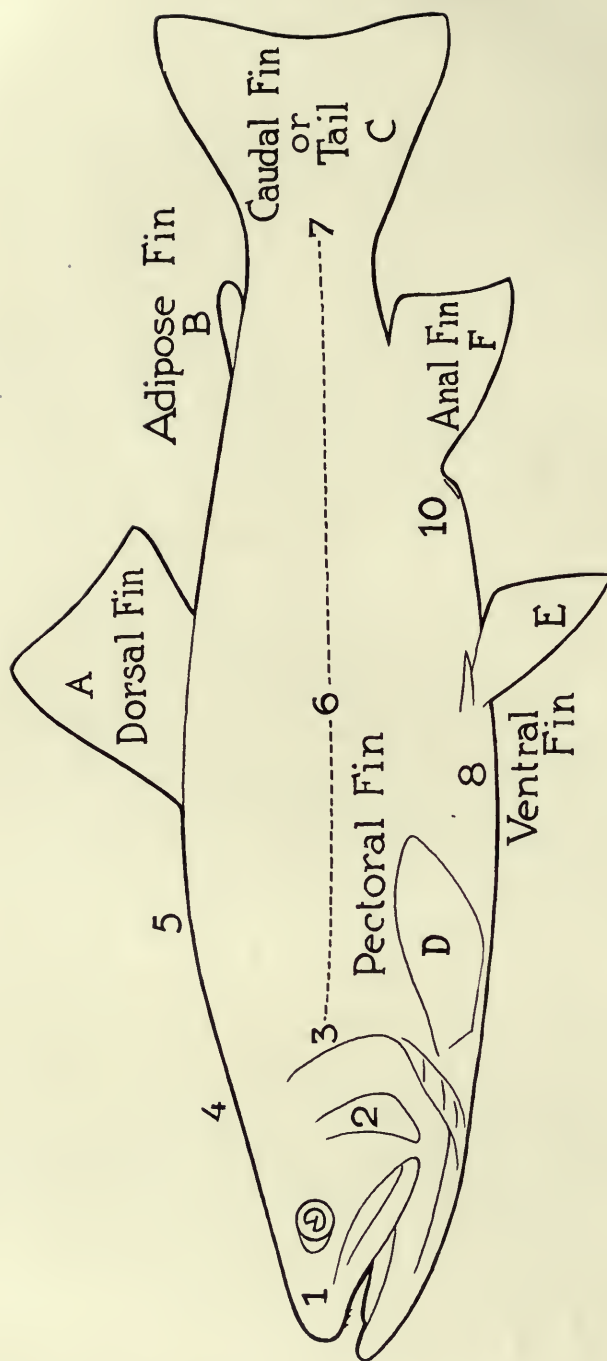
- 1 Snout
- 2 Cheek-bone
- 3 Gill-cover
- 4 Nape of neck
- 5 Shoulder
- 6 Lateral line
- 7 Base of tail
- 8 Ventral line
- 9 Dorsal line
- 10 Anus opening

THE BROOK TROUT

Genus: *Salvelinus*. Species: *Fontinalis*.

The Brook Trout, or, as called by many, the Speckled Beauty, and by some the Square Tail, is a native of both large and small streams and lakes east of the Mississippi and the Saskatchewan rivers and north of the Chattahoochee river. It is found in all suitable waters of this section as far north as Labrador and Hudson Bay, but the extreme northern limit is not as yet fully determined.

It varies greatly in size, ranging in length from four inches in small streams to thirty inches in lakes and large



OUTLINE OF A TROUT SHOWING DIFFERENT PARTS

TROUT FLY-FISHING IN AMERICA

streams, and from half an ounce to twelve pounds in weight.

"The largest specimens are recorded from the sea along the Canadian coast. These frequently reach a weight of ten pounds, and from their marine and migratory habits, they have been regarded as forming a distinct variety (*Salvelinus-fontinalis-immaculatus*), but this form is merely a sea-run brook trout."

Although the trout found in southern streams do not grow as large as those found in the more northern ones, it can be truthfully said that large streams produce large trout and small streams produce small trout.

The Brook Trout is a very game fish; everything considered, it is more so than any other species; it does not break water when hooked, however, and on that account it is not considered by some anglers as game as the Steelhead, which breaks water repeatedly, as do most salmo trout.

Although rising readily to the artificial fly under favorable conditions, nevertheless it is an extremely wary fish, and usually considerable skill is required to capture it.

These trout grow rapidly in some waters, such as the lakes and streams of Maine and Canada, and in the waters of the Rangeley Region they have been known to attain a weight of three to four pounds in as many years, while in the usual small brooks and streams they seldom grow to a pound weight in a like number of years.

On the other hand, trout in fair-sized streams grow

TROUT FLY-FISHING IN AMERICA

to two and even three pounds, but rarely if ever before they are six or seven years old.

They spawn in the fall from early September to late November, depending largely upon the locality and the temperature of the water.

In Maine the spawning season begins early in October. Brook Trout begin to produce at about the average age of two years, and one trout deposits from three to five hundred eggs.

Of all the many species of trout, *Salvelinus* or *Salmo*, the Brook Trout, *fontinalis*, is by far "the most beautiful fish that swims."

Sub-species of *Salvelinus-fontinalis*.

The Gray Trout or *The Dublin Pond Trout*
(*Salvelinus-fontinalis-agassizii*).

This trout is a native of Dublin Pond, Cheshire County, New Hampshire, and it is also found in Lake Monadnock and Center Pond of the same state.

It has a gray, slaty or leadeny color on account of which it was given the name of Gray Trout. This trout is without many red spot markings, and frequently they have no red spots at all.

It is a small, but game, fish; the largest specimens reaching a length of 10 to 12 inches.

They will at times rise to the fly and fight well when hooked, but at no time can the Gray Trout be called other than a doubtful riser.



THE RANGELEY TROUT (ADULT MALE) SALVELINUS-OQUASSA

TROUT FLY-FISHING IN AMERICA

THE RANGELEY TROUT

Genus: *Salvelinus*. Species: *Oquassa*.

The Rangeley Trout, so named because it is only found in the waters of the Rangeley Lakes, is a most beautiful small trout. By the natives it is called the "Blue-back" on account of the peculiar coloring on its back.

Years ago the "Blue-back" existed in countless numbers; they came to the streams in the fall to spawn, at which time they have been known to rise to the fly, but never at any other time or place.

To-day this trout is seldom seen; indeed, it is now several years since it has been possible to obtain a specimen. What it is that has caused a change in the habits of this fish, or has possibly exterminated it, no one seems to know, but the feeling among the older guides of this region, who remember this trout well, is that the species has not become extinct, and that they are liable to appear again at any spawning season.

About 1883 The Century Company published a book entitled "Sport with Gun and Rod," in which there was a chapter on "Trout-fishing in the Rangeley Lakes" by Edward Seymour, and it is interesting to note what he has to say about the "blue-back" trout.

Speaking of fish found in the Rangeley Lakes, other than the Salmon and Brook Trout, Mr. Seymour says:

"There is still a fourth variety, called by the natives the 'blue-back' trout, the *Salmo Oquassa* (so named because it is peculiar

TROUT FLY-FISHING IN AMERICA

to these waters), which is also generally supposed to furnish food to the monarchs of the lake.

"They come in an immense army, actually filling the streams here and there with a dense, struggling mass, which the natives capture by the bushel and by the barrel in nets, buckets and pails; even scooping them out by hand and throwing them on the bank. They are salted down and preserved in the same way as mackerel are cured.

"These blue-back trout have never been found more than nine inches in length, nor less than six inches.

"In flavor, they are quite as rich and delicate when cooked as the brook-trout.

"After spawning, they return to the lake just as suddenly as they appeared, and, notwithstanding the number in which they are captured during their brief stay in the stream, they do not diminish in multitude year after year.

"It is inferred that their regular haunts must be in the deepest waters of the lake, since their capture by the enticements and appliances which prove irresistible to the speckled trout is almost unknown."

Sub-species of *Salvelinus-oquassa*

The Lac de Marbre Trout

(The Marston Trout)

(*Salvelinus-oquassa-marstoni*)

The Lac de Marbre Trout receives its name from the water in which it was first discovered; the lake is located in Ottawa County, Province of Quebec, Canada, and it is near Ottawa.

This trout is also found in the Lake St. John district, Lac a Cassette in Rimousky County, Lake Saccacomi and the Red lakes in Maskinonge County, Quebec.

These beautiful trout are probably identical with what is commonly called the Canadian Red Trout that are

TROUT FLY-FISHING IN AMERICA

found in many of the suitable waters to the north of the St. Lawrence river.

The Lac de Marbre Trout will take the artificial fly readily, and are good fighters, but as is the case with all species of trout their game qualities vary greatly with their environment.

The Naresi Trout (*Salvelinus-quassa-naresi*)

This trout is found in the lakes of Arctic America, and does not differ much from the Rangeley Trout. It is a handsome trout, and grows to about twelve to fourteen inches in length. Little or nothing is known about its habits.

THE SUNAPEE TROUT

Genus: *Salvelinus*. Species: *Alpinus*.

The Sunapee Trout was originally found in Sunapee Lake, which is situated part in Sullivan and part in Merrimack County, New Hampshire, and from the lake it received its name. This trout is also a native of Flood Pond, which is located near Ellsworth, Maine. Other than in these two places it is not found as a native, but it has of late been planted and introduced into several of the lakes in the immediate vicinity.

It is a very handsome fish, being beautifully marked and colored. It grows to a large size, often to ten pounds,

TROUT FLY-FISHING IN AMERICA

and some have been taken that weighed over fifteen pounds.

The Sunapee Trout has never been known to rise to the natural or artificial fly as far as I have been able to find out from guides and anglers.

It is only caught by bait fishing in deep cold water during the summer or by trolling with smelt along the shores and sand bars early in the season.

The scientific name for the Sunapee Trout is *aureolus* (Bean), although it probably best represents in this country the species *Alpinus*.

Sub-species of *Salvelinus-alpinus* (*aureolus*)

The Greenland Trout
(*Salvelinus-alpinus-stagnalis*)

This trout is found in the waters of Greenland, Boothia Felix and the surrounding regions of the far north. It is the food-fish of the natives and grows to a good size, ranging from one to two feet in length for adults.

The Long-finned Trout
(*Salvelinus-alpinus-alipes*)

Like the Greenland Trout the Long-finned Trout is found in the lakes of Greenland and the waters of Boothia Felix in and about Prince Regent inlet.

The Floeberg Trout
(*Salvelinus-alpinus-arcturus*)

This trout is a native of the extreme northern part of North America and is found in Victoria Lake, Floeberg Beach, from which specimens have been obtained.

TROUT FLY-FISHING IN AMERICA

THE MALMA TROUT OR THE DOLLY VARDEN TROUT

Genus: *Salvelinus*. Species: $\begin{cases} \textit{Malma} \\ \textit{Parkei} \end{cases}$

The Malma or Dolly Varden Trout is a native of the waters west of the Rocky Mountains; it is found in streams of northern California, in Oregon, Washington, British Columbia and Alaska, and is also found in Lake Pend d'Oreille, Idaho.

"It abounds in the sea in the northward, and specimens of ten to twelve pounds weight are not uncommon in Puget Sound and especially Alaska."

"The Dolly Varden trout is, in general, slenderer and less compressed than the Eastern brook trout."

It is a red-spotted trout, the spots being on both the back and sides; the back and dorsal fin have no variegated markings or blotches, as is the case with the Brook Trout.

In other respects, the Malma Trout more closely resembles the Brook Trout than any other species, as it has the same characteristics of size, form, color, beauty, habits and gaminess, and rises to the fly.

There are no sub-species of The Malma Trout.

TROUT FLY-FISHING IN AMERICA

THE STEELHEAD TROUT

Genus: *Salmo*. Species: *Rivularis*.

The Steelhead Trout is a native of the streams of California, Oregon and Washington; it "is found in the coast-wise streams of California and in the streams of Oregon and Washington, below the great Shoshone Falls of Snake River, and northward in Alaska along the mainland as far as Skaguay. The steelhead trout reach a large size (10 to 20 pounds). They spend a large part of their life in the sea. In all the true steelheads the head is relatively very short, its length being contained about five times in the distance from tip of snout to base of caudal fin. The scales in the steelhead are always small, about 150 in a linear series, and there is no red under the throat. The spots on the dorsal fin are fewer in the steelhead (4 to 6 rows) than in the other American trout."

Some anglers consider the Steelhead the most gamy of all trout, but this is probably due to the fact that it breaks water repeatedly when hooked. It rises eagerly to the artificial fly, strikes boldly, and is a good fighter.

Sub-species of *Salmo-rivularis*

The Kamloops Trout
(*Salmo-rivularis-kamloops*)

David Starr Jordan and Barton Warren Evermann, in their book, entitled "American Food and Game Fishes," published by Doubleday, Page & Company, say:

TROUT FLY-FISHING IN AMERICA

"This is an interesting trout found in Kamloops, Okanogan, Kootenai and other lakes tributary to the Fraser and upper Columbia rivers. It is locally abundant, and is a fine large trout, slender in form, graceful in appearance and movement, somewhat different from the common steelhead, but not distinguished by any technical character of importance, and probably intergrading fully with the latter. It is said to be a very fine game fish, which is taken chiefly by trolling with a spoon.

"Color, dark olive above, bright silvery below, the silvery color extending some distance below the lateral line, where it ends abruptly; middle of side with a broad light-rose colored band, covering about one-third total depth of fish; back above with small black spots about the size of pin heads, irregularly scattered, and somewhat more numerous posteriorly; a few faint spots on top of head; dorsal and caudal fins rather thickly covered with small black spots similar to those on back, but more distinct; a few spots on adipose fin which is edged with blackish; lower fins plain; upper border of pectoral dusky; a vague dusky blotch on upper middle rays of anal."

The Crescent Trout or
The Spotted Trout
(*Salmo-rivularis-crescentis*)

The Blueback Trout or
The Beardslee Trout
(*Salmo-rivularis-beardsleei*)

These two trout were discovered by Admiral L. A. Beardslee, and they are of unusual beauty and attractiveness. They will not rise to the artificial fly, for they are not surface feeders.

The Beardslee Trout grows to a large size, ranging from six to twelve pounds, and it is not uncommon to catch specimens that weigh ten pounds.

TROUT FLY-FISHING IN AMERICA

The Long Headed Trout
(*Salmo-rivularis-bathacector*)

This trout can be caught only with bait on set lines, for it also lives in deep water and never comes to the surface to feed.

All of these sub-species of steelhead are found only in Lake Crescent, Callam County, Washington, which is located in the extreme northwestern part of the State.

THE RAINBOW TROUT

Genus: *Salmo*. Species: *Irideus*.

The Rainbow Trout is a native of the streams of California and Oregon where it is to be found in abundance in every suitable clear brook and stream.

The scales are large, there being about 135 in a length-wise series. The head also is large, being about one-fourth the length of the body to the base of the tail or caudal fin. The mouth is smaller than in other species of trout, and the tail in young rainbows is well forked, but they become more truncated as they grow older. This species generally has no red under the throat, and the rim of the tongue only has teeth. The size of the head is undoubtedly the best distinctive character.

The Rainbow Trout varies greatly in size, ranging from six inches in length, as found in Lower California, to six pounds in weight as found in Northern California.

TROUT FLY-FISHING IN AMERICA

David Starr Jordan says of this trout:

"The head, back, and upper fins are sprinkled with round black spots, which are variable in number, those on the dorsal usually in about nine rows.

"The color, as in all the other species, is bluish, the sides silvery in the males, with a red lateral band, and reddish and dusky blotches.

"In specimens taken in the sea this species, like most other trout in similar conditions, is bright silvery and sometimes immaculate.

"Although not usually an anadromous species, the rainbow trout frequently move about in the rivers, and it often enters the sea, large sea-run specimens being often taken for steelheads.

"No true rainbow trout have been anywhere obtained to the eastward of the Cascade Range or of the Sierra Nevada, except as artificially planted in the Truckee River.

"Several attempts have been made to introduce it in Eastern streams, but it appears to seek the sea when it is lost.

"It is apparently more hardy and less greedy than the American Charr, or brook trout (*Salvelinus fontinalis*). On the other hand, it is distinctly inferior to the latter in beauty and gaminess."

Professor Evermann says:

"The Rainbow takes the fly so readily that there is no reason for resorting to grasshoppers, salmon eggs or other bait.

"It is a fish whose gaminess will satisfy the most exacting of expert anglers, and whose readiness to take any proper line will please the most impatient of inexperienced amateurs."

Sub-species of *Salmo-irideus*

West Oregon Rainbow Trout
(*Salmo-irideus-masoni*)

This is a small rainbow trout; it is a native of the forest streams of the western part of Oregon, on account of which it gets its name.

TROUT FLY-FISHING IN AMERICA

McCloud River Rainbow Trout (*Salmo-irideus-shasta*)

This trout is a native of the McCloud River, which is located in Shasta County, California, in the central northern part of the State.

The No-shee Trout The Nissuee Trout or Stone's Trout (*Salmo-irideus-stoneri*)

"This is a large voracious trout of the rainbow series found in the upper Sacramento basin, especially in the McCloud River above Baird. It is much larger than typical irideus, and reaches a weight of 10 to 12 pounds, but is doubtfully distinct.

"Color, upper parts plain greenish; spots few and confined chiefly to the posterior part of body; spots small and sparse on dorsal, adipose and caudal fins; a red lateral band usually distinct; cheek and opercles with red; no red on throat."

Lower California Trout (*Salmo-irideus-nelsoni*)

This is an extremely small trout, and has been called the "pigmy trout." It is found in the small streams which rise and flow from San Pedro Martyr Mountain, California.

Rio Santa Ana River Trout (*Salmo-irideus-evermanni*)

Here we have another small rainbow trout which is found in the streams of San Gorgonia mountains, California.

TROUT FLY-FISHING IN AMERICA

THE RED THROAT TROUT OR THE CUTTHROAT TROUT

Genus: *Salmo*. Species: *Clarkii*.

The Red Throat or Cutthroat Trout, of which there are at least ten sub-species, is a native of the waters on both sides of the Rocky Mountains.

In speaking of this species of trout I cannot do better than quote what David Starr Jordan has to say about it in his book entitled "Fishes":

"This species has much smaller scales than the rainbow or steelhead, the usual number in a longitudinal series being 160 to 170. Its head is longer (about four times in length to base of caudal). Its mouth is proportionately larger, and there is always a narrow band of small teeth on the hyoid bone at the base of the tongue. These teeth are always wanting in *Salmo irideus* and *rivularis* in which species the rim of the tongue only has teeth. The color in *Salmo clarkii* is, as in other species, exceedingly variable. In life there is always a deep-red blotch on the throat, between the branches of the lower jaw and the membrane connecting them. This is not found in other species, or is reduced to a narrow strip or pinkish shade. It seems to be constant in all varieties of *Salmo clarkii*, at all ages, thus furnishing a good distinctive character. It is the sign manual of the Sioux Indians, and the anglers have already accepted from this mark the name of cutthroat trout.

The cutthroat trout of some species is found in every suitable river and lake in the great basin of Utah, in the streams of Colorado, Wyoming, and Montana, on both sides of the Rocky Mountains. It is also found throughout Oregon, Washington, Idaho, British Columbia, the coastwise islands of southeastern Alaska (Baranof, etc.), to Kadiak and Bristol Bay, probably no stream

TROUT FLY-FISHING IN AMERICA

or lake suitable for trout life being without it. In California the species seems to be comparatively rare, and its range rarely extending south of Cape Mendocino. Large sea-run individuals analogous to the steelheads are sometimes found in the mouth of the Sacramento. In Washington and Alaska this species regularly enters the sea. In Puget Sound it is a common fish. These sea-run individuals are more silvery and less spotted than those found in the mountain streams and lakes. The size of *Salmo clarkii* is subject to much variation. Ordinarily four to six pounds is a large size, but in certain favored waters, as Lake Tahoe and the fjords of southeastern Alaska, specimens from twenty to thirty pounds are occasionally taken.

Those species or individuals dwelling in lakes of considerable size, where the water is of such temperature and depth as insures an ample food supply, will reach a large size, while those in restricted environment, where both the water and food are limited, will be small directly in proportion to these environing restrictions. The trout of the Klamath Lakes, for example, reach a weight of at least 17 pounds, while in Fish Lake in Idaho mature trout do not exceed 8 to 9¼ inches in total length or one-fourth pound in weight. In small creeks in the Sawtooth Mountains and elsewhere they reach maturity at a length of 5 or 6 inches, and are often spoken of as brook trout, and with the impression that they are a species different from the larger ones found in the lakes and larger streams. But as all sorts and gradations between these extreme forms may be found in the intervening and connecting waters, the differences are not even of sub-specific significance."

As it should be of great interest to the angler what Doctor Evermann has to say about the game qualities of the *Salmo-clarkii*, I give it here:

"The various forms of cutthroat trout vary greatly in game qualities; even the same sub-species in different waters, in different parts of its habitat, or at different seasons, will vary greatly in this regard. In general, however, it is perhaps a fair statement to say that the cutthroat trout are regarded by anglers as being inferior

TROUT FLY-FISHING IN AMERICA

in gaminess to the Eastern brook trout. But while this is true, it must not by any means be inferred that it is without game qualities, for it is really a fish which possesses those qualities in a very high degree. Its vigor and voraciousness are determined largely, of course, by the character of the stream or lake in which it lives. The individuals which dwell in cold streams about cascades and seething rapids will show marvelous strength and will make a fight which is rarely equaled by its Eastern cousin; while in warmer and larger streams and lakes they may be very sluggish and show but little fight. Yet this is by no means always true. In Klamath Lakes, where the trout grow very large and where they are often very logy, one is occasionally hooked which tries to the utmost the skill of the angler to prevent his tackle from being smashed and at the same time save the fish."

The oldest scientific name for the Red Throat or Cutthroat Trout is *Salmo-mykiss*. It was given to this trout by Walbaum in 1792. Later it was called *Salmo-Purpuratus* by Pallas in 1811, and in 1836 Richardson gave the species found in North America the name of *Salmo-clarkii*, by which name it is now generally called.

Sub-species of *Salmo-clarkii*

The Colorado River Trout

Salmo-clarkii-pleuriticus (Cope)

This trout is a native of the waters of the Colorado Basin. It is both large and handsome, having very small scales, and in western Colorado is extensively sought after by anglers. This trout abounds in all suitable waters throughout the Colorado Basin.

It is "variable in color, size and form with its surroundings, and in most respects substantially identical with *lewisi*, the chief

TROUT FLY-FISHING IN AMERICA

difference being that in this form, as in *spilurus*, *stomias*, and *macdonaldi*, the black spots are usually much more numerous on the posterior part of the body, while the head is usually free from spots. This is, however, not universally true.

"In variety *pleuriticus* there is almost always a very distinct red lateral band, and the lower fins are more or less red."

The Rio Grande Trout *Salmo-clarkii-spilurus* (Cope)

This trout is a native of the Rio Grande River and the mountain streams of the Great Basin of Utah, and is found "as far south as the northern part of Chihuahua." While this trout has a number of black spots they are largely confined to the region of the tail.

"This form is apparently wholly identical with variety *pleuriticus*, except that in specimens examined the scales are less crowded forward, so that the number in a lengthwise series is less. I count 155 to 160 in Rio Grande specimens; 185 to 190 in those from Colorado. From the trout of the Great Basin (*virginalis*), *spilurus* differs chiefly in the arrangement of its spots."

The Great Basin of Utah Trout or The Utah Lake Trout *Salmo-clarkii-virginalis* (Girard)

This trout derives its name from the fact that it is a native of Utah Lake, Utah County, Utah, and the streams and waters of the Great Basin of Utah.

"The trout of the Great Basin are profusely and not very coarsely spotted, the spots being numerous anteriorly as well as posteriorly, confined to the back rather than the tail."

"In several examined, the scales are a little larger than in any of the other forms, 140 to 150 in a lengthwise series, the scales on

TROUT FLY-FISHING IN AMERICA

the anterior part of the body being less crowded than in *spilurus* and *stomias*. In other respects *virginalis* scarcely differs from *clarkii*.

"The large fishes from Utah Lake are very pale in color, the dark spots few and small, much as in variety *macdonaldi*, but fewer, and more on the back. This pale coloration is characteristic of lake and sea trout in general. It is doubtless partly due to the alkaline character of the waters of Utah Lake."

The Green-back Trout *Salmo-clarkii-stomias* (Cope)

This trout is a native of the Arkansas and Platte Rivers and "is especially fine in St. Vrain's River and the streams of Estes Park." It is a small trout having a green back or greenish-brown back with large black spots and a red throat patch. It also has small scales and "it closely approaches *lewisi* and *spilurus*. The black spots are always larger than in any of these, and mostly gathered on the tail."

"The green-back trout seldom exceeds three-fourths of a pound in weight. It is very abundant in the streams of the Upper Arkansas as well as in the Twin Lakes. It spawns in spring, in snow-water if possible, and it will leave spring-water to find snow-water. In winter, however, they seek for warmer waters. It is said that when the winter breaks up the trout are too blind to see bait.

"In color the green-back is green, or even almost black on the back. The lower fins and the throat are bright red, but there is not much trace of the red lateral band. The black spots are large and mostly confined to the posterior part of the body. In some cases these spots are ocellated with paler.

"At the spawning time, in May and early June, the males have much red, but later the sexes become similar. In specimens found about pools, there is often much red even in summer. Those from deeper parts of the lake are always bright green, with a little red.

"The flesh in these trout is extremely red, this color being probably heightened by the character of its food. In the specimens

TROUT FLY-FISHING IN AMERICA

from Arkansas River the body is plumper and softer than those from Twin Lakes."

The Yellow-fin Trout

Salmo-clarkii-macdonaldi (Jordan and Evermann)

This trout is a native of Twin Lakes, Colorado. It is a large and handsome species, having lower fins of golden yellow from which it derives its common name. Its scientific name was given after the Hon. Marshall McDonald, who was the U. S. Fish Commissioner at the time it was recognized as a sub-species of *clarkii*.

The Yellow-fin Trout is found largely on shallow gravelly bottoms, and is not often taken in deep water; it spawns in the spring and rises readily to the fly.

This trout has "body more elongate and more compressed than usual among the trout. Head long, compressed, the snout moderately pointed.

"Scales small and regularly placed.

"Color, silvery olive, a broad lemon yellow shade along the sides, lower fins bright golden yellow in life, no red anywhere except the deep red dash on each side of the throat, which is never wanting in *Salmo clarkii*. Body posteriorly and on dorsal and caudal fin profusely speckled with small pepper-like spots, smaller than the nostril and smaller than in any other forms of the *Salmo clarkii*. Occasionally these spots extend forward to the head, but they are usually sparse on the anterior half of the body."

The Waha Lake Trout of Washington

Salmo-clarkii-bouvieri (Bendire)

This trout is a native of Waha Lake, Washington, which is a mountain lake without outlet. It is a small



THE SUNAPEE TROUT (ADULT MALE) *SALVELINUS-AUREOLUS*

TROUT FLY-FISHING IN AMERICA

trout with peculiar markings, having a short, blunt head, with large eyes. The spots are only found on the posterior part of the body.

The Spotted Trout

Salmo-clarkii-jordani (Meek)

The Salmon Trout

Salmo-clarkii-declivifrons (Meek)

Both of these trout are natives of Lake Sutherland, Clallam County, Washington. It is a mountain lake not far from Lake Crescent, but is not connected with it. These two trout were discovered by Dr. Daniel G. Elliot.

The Yellowstone Trout

(*Salmo-clarkii-lewisi*)

David Starr Jordan and Barton Warren Evermann say:

"The Yellowstone or Lewis trout inhabits the Snake River basin above Shoshone Falls, and the headwaters of the Missouri. It is abundant throughout this whole region in all accessible waters, and is particularly numerous in Yellowstone Lake. As already stated the trout of Yellowstone Lake certainly came into the Missouri basin by way of Two-Ocean Pass from Upper Snake River basin. One of the present writers has caught them in the very act of going over Two-Ocean Pass from Pacific into Atlantic drainage. The trout on the two sides of the pass cannot be separated, and constitute a single species."

Columbia River Trout

(The Silver Trout)

(*Salmo-clarkii-gibbsii*)

Of this trout David Starr Jordan and Barton Warren Evermann say:

TROUT FLY-FISHING IN AMERICA

"In the tributaries of the Columbia, between Shoshone Falls and the Cascades, in the lakes and larger streams, there is a trout which may be called the silver trout. It is particularly common in the Des Chutes River, and in the Payette Lakes in Idaho. Examples about 15 inches long taken in Big Payette Lake, had the spots small, half circles, few below middle of side; rosy wash on side and opercles, brightest in the male; scarcely any red on throat; belly silvery, back dark-greenish; scales about 140 to 145."

THE TAHOE TROUT

Genus: *Salmo*. Species: *Henshawi*.

The Tahoe Trout receives its name from Lake Tahoe, which is located in California and Nevada, about two-thirds being in Placer and Eldorado counties, California, and one-third in Ormsby and Douglas counties, Nevada. This lake has an elevation of 6,225 feet, and its greatest depth is 1,640 feet. Carson City, the capital of Nevada, is the nearest large city, and is about ten miles distant.

The Tahoe Trout is a native of Lake Tahoe, its tributaries and outlet, and is also found in Pyramid Lake, the Humboldt and the Carson.

The Tahoe Trout "is a distinct species from *Salmo clarkii* and must be regarded as the finest of all the cutthroat trout.

"It is readily known by its spotted belly, the black spots being evenly scattered over the whole surface of the body, above and below."

This is a wonderfully game fish, and is to be found in abundance in Lake Tahoe and Pyramid Lake.

Pyramid Lake, with an elevation of 4,000 feet, is lo-

TROUT FLY-FISHING IN AMERICA

cated in Washoe County, Nevada, in the northwestern part of the State. It is about fifteen miles from the California line, and slightly to the northeast of Tahoe Lake, which is fifty miles distant. Reno, thirty miles away, is the nearest large city.

Sub-species of *Salmo-henshawi*

Silver Trout of Lake Tahoe

(*Salmo-henshawi-tahoensis*)

This sub-species is found in the depths of Lake Tahoe, where it lives, spawns and grows to the great weight of twenty-five to thirty pounds.

THE GOLDEN TROUT

Genus: *Salmo*. Species: *Gilberti*.

The Golden Trout is a native of the Kings and Kern rivers of California and the creeks running into them. These are very handsome trout, being most beautifully and brilliantly marked and colored.

They rise with alacrity to the fly, and the game qualities disclosed when hooked greatly surpass, for size and weight, all other species of *Salmo*-trout. All of the fins are especially large and powerful for such small trout, and it is on that account, in a measure, that they fight so savagely and persistently when hooked.

There is a peculiar lightish coloring to the tip of the dorsal fin, which is always present to a greater or less degree, and is a distinguishing characteristic of the species.

TROUT FLY-FISHING IN AMERICA

"In isolated streams with a bottom of red granite at the headwaters of the Kern are three species called 'golden trout,' all small and all brilliantly colored, each of these species being independently derived from *Salmo gilberti*, the special traits fixed through isolation."

Sub-species of *Salmo-gilberti*
The Golden Trout of South Fork,
Kern River, California
(*Salmo-gilberti-aguabonita*)

This trout is a native of the creek from which it derives its name. The South Fork of the Kern River is in Kern and Tulare Counties, California, and is about one hundred and ten miles almost directly north of Los Angeles.

The Golden Trout of Soda
Creek, California
(*Salmo-gilberti-whitei*)

This trout is a native of Soda creek, which is to the southeast of Clear Lake in the extreme southern part of Lake Colusa County, California, and about seventy-five miles almost directly north of San Francisco.

The Golden Trout of Volcano
Creek, California
(*Salmo-gilberti-roosevelti*)

This trout is a native of Volcano creek, from which it receives its name.

TROUT FLY-FISHING IN AMERICA

THE BROWN TROUT

Genus: *Salmo*. Species: *Fario*.

The Brown Trout is the brook-trout of Europe and is the principal trout of England and Germany, but is not a native of America.

It has been imported into this country, planted in eastern waters and from these waters it has been transplanted to some western waters, seeming to thrive in both places.

The Brown Trout, from several standpoints, is without doubt the least attractive of all the species of trout found in America which rise to a fly.

Its coloring or marking is poor indeed when compared with other trout. It is of a dirty brown color, shading off to a yellow on the lower sides with a white belly; it has comparatively few red spots in addition to the black ones and the scales are large, which gives an appearance of coarseness and a lack of that beauty which characterizes other trout.

It is a game trout, but less so than nearly if not all of the other species, and I say this notwithstanding the fact that some few anglers (mostly dry-fly men) have cried early and late its game qualities.

It rises readily to the fly and strikes with some force; but when hooked, after a short struggle, during which it often breaks water two or three times, it gives up, and is quite easily and quickly landed.

TROUT FLY-FISHING IN AMERICA

The Brown Trout is a hardy fish, and can live, propagate and thrive in much warmer water than the Brook Trout. It is at its best (in every way) when found in rather swift running streams, for then it shows its greatest life and gaminess, due entirely to the environment.

If there were no other kind of trout that would rise to the fly in this country than this foreigner, the Brown Trout might, and probably would be, considered by all anglers "a fish of quality," but as yet such is not the case.

Sub-species of *Salmo-fario*

The English Brown Trout

(Loch Leven Trout)

(*Salmo-fario-levenensis*)

This trout is found in some lakes and streams of this country, and is superior to the German species in every way.

THE LAKE TROUT

Genus: *Christivomer*. Species: *Namaycush*.

This trout differs from the true Charr, although closely allied to them, but it is now placed in a different genus.

This trout does not, except in rare instances and under peculiar conditions, ever rise to the natural or artificial fly, but is caught by almost any kind of bait (dead or alive) by trolling or still fishing in deep water.

Small Lake Trout have been actually caught on the fly in shallow water over sandy and gravelly bars, where a stream enters a lake, but as far as I know it has always

TROUT FLY-FISHING IN AMERICA

been in warm weather during the dusk of the evening. Trout so taken weigh from one and one-half to two and one-half pounds, and they put up an unusually good fight for a short time. The chance of catching these fish in this way, however, is so remote that it is hardly worth while attempting it.

The Lake Trout is also called the Mackinaw Trout, the Lunge or the Togue, and is found in many lakes of New England, New York to Wisconsin, Montana and the Mackensie River.

It grows to a large size, from fifteen to twenty pounds being not uncommon, and occasionally it reaches a weight of forty to seventy pounds, and they have been caught weighing one hundred pounds.

Up to a weight of about seven or eight pounds the Lake Trout is rather a handsome fish, but after it exceeds this weight it begins to lose its good looks and grow ugly. The very heavy fish become almost monstrosities.

Sub-species of *Christivomer-namaycush*

The Siscowet or

Lake Trout of Lake Superior

Christivomer-namaycush-siscowet (Agassiz)

"The siscowet differs from the ordinary Great Lake trout in having a deeper body, which is covered with a thicker skin, beneath which is an excessive development of fatty tissue.

"The scales are somewhat larger and the color is usually somewhat paler.

"This fish is practically confined to Lake Superior, where it is abundant in deep water. Occasional examples have been taken in Lakes Huron and Erie."

CHAPTER II

THE ART OF FLY-FISHING

ALTHOUGH fly-fishing is a fine art it can be acquired to a greater or less extent by any angler who makes a study of it, and the proficiency attainable is only governed by the natural and sometimes by the acquired ability of the angler.

It is essentially a personal or individual art, and can be perfected to a marked degree, after the rudimentary principles have been acquired, by carefully studying the habits of the fish and the conditions governing the waters in which they are found. By rudimentary principles is meant the casting of the fly, the handling of the line, leader and fly when fishing. Everything else is personal or individual, and success is dependent only upon knowledge of the habits of the fish and the "fish sense" of the angler.

The ability of any fisherman is naturally measured by the success attained in catching fish, and the degree of success is determined by the consistency of the angler's performances during a period of months or years.

Some persons become expert anglers in stream fishing while they fail to make even a respectable showing on any other kind of water; and often still-water anglers of

TROUT FLY-FISHING IN AMERICA

considerable skill cannot induce a trout to rise to a fly when fishing a stream.

Trout fly-fishing with the artificial fly embraces two very unlike methods, and they are known as the wet-fly method and the dry-fly method.

The art, skill and success of both methods consist in the ability of the angler to catch trout with light tackle under ever-changing conditions, and the angler who is a consistent performer is called a good and successful fly fisherman.

The wet-fly method has been in existence for centuries, while the dry-fly method was born about the first of the latter half of the nineteenth century.

While it is true that the dry-fly method has been practiced in this country to a very limited extent for fifteen years or more, it is only during the last five or six years that the number of dry-fly fishermen has increased sufficiently to bring this branch of fly-fishing into wider notice.

At the present time a few exponents of the method are valiantly trying still further to increase their number (using peculiar ways, to say the least) by persistently abusing the wet-fly method as well as the wet-fly fishermen, without showing much regard for the truth or facts.

As illustrative of this attitude I quote from an article which appeared during 1912 in one of our sporting magazines, entitled "Caught with the Dry Fly."

"If the angler wishes to be a true fly-fisherman, let him give up such tactics" (wet-fly-fishing) "and cast the dry fly!"

TROUT FLY-FISHING IN AMERICA

"That the wet-fly is in many ways successful is freely admitted; . . . but is it fly-fishing in the strictest sense of the term? Is it not often rather bait fishing with a fly as bait?

"It is comparatively of little moment to the wet-fly fisher how his fly drops upon the water, for a greater part of the time the fly is let to sink below the surface, and if necessary yanked up to the top of the water again.

"And, furthermore, how often is the wet-fly caster aware that a fish has taken his fly before he feels the jerk on his line resulting from the grab? In other words, how often does he know what is going on at the end of his line while his fly is below the surface of the water, and often completely out of sight? And how does all this differ from bait fishing with a fly?

"Would not the same method be used were the fly replaced by a worm?"

I now quote what the writer has to say about the dry-fly:

"And everything within the range of vision, with the fly always on the surface, so that the dash of the fish which always precedes its furious onset is well and fully seen and taken in time, and can be successfully acted upon in consequence.

"Are such conditions not more gratifying to the angler than the average conditions under which trout are caught by the caster of the wet fly?

"One of the strongest arguments in favor of the use of the dry-fly in preference to the wet is the undeniable fact that the greatest amount of pleasure derived from fly-casting for trout is experienced in causing the fish to rise and take the fly, for after he is once hooked the whole proceeding begins to quiet down and lose its charm, for it is a very easy matter to land a trout that is well-hooked, the process requiring but little skill, for the trout rarely leaps into the air, as do salmon and bass, for instance, and hence it is comparatively easy to guide him over the landing net and thence into the creel.

"The channel is a broad one, and consequently the shores are

TROUT FLY-FISHING IN AMERICA

far apart, giving plenty of space in which to make a long cast without the aggravating interference of nearby bushes and trees, and then, again, this generous expanse of water gives the hooked trout a large field in which to exploit his agility, meanwhile keeping the fisherman in suspense!"

In substance, this is the gist of what I have quoted about the two methods of trout fly-fishing:

The wet-fly method:

That wet-fly fishermen are nothing more than "bait" fishermen using a fly as bait.

"That it is comparatively of little moment" how the wet-fly fisher handles his fly.

That wet-fly fishermen "for a greater part of the time" let their flies sink well below the surface and then yank them "up to the top of the water again."

That, as a general proposition, the wet-fly angler is not aware that a trout has risen to his fly "before he feels the jerk on his line resulting from the grab."

That the wet-fly method of fly-fishing is the same as the "Bait" method of fishing because the writer can see no difference between them.

The dry-fly method:

That dry-fly fishermen are the only real or true fly fishermen.

That as soon as a trout is hooked fly-fishing begins to lose its charm.

That dry-fly-fishing is the only proper way to fish with

TROUT FLY-FISHING IN AMERICA

a fly because everything is visible and on that account "can be successfully acted upon in consequence."

That notwithstanding everything is visible and that a well-hooked trout requires "but little skill" to handle and land, dry-fly fishermen, when fishing under most favorable conditions, are kept "in suspense."

It certainly is interesting as well as amusing to note some of the things *NOT* mentioned in this article, as, for instance, how and where the writer obtained this wonderful and profound knowledge about wet-fly fishing and the anglers who practice this method.

What spirit it was that urged him to write about a method of fly-fishing of which his very words convict him of having no real knowledge.

Why he lays claim to being any kind of an angler or sportsman after making this kind of a statement, "for after he" (meaning the trout) "is once hooked the whole proceeding begins to quiet down and lose its charm."

Upon what theory he ever expects to gather in a single recruit to the ranks of the dry-fly anglers with such an unfair article as "Caught with the Dry-Fly."

Why he puts up as "one of the strongest arguments" for the dry-fly the "pleasure derived . . . in causing the fish to rise and take the fly," when this is equally true in every way as regards the wet-fly.

England gave birth to the dry-fly method of trout fishing, and it has been extensively and successfully practiced there for many years.

TROUT FLY-FISHING IN AMERICA

The greatest exponent of the art is an Englishman, Mr. Frederick M. Halford, the author of the following works:

- “FLOATING FLIES AND HOW TO DRESS THEM.”
- * “DRY-FLY FISHING IN THEORY AND PRACTICE.”
- * “DRY-FLY ENTOMOLOGY.”
- “MAKING A FISHERY.”
- “AN ANGLER’S AUTOBIOGRAPHY.”
- * “MODERN DEVELOPMENT OF THE DRY-FLY.”
- * “THE DRY-FLY MAN’S HANDBOOK.”

Mr. Halford is a real authority on the subject of dry-fly fishing, and it would be well worth the expense of owning the books marked with a star.

Although “Dry-fly Fishing in Theory and Practice” is now out of print an occasional copy can be picked up at times; but it is earnestly hoped that before long there will be a new edition printed so that all ardent anglers can obtain a copy.

The dry-fly method has been, and is, used successfully in this country on such streams as the Esopus, the Neversink, the Beaverkill and the Willowemoc in New York State as well as some other waters, and in eddies, pools and slack waters of more rugged streams; but from my experience and as far as I have been able to ascertain it has not proved successful on ponds, lakes and fast-flowing streams that constitute at least ninety-five per cent. of the fishable waters for trout in this country.

It is a fine art, this dry-fly method of angling, and it

TROUT FLY-FISHING IN AMERICA

requires great skill and patience to practice it successfully. It will not, however, I venture to say, black the stove, shine your shoes, comb your hair, clean your hat, or do a thousand other things that some American dry-fly writers would have every wet-fly angler and beginner believe; and it is not perforce of many adverse conditions, the alpha and omega of all fly-fishing.

This method of fly-fishing has come to stay, and it has its place in the angling world just the same as wet-fly fishing has its place, but no more.

After owning a proper fly-fishing equipment, one has, in order to become successful as a wet or dry-fly fisherman, to study the nature of the different species of trout; one must learn their habits and actions under many varied conditions, such as locality, the time of year, the time of day, the kind of day, the depth of water, the temperature of the water and the weather and water conditions, also the character of the natural food they have to live upon in the many different kinds of trout waters.

Remember that as conditions change in the different trout waters, so must the method of fly-fishing vary, if the angler is to meet with success, as it is only by careful observation and study of the altering conditions that the beginner can ever arrive at the much-coveted goal . . . that of becoming a really good fly fisherman.

My suggestion to all fly fishermen is to use both the wet and dry-fly methods of fishing, and not to confine themselves to either method exclusively, but to use the method best adapted to the waters it may be their good

TROUT FLY-FISHING IN AMERICA

fortune to fish. In this way one will be enabled to enjoy the pursuit of angling to the fullest extent whenever one can get away from the hot, noisy city and tiresome daily work, whether it be for a day, a week or a month.

In order that there may be no misunderstanding about anything I say, let it be understood that I am a firm believer in both the wet and dry-fly method of trout fishing. But while I believe above all in fair play and tolerance of other anglers' views, I also believe in severe criticism of writers, on any branch of angling, who, for any reason, make unfair, unjust, untrue, and contemptible statements and insinuations about brother writers and what they have to say.

When considering the art of fly-fishing it is important to realize that there is as much difference between the art of fly-casting and fly-fishing as there is between daylight and darkness. A person may be an expert fly-caster and at the same time be absolutely ignorant of the art of either wet or dry-fly fishing. This is said with no idea of disparagement of the art of casting or tournament casters.

The two arts are very dissimilar, and it is not strange that such is the case when one considers that in fly-casting there is but one essential requirement, while in dry-fly fishing there are four and in wet-fly fishing there are five.

Requirements in Fly-Casting:

This art requires solely the casting of a line, leader and fly, or their equivalent, with a fly rod and nothing more.

TROUT FLY-FISHING IN AMERICA

The aim being to cast accurately the greatest possible distance and to accomplish it in "good form."

Requirements in Dry-Fly Fishing:

This method has four requirements, three more than fly-casting, and they are:

The casting of the fly,
The striking of the fish,
The playing of the fish,
The landing of the fish.

Requirements in Wet-Fly Fishing:

This method has five requirements, four more than fly-casting and one more than the dry-fly method, and they are:

The casting of the fly,
The fishing of the fly,
The striking of the fish,
The playing of the fish,
The landing of the fish.

Primarily there are, between the wet and the dry-fly method of fly-fishing, only two radically different requirements in the successful application of both methods, namely, *The casting of the fly* and *The fishing of the fly*.

The Dry-Fly Method:

To fish properly by this method it is necessary to use especially-made flies that embody two all-important features, likeness to the natural flies found upon our streams,



THE DOLLY VARDEN TROUT (ADULT MALE) SALVELINUS-PARKEI

TROUT FLY-FISHING IN AMERICA

and so made that they will float with the wings cocked for a considerable length of time. After having obtained the proper equipment the most important element in dry-fly fishing is "*The casting of the fly.*"

The Wet-Fly Method:

With this method of fly-fishing no especially made flies are necessary to success, as both wet and dry flies are productive of good results.

The all-important element to obtain success in wet-fly fishing is "*The fishing of the fly.*"

That there is a difference of opinion as to what is the all-important element in wet-fly fishing, I am well aware, but this difference is not nearly so great between the wet-fly anglers themselves as it is between the dry and the wet-fly fisherman.

Just why it is that dry-fly anglers have so much to say about this particular subject, wet-fly fishing, I sometimes wonder, because, judging from their attitude, how can it possibly interest them?

As illustrative of this remark, let us for a moment consider, along this line, what some dry-fly anglers have to say.

Taken from "Caught with the Dry-Fly":

"It is comparatively of little moment to the wet-fly fisher how his fly drops upon the water, for a greater part of the time the fly is let to sink below the surface, and if necessary yanked up to the top of the water again."

TROUT FLY-FISHING IN AMERICA

Taken from "The Dry-Fly in America" (La Branche):

"Even in wet-fly fishing it is at all times necessary to cast delicately and accurately. . . .

"The man who believes this (that the casting of a fly is subordinate to the fishing of the fly) will never become an accomplished fly fisherman; nor will he, if he does not realize that the greatest essential to success lies in placing the fly lightly and accurately."

Taken from "*The New York Times*," June 9, 1913:

"The wet-fly, as anyone conversant at all with angling knows, sinks as soon as it strikes the water."

So it seems that dry-fly enthusiasts are somewhat at odds about what is the proper thing for the wet-fly man to do.

While it is easy to contend that a man is wrong if one happens to disagree with him, it is rarely a convincing form of argument. Disputed questions whether in law or sport should be argued fairly and impartially, and it is disappointing to find, as I have pointed out, that the spokesman of the minority has preferred to make statements which even a casual examination prove to be biased and incorrect.

Some of the dry-fly anglers, if we are to judge from what many of them put into print, belong to the minority class who spell success in fly-fishing with the word *ANTICIPATION*, and seem to take issue with the wet-fly angler because he sees fit to spell success with the word *REALIZATION*.

TROUT FLY-FISHING IN AMERICA

In other words, the large majority (wet-fly anglers) are wrong, and the small minority (dry-fly anglers) are right, because they say they are, and this is, in their minds, sufficient to settle the matter.

You will find that American dry-fly anglers say many unfair things about wet-fly anglers and their method, largely in the form of abuse and untruthful statements.

Where do you find the wet-fly anglers stating any such things about dry-fly anglers?

The strongest term I have heard applied to the dry-fly man by the advocate of the wet-fly is that of "faddist."

I have yet to find a single recorded instance where a wet-fly angler has resorted to the same questionable tactics as the American dry-fly angler, and I believe this to be the case because he grants to the dry-fly man the same right he claims for himself: the privilege of fishing as he sees fit without damning any particular method or telling him how he should fish.

The American dry-fly writer seems to delight in always speaking of the wet-fly as the "sodden" and "sunken" fly, but that does not make it so in reality, nor does the fact that the wet-fly writer has called the dry-fly a "fad" and its user a "faddist" make it so.

Of course it is possible, but not at all probable, that some of the dry-fly writers know nothing about wet-fly fishing or their knowledge has been gained not from good but poor wet-fly men. In either case they should be forgiven for what they say, but not for writing about a subject in ignorance.

TROUT FLY-FISHING IN AMERICA

The good and, therefore, successful wet-fly anglers do not use a "sodden" or "sunken" fly in the sense the dry-fly writer would have his readers believe.

A "sodden" fly is one that has been soaked through and through in water, it is saturated; and such are the flies the wet-fly angler is said to use by the dry-fly men, and they are also said to be made "sodden" before they are used.

This is a deliberate misstatement of facts because they are not true; real wet-fly anglers never soak their flies before using.

A wet-fly in the hands of a good wet-fly man is never a "sodden" fly, and cannot become so even with constant use because it cannot be made saturated, owing to the way it is handled.

A "sunken" fly is one that must be deep down in the water, such as a "sunken" rock, a "sunken" battery, a "sunken" body or a "sunken" boat, but the wet-fly that is fished under the surface of the water from one to twenty inches should not be by any stretch of the imagination called "sunken," especially as it is controlled and manipulated by the angler.

The wet-fly can only become a "sunken" fly after it has been made "sodden" and all control over it has been lost by the angler, due to the severing of the leader or line.

The wet-fly is fished by the great majority of wet-fly anglers in this country, mostly upon or nearly upon the surface of the water, just under the surface and sometimes as deep as twenty inches, but never so far below the sur-

TROUT FLY-FISHING IN AMERICA

face that the angler cannot see the swirl of the trout when it rises and strikes.

The wet-fly angler is said to fish his fly or flies in such a manner and so deep that he cannot tell when he has a strike until he feels the "yank," the "grab" or the "jerk" on the line; and the strangest part of all this is that the dry-fly writer apparently thinks that his readers will believe such absurd stuff.

It is but fair to say right here of the good wet-fly angler that he never waits until he feels the "yank," the "grab" or the "jerk" on his line before striking, because if he did he could not be called a good fisherman for the reason he would be unsuccessful.

The fact is that such statements as these are wholly untrue and should be beneath the dignity of any dry-fly writer to make if he has any real knowledge of wet-fly fishing, and if he has no knowledge then they are pernicious.

The wet-fly anglers have been very patient for some time, and even now have no desire to quarrel with their brothers, the dry-fly men, but they do insist upon fair play and protest against the many unfair and untrue statements and insinuations made by them.

Dry-Fly Fishing:

Concisely, dry-fly fishing consists in fishing with an artificial fly, especially constructed in such a manner as to resemble the natural insect and float and remain upon the surface of the water if properly handled by the angler.

TROUT FLY-FISHING IN AMERICA

Only one fly is used, which is generally of the eyed hook pattern, fastened to a light, finely drawn, tapered or flat silkworm gut leader, which in turn is fastened to a tapered or flat high-grade enameled water-proofed silk line. The tapered leader and tapered line are the best to use and have the approval of the "purists."

The rod is preferably of split bamboo, from nine feet and a half to ten feet and a half in length, and weighs from four and one-half to seven ounces.

The rod that finds general favor is one which is ten feet long, and weighs from five to five and one-half ounces.

Some anglers believe that the rod should have great resilience, thus making it rather a "stiff rod," and on this account called by them the "powerful rod."

The *MOST* essential thing, however, other than quality, is that the rod should be suited to the angler's physical requirements; in other words, it must fit him.

The fly is cast "up stream" by most dry-fly anglers, and it is considered the only proper way to cast the dry-fly, when it is possible to do so, by the best exponents of the art.

The dry-fly is kept in condition to float by the making of a number of false casts between each regular cast and by the application, from time to time, of paraffin oil. To accomplish the same thing with the leader and a portion of the line, deer fat is rubbed on them.

As the object in dry-fly fishing is to keep the fly always floating upon the surface of the water, properly placed

TROUT FLY-FISHING IN AMERICA

with the fly cocked, it is at once apparent that the most important element in this method of fishing must be "*the casting of the fly*," because "*the playing of the fly is entirely eliminated*," as its movement on the water is caused or should be caused *solely* by the current.

In order that the dry-fly can take its proper course down a stream like the natural fly the angler is obliged to have his line slack after the cast is made; otherwise he will not be fishing properly, and will have to contend with what the dry-fly men call the "drag."

The striking, hooking, playing and landing of a trout in no way differ from the methods employed when handling the wet-fly.

The conditions governing the efficient use of the dry-fly are three: weather, wind and water. To practice this art of fishing with even a fair chance of success, favorable conditions must first exist, and over these three conditions the angler has no control.

Is it not, then, a fair statement to make that the application of the art of dry-fly fishing is necessarily restricted, to some extent, as to time and place on account of physical conditions?

One of the strong claims made for dry-fly fishing is that, with this method of fishing, trout can be caught in certain waters, when the conditions are right, because they have become "educated" to the ordinary fly and the wet-fly method fails of success, and this is a proper and just claim.

TROUT FLY-FISHING IN AMERICA

Wet-Fly Fishing:

Wet-fly fishing consists of all the features of dry-fly fishing, except that especially constructed flies are not often used nor is anything applied as a general thing to the fly, leader and line to make them float.

Wet-fly fishing, however, embraces one more feature or requirement than dry-fly fishing, namely, the playing or fishing of the fly upon or under the surface of the water.

You will observe when casting the wet-fly, if you have not already done so, that trout seldom rise to the fly when it first strikes the water after the cast is made. As a matter of fact, after years of experience in wet-fly fishing for trout, on many kinds of water, I am prepared to state as my opinion that such a thing does not happen once in thirty casts.

Therefore, it is not alone the act of casting the fly lightly and well or "delicately and accurately" upon the water that is the means whereby trout are induced to rise to the fly in the first instance.

Consequently, the principal element to master in wet-fly fishing, in order to make trout rise, is "*the playing or fishing of the fly*" upon or under the surface of the water *after* the cast has been made.

This I realize is not the theory or belief of some dry-fly fishermen when speaking about wet-fly fishing, but would any wet-fly angler think of going to a dry-fly "purist" for information as to the most important element in wet-fly fishing when there are so many fully qualified experts in the wet-fly ranks?

TROUT FLY-FISHING IN AMERICA

In wet-fly fishing there is no such thing as the "drag," consequently the fly or flies are fished with a taut line, and the command of the fly is always with the angler.

This is what Mr. Samuel G. Camp, in his book entitled "The Fine Art of Fishing," has to say on this subject:

"The manner in which the flies are fished distinguishes the fly-fisherman from the mere fly-caster, whether or no the fly-caster as such be expert or otherwise.

"Fishing the fly, when all is said, is of far more importance than either the formation or coloration of the fly. The operation of casting may, to a certain extent or natural limit of proficiency, be learned by almost anyone."

"FISHING THE FLY IS QUITE ANOTHER MATTER AND HEREIN THE ANGLER SHOWS HIS QUALITY."

For your own satisfaction and education, when the opportunity offers, keep an account of the number of rises you get when your fly first strikes the water and the number you get after you have begun to fish the fly, and so prove for yourself what the real facts are on this subject.

As illustrating the effect of properly "*fishing the fly*" on a stream I will mention a case that I had the good fortune to observe. A certain pool, where there was deep and fast and slow running water, had been fished faithfully for nearly two hours by an angler who was an expert caster with either a short or a long line. He tried both wet and dry flies, but to no avail, as not a single fish (trout or salmon) rose to them. He gave up the pool in disgust to another angler, who fished with the wet-fly.

TROUT FLY-FISHING IN AMERICA

On the third cast a three-pound salmon was hooked, played, landed and weighed, then returned to the water unhurt. In less than ten minutes the second angler had hooked and landed another salmon, which weighed over three pounds and returned this fish to the water unhurt. After making a change of flies and casting for perhaps fifteen or twenty minutes he hooked and landed a fine male salmon weighing five and one-half pounds, which he killed and took back to camp for the next day's dinner.

The fish were rising during all the time both anglers were fishing the pool. Why was it the good caster got nothing and the good fisher of the fly caught three fish?

Another instance I observed was at a noted large pool in Little Kennebago Lake, Maine. This pool had been fished all day by at least seven boats containing twelve fishermen. The largest fish that had been caught up to four o'clock weighed just one pound. At that time one canoe and one more boat arrived at the pool, and the wet-fly angler in the boat got a rise on his second cast and hooked, played and landed a trout which weighed over three pounds on the scales. Within half an hour he had caught several fair sized trout and then "brought to net" another one that weighed very nearly three and three-quarter pounds. Only the two large trout were killed (they were both male fish), and as it was growing dusk he started back to camp.

During the time this angler was at the pool the other anglers did not catch a trout that weighed as much as half a pound.

TROUT FLY-FISHING IN AMERICA

Why was it this one angler caught good-sized trout when fourteen other anglers could not, although they had the best locations at the pool?

These two instances, where the angler who knew how to fish his flies and consequently caught fish, are but two of hundreds of instances that I have observed in many parts of this country.

The good fly fisherman, who is always the successful fisherman in the long run, not only knows how to fish his flies, but he knows how to select the flies to fish, and he chooses them for color according to the weather and water conditions and the time of day.

In closing this chapter, I cannot do better than quote from "Practical Dry-Fly Fishing," written by Mr. Emlyn M. Gill, to show that all dry-fly men are not in the same class.

"But to be a finished wet-fly angler one must possess as much skill as the dry-fly fisherman.

"There are no insurmountable obstacles in the way of becoming a successful dry-fly angler that do not confront the user of the sunken fly."

CHAPTER III

A COMPARISON OF THE MERITS OF THE WET AND DRY-FLY METHODS OF FLY-FISHING

TO SAY that a person enjoys the dry-fly method of fly-fishing more than the wet is entirely proper as it is the right and privilege of every angler to select such method as he sees fit without regard for what any other angler may think or say.

But when it comes to asserting that dry-fly fishing is a greater art than wet-fly fishing it is quite another question, and one that cannot be fairly determined by mere opinion.

The two methods are very different in one essential at all events, *the casting of the fly*, yet both methods are practiced to the same end, namely, that of catching trout; and to do so both methods must be applied in such a manner as to deceive the fish.

Therefore we start with a fact, not an opinion, that to catch trout with the artificial fly the fish must first be deceived.

It is undoubtedly true that there are many different kinds of both wet and dry-fly fishermen, and this necessarily must be the case because all anglers cannot possibly have the same knowledge, experience and skill.

TROUT FLY-FISHING IN AMERICA

Consequently, it must follow, as a fact, that all anglers, irrespective of method, are not equally good fly-fishermen.

Because one dry-fly angler fishes across or down the stream and one wet-fly angler fishes with his fly well down in the water, it does not follow that such an application of either method is the proper or controlling factor by which either style of fly-fishing should be judged.

Here then is established the fact that when comparing the relative merits of wet and dry-fly fishing it is manifestly proper that we should consider the two methods as set forth by the best exponents of each art, and it should be done fairly and without favor.

The dry-fly angler uses flies that are constructed so as most nearly to represent the natural ones found upon the streams, and also in such a manner as to make them float upon the surface of the water.

The wet-fly angler uses flies that only passably represent a few of the natural ones, but which in most instances do not represent, in the remotest manner, any known kind of fly.

The dry-fly angler fishes his fly upon the surface of the water exclusively, while the wet-fly angler fishes his fly or flies both upon and below the surface of the water, depending upon conditions.

The object with each method being to deceive the trout and make them rise to the fly.

When the dry-fly is cast, to use the expression of a "Disciple," everything is "within the range of vision, with the fly always on the surface," and this is equally true

TROUT FLY-FISHING IN AMERICA

when the wet-fly is cast and fished upon or just under the surface, so far as being "within the range of vision" is concerned.

Now consider the flies mentioned and determine for yourself which fly is most likely to deceive the wary trout, the one most nearly representing the natural fly or the one which is a poor imitation?

And to which fly would you expect the trout to rise, assuming the attraction to be solely the fly and nothing else?

Can it be other than self-evident, first, that the dry-fly would better deceive the trout, and, second, that the trout would naturally rise to the most natural-looking fly?

Is it not fair and just, then, to say that so far as the fly alone is concerned the dry-fly has the advantage over the wet-fly?

Now consider the dry-fly and the wet-fly when it is fished below the surface of the water to a depth of twelve inches, or so deep that the angler cannot see the fly, yet not so deep as to prevent his seeing the rise or swirl of the trout.

The dry-fly is "within the range of vision," and the wet-fly is without or beyond "the range of vision" With which fly, the wet or the dry, would it be easier to strike and hook a rising trout, and with which fly would the greater skill be required?

Again, is it not self-evident, first, that it would be

TROUT FLY-FISHING IN AMERICA

easier to hook the fish with the dry-fly, and, second, to hook the fish with the wet-fly would require the greater skill?

Does it not appear again as if the dry-fly had the advantage over the wet-fly?

The dry-fly floats and moves without any aid from the angler after it falls upon the water; therefore, after the cast is made up to the time the fly is recovered for another cast, no act of the angler plays any part in the deception or attraction of the trout—*the fly does it all.*

How is it with the wet-fly? The angler makes his cast, he then plays or fishes his fly until a recovery is necessary for another cast—*it is the angler who does it all.*

Under these conditions and facts, where does the greater skill lie, with the wet or the dry-fly angler?

The dry-fly angler at the outset would seem to have at least three points of vantage over his brother, the wet-fly angler, in that he has:

First—The most natural fly.

Second—The fly most likely to deceive the trout.

Third—His fly is “always on the surface” with “everything within the range of vision.”

It is only fair to say that the wet-fly angler has one advantage over the dry-fly angler, which consists in *the playing or fishing of the fly or flies upon or under the surface of the water*, although this is not considered or admitted to be an advantage by the advocates of the dry-fly.

TROUT FLY-FISHING IN AMERICA

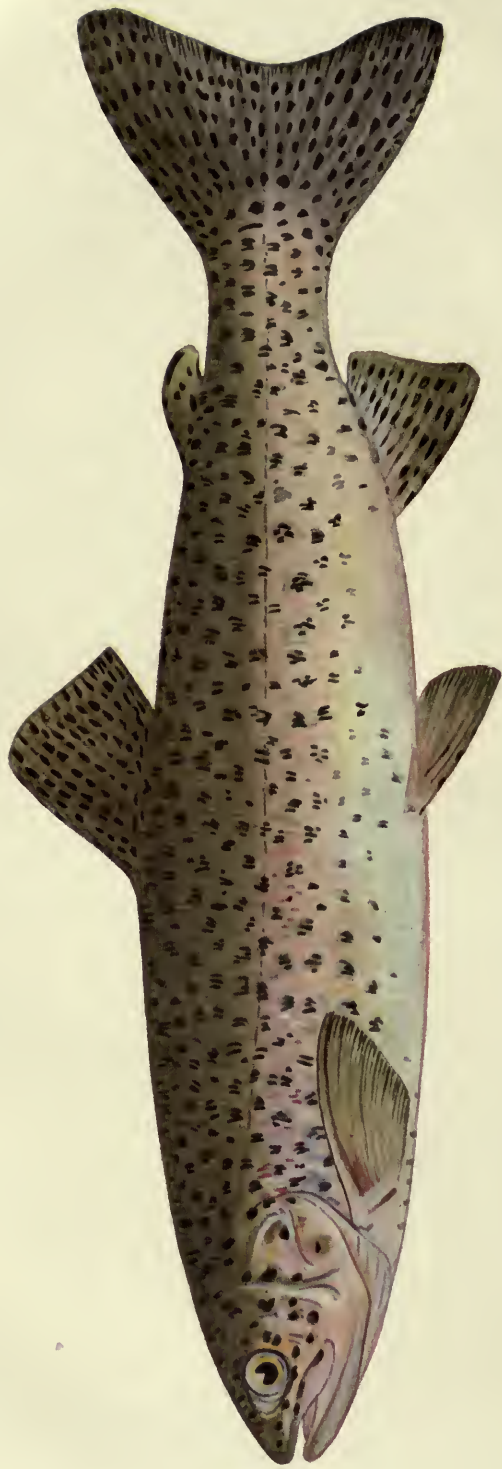
There are other features which must be taken into account when comparing these two methods of fly-fishing before any conclusion should be reached as to the relative merits of each, and they consist of where and when each method can be successfully practiced.

The dry-fly angler can successfully ply his art on streams that are placid, slow running and clear; on streams that are shallow, having many rocks and small or large pools of no great depth; on portions of more rugged streams, such as eddies, pools and slack waters and sometimes on lakes just beyond where a stream enters.

Having the proper waters to fish, the dry-fly angler can enjoy fishing, usually with success, whenever the weather, wind and water conditions are favorable, but at no other time.

The dry-fly angler cannot hope to accomplish anything when it is rainy, or when the wind is high or gusty or when the water is disturbed or roilly; so it is apparent that natural conditions must play a most important part in the proper application of the art of dry-fly fishing under all circumstances.

On the other hand, for the wet-fly angler to enjoy fishing with more than average chance of success, all that is necessary is available fishable water, and it makes no difference what the weather, wind and water conditions may be, so far as applying the art of wet-fly fishing is concerned, because success rests largely with the angler and not necessarily with the physical conditions, as is the case in dry-fly fishing.



THE STEELHEAD TROUT (ADULT MALE) SALMO-GAIRDNERI

TROUT FLY-FISHING IN AMERICA

Would it not seem at this time that it was a fair statement to make that, everything considered, the wet-fly method was a more comprehensive method of fly-fishing than the dry-fly method?

And also, is it not a truthful and impartial statement to make, that, before dry-fly fishing can be practiced with success, certain absolutely fixed requirements or conditions must be supplied either by mankind or by nature, and are not these the five requirements?

First—The angler must use only such flies as will float.

Second—The flies must very closely resemble the natural flies they are intended to imitate.

Third—The flies must be fished “always on the surface.”

Fourth—The Angler must have the proper water to fish successfully.

Fifth—The physical conditions must be such as to enable the angler to apply his art properly.

The wet-fly angler is not restricted to these five requirements as is the dry-fly angler. As a matter of fact, he is restricted in no sense of the word, and only requires fishable waters of any kind in order to apply his art of angling.

The wet-fly angler is not restricted as to time and place, as he is not restricted as to kind of fly, or as to any particular rules for fishing it, would it not appear as if the wet-fly fisherman was the more versatile, and would it not follow that he was also the more skilful for the same reason?

TROUT FLY-FISHING IN AMERICA

Advantage does not mean merit, and a restricted art is not as comprehensive as one that is unrestricted, and it is also true that a limited art cannot be as great or require such a degree of skill as one that is unlimited.

In the *London Field* appeared this statement:

"Startling as the statement may sound, it is probably true that the really good wet-fly fisherman is a greater rarity than the really good dry-fly man."

In the *London Fishing Gazette* appeared this statement:

"A real expert with the wet-fly is a much rarer bird than one with the dry."

Do not these two statements, coming as they do from the home of the dry-fly, indicate that greater skill is required to become a good wet-fly angler than to become a good dry-fly angler?

Emlyn M. Gill in "Practical Dry-Fly Fishing," says:

"But to be a finished wet-fly angler one must possess as much skill as the dry-fly fisherman."

Henry P. Wells, the author of "Fly-Rods and Fly-Tackle," was one of the greatest wet-fly fishermen this country has ever known, and one whose knowledge of how the art of fly-fishing should be practiced, and how the tackle should be constructed, has never been surpassed.

TROUT FLY-FISHING IN AMERICA

He very aptly says:

"The truth is there are few points in regard to fly-fishing of which it may justly be said this is right and that is wrong, irrespective of attendant circumstances."

There appeared in *The New York Sunday Times* of June 9, 1912, an article upon Dry-Fly Fishing in which Emlyn M. Gill is reported as saying:

"The wet-fly, as anyone conversant at all with angling knows, sinks as soon as it strikes the water."

At the time I read this article I was inclined to believe that Mr. Gill had been misquoted on the ground that he was considered to be an experienced wet-fly angler long before he took up the dry-fly. I could not imagine how anyone, even an angler of limited experience, so expressing himself about the wet-fly, unless the fly had been deliberately soaked before ever a cast was made.

Such a proceeding would be decidedly irregular and not at all in keeping with good practice of wet-fly fishing.

I forgot all about the matter until I read Mr. Gill's article, entitled "Dry-Fly Fishing with A. W. Dimock," which appeared in the February, 1913, issue of *Field and Stream*.

In this article Mr. Gill states as follows:

"Mr. Dimock had been for many years a wet-fly fisherman, and as considerable discussion had been going on in the sporting papers and elsewhere as to the comparative merits of the dry-fly and the wet, we thought that we would give both an impartial tryout.

TROUT FLY-FISHING IN AMERICA

"Standing below a likely bit of water, after soaking a whirling dun so thoroughly that it would sink immediately after striking the water, I would cover carefully all water within casting distance.

"The stream was so clear that usually I could see the fly coming down stream a few inches below the surface.

"After all promising water had been fished with care, the sodden fly was removed and a fly exactly like it, but dry, substituted.

"The floating fly seemed to have the effect of arousing the trout to action at once. During the week I estimate that there was an average of ten rises to the dry-fly to every one to the same fly wet.

"Mr. Dimock will probably agree with me in this estimate."

Mr. Dimock and Mr. Gill are both well-known anglers, and anything either of these gentlemen says about fly-fishing is worthy of great consideration at all times.

In this instance, however, I must take exception to what Mr. Gill has to say about giving the dry-fly and the wet "*an impartial tryout*," but no exception is taken to the estimate of ten to one, because a wet-fly fisherman of experience would expect to see just such a result follow under the conditions of the tryout.

Thinking perhaps I did not fully realize what the word *impartial* meant, I referred to "The Century" and found *impartial* to mean, "Not partial, not favoring one more than another; unprejudiced, equitable; just."

Having this meaning in mind, I ask Mr. Gill if he really considers it an impartial tryout of the two fly-fishing methods to have the fly that is fished wet so thoroughly soaked "that it would sink immediately after striking the water"?

TROUT FLY-FISHING IN AMERICA

And why this wet-fly should be fished "up stream" when most successful wet-fly fishermen fish the fly "across" the stream so that the fly can be played or fished by the angler?

The tryout mentioned by Mr. Gill simply proved that a dry-fly fished on the surface of the water was more successful than when fished under the surface.

It was the merit of the fly and the same kind of fly that was ascertained when fished in the same way by a dry-fly enthusiast, only it was at one time fished as a dry-fly and at another as a "sodden fly" "up stream," but otherwise the method was the same in each case.

Such a tryout proves nothing as to the comparative merits of the two methods, because the two methods were not compared. It was a dry-fly fished in the same manner, but in different places.

With all due respect for Mr. Gill, and I believe him to be the fairest of all American dry-fly anglers, nevertheless I am unable to understand how such an angler can hope fairly and impartially to do even substantial justice to both methods of fly-fishing in any kind of a tryout where he himself demonstrates the application of each.

It is hardly within the ability of any angler, no matter how expert he may be, to be equally good at the application of both arts, the wet and the dry-fly methods of fishing.

Then again each angler has his natural liking for one of the two methods of fly-fishing, which of itself would

TROUT FLY-FISHING IN AMERICA

render him unfit to try out both methods in any comparative test for determining the merits of both.

The comparative merits of the two methods of fly-fishing can only be fairly, squarely and impartially tried out by two anglers, one representing the wet-fly and the other the dry-fly, and each should be an expert exponent of his respective style of fly-fishing.

Results obtained from such a tryout would be of some value in determining which method was the more comprehensive as well as skillful, without prejudice to either.

It must always be borne in mind that the test between the dry-fly dry and the dry-fly wet is not the question, but that the test is between the two methods of fishing with a fly, the wet and the dry.

Mr. Gill's tryout proved nothing as to the relative merits of the two styles of fly-fishing any more than a tryout would prove anything had a wet-fly been substituted for a dry one by Mr. Gill, and certainly he would not have thought such a tryout was at all fair to his method of fishing the fly, nor would any fair-minded angler think so.

In trying out the two methods of fly-fishing both exponents of the two styles should be obliged to fish, not only waters suitable to the dry-fly, but those suitable to the wet-fly as well. Both methods should be tested on all the different fishable waters, for only in this way can the real merits be at all determined with fairness to each and a proper comparison be made.

It is refreshing at times to observe the frankness and fairness with which an English dry-fly angler says cer-

TROUT FLY-FISHING IN AMERICA

tain things about fly-fishing. I have in mind what George A. B. Dewar, author of "The Book of the Dry-Fly" states about the two different methods of fly-fishing.

"The dry-fly is as clearly out of place on the wet-fly water as the wet-fly is on the dry-fly stream."

"After all, it is only in the style of deceiving and hooking fish that dry-fly and wet-fly anglers . . . assuming both to be good sportsmen . . . can much differ. In nearly all other fly-fishing matters they must naturally be at one."

"It has already been said that the dry-fly is quite out of place in many trout streams."

"The dry-fly streams, though they have increased of late years, are still and ever must be in a decided minority."

"The dry-fly angler is not, as a rule, a very early riser. He can do nothing without natural fly, and in my experience there are very few duns or other water-flies out till nine or even ten o'clock in the morning."

What Mr. Dewar says, in the main, applies equally well to the conditions found in this country so far as dry-fly fishable waters are concerned.

As to the time of fishing that is governed to a great extent by the fact that in England the angler "*fishes the rise*," while in America the angler "*fishes the stream*."

These are true statements made by Mr. Dewar, and just as soon as the dry-fly anglers and writers of this country realize such is the case and quit their manifestly unfair attitude toward the wet-fly angler their standing in the angling world will be decidedly improved from what it is at the present time.

Because the fly-fishing conditions, as well as the trout, of England are so different from those found in this coun-

TROUT FLY-FISHING IN AMERICA

try, one can understand why the dry-fly anglers there may be absolutely correct when speaking about certain methods used by wet-fly men.

On the other hand, one cannot understand how the American dry-fly anglers can make the statements they do unless they simply voice their English cousins' views, having no real knowledge of their own.

For instance, Mr. Dewar, who is an exceptionally fair writer in what he has to say about the wet-fly angler, makes several statements that do not apply to wet-fly fishing in this country at all, and to which every good sportsman and angler who uses the wet-fly method very properly and emphatically objects.

I refer to such statements as these:

"As a rule he" (the wet-fly angler) "fishes down or across stream, and does not strike till he feels his fish."

"It is the aim of the wet-fly angler, as we have seen, to make his flies sink below the surface. . . ."

"It might not be too much to say that it is no more satisfaction to him" (the wet-fly angler) "to hook and land a particular feeding fish than to hook in a rough bit of water a fish of whose existence, till the tug on the line came, he knew nothing."

I do not believe the anglers of this country, the fair-minded-sportsmen, be they wet or dry-fly exponents of the two different methods, will ever tolerate such statements as these made by dry-fly writers, especially when such a noted and experienced angler as Henry P. Wells, who was an expert wet-fly angler, states as follows, speaking about striking trout.

TROUT FLY-FISHING IN AMERICA

"Not that the angler is to rely in the *SLIGHTEST DEGREE ON FEELING THE FISH*; his eye, and his eye alone, is his guide."

Has it come to pass that the dry-fly angler shall not only determine everything about his own method but shall, as well, decide what are the usual and customary methods of the wet-fly angler?

I, for one, think not, and say . . . Mr. Dry-Fly Man, you will have to call several more witnesses other than those of your own ilk, even to make out a case (much less get a verdict from any jury of real American sportsmen) to the effect that the dry-fly method of fly-fishing is more scientific, more comprehensive and more skilful than the wet-fly method, as applied by the best exponents of the art.

It should be borne in mind when the merits of the wet and the dry-fly are being considered and the two methods of fly-fishing are being compared, that the real success attained by the dry-fly, both in England and America, has been with the Brown Trout (*Salmo-fario*) and not the Brook Trout (*Salvelinus-fontinalis*).

The marked difference between the Brown Trout and the Brook Trout in their habits and manner of feeding accounts in a great measure for this fact. And it is still further accounted for by the fact that Brown Trout can live in water where Brook Trout cannot, and they will thrive in water from ten to fifteen degrees warmer than water in which the Brook Trout can barely exist.

The Brown Trout will rise to flies on streams and lakes

TROUT FLY-FISHING IN AMERICA

on bright, clear, warm days, when the temperature of the water is at sixty degrees and over; while under these conditions the Brook Trout, in order to live, seeks the coolest of places, such as under banks, in deep sheltered pools and in the shadows of large rocks and boulders, where they will remain inactive until the temperature of the water falls to 55 degrees and below.

It is a fact that at such times the dry-fly method is successful, and at its best, and that the wet-fly method is least successful, and at its poorest; but how do these facts alone prove anything about the real merits of the two methods?

Certainly all that they prove at most is that Brown Trout, under the conditions named, will rise to a fly when the Brook Trout will not.

The dry-fly method of fishing for trout is a great art, but up to this time neither on paper nor by practical demonstration, I make so bold to say, has it been proven to be the superior to the wet-fly method.

CHAPTER IV

THE FLY-ROD AND ITS FUNCTION

UP to within a comparatively few years, or, to be more exact, to the advent of the American dry-fly purist, the angling fraternity was composed of big-hearted, nature-loving sportsmen, who respected their brother anglers' views even if they did not entirely agree with all of them.

It is different now since the dry-fly fishermen have become writers, because a discordant element has thereby entered the once peaceful angling fraternity; but let us hope that time, "which cures many ills," will very nearly, if not entirely, restore the old-time feeling of respect, tolerance and courtesy that one angler had for another.

In order that the beginners at fly-fishing, who are to form the coming generation of anglers, may have in mind just the kind of thing to avoid in the future I am going to call their attention to what a well-known dry-fly angler has written about the views of a wet-fly angler and leave it to them and experienced anglers to determine later whether or not the above statement is warranted.

Let us consider, for instance, a subject in which all fly-fishermen should be interested and compare what an old-time wet-fly angler and a modern dry-fly angler have to say about the fly-rod and its function.

TROUT FLY-FISHING IN AMERICA

I quote from Dr. James A. Henshall's book, entitled "Favorite Fish and Fishing," in which he states his opinion of "the proper function of the rod." (Pages 71-72.)

"The essential and most important office of a rod is that which is exhibited after the fish is hooked; . . . in other words, in the playing and landing of the fish."

"In practical angling the act of casting, either with fly or bait, is preliminary and subordinate to the real uses of a rod."

"The poorest fly-rod made will cast a fly thirty or forty feet, which is about as far as called for in ordinary angling."

"But it is the continuous spring and yielding resistance of the bent rod, constantly maintained, that not only tires out the fish, but protects the weak snell or leader from breakage, and prevents a weak hold of the hook from giving way; and this is the proper function of a rod."

In contradistinction to what Dr. Henshall says about a rod, I now quote from the first chapter of Mr. George M. L. La Branche's book, entitled "The Dry-Fly in America," as follows:

"The man who believes this will never become an accomplished fly-fisherman, nor will he, if he does not realize that the great essential to success lies in placing the fly lightly and accurately."

"In plain words, the reader is told that the proper function of a rod lies in the power which it gives the angler to kill fish, or, at the least, in enabling him to handle his fish with a minimum risk of loss."

"I MAINTAIN THAT DR. HENSHALL'S PRINCIPLE IS WRONG BECAUSE IT PRESUPPOSES A DESIRE UPON THE PART OF THE ANGLER TO POSSESS FISH, . . . AND SURELY THE DESIRE OF POSSESSION ALONE CANNOT CALL SO MANY TO THE BROOKSIDE!"

"Even in wet-fly fishing it is at all times necessary to cast delicately and accurately, and while this may be done with a soft rod

TROUT FLY-FISHING IN AMERICA

by an expert, the command over line and fly in no way compares with the facility with which they may be handled on the more powerful rod."

"Either through lack of experience or lack of confidence in their own opinion . . . if they have had any on the point . . . many latter-day writers have echoed Dr. Henshall's statement . . . in some cases, word for word . . . with the result that their readers have been misguided in their selection of rods."

"Is it wrong to assume that the advantage gained over the fish by using a rod which relieves the light gut leader of strain may be safely abandoned in favor of the rod which enables the angler to place his fly with more delicacy and precision, even though he risk a smash in hooking, or after, because of its stiffness?"

Compare now what Dr. Henshall has to say about the fly-rod and its function with what Mr. La Branche has to say upon the subject and then, after carefully considering the words of each, draw your own conclusions, which later verify by experience.

I trust and believe that I am correct when I assume that both Dr. Henshall and Mr. La Branche speak from the same standpoint . . . fly-rods in general use for wet or dry-fly fishing. I also assume that both deem successful trout fishing with the artificial fly, using either method, to mean the ability to make the trout rise, to hook, to play and to land them.

This, however, does not mean the killing of trout.

TROUT FLY-FISHING IN AMERICA

Before going any further with the subject, I wish to call the reader's attention to what, in my judgment, is a fact, namely, that fly-rods vary just as much as do anglers, and that fly-rods have to be fitted to the anglers, not the anglers to the fly-rods, in order to achieve any kind of success at fly-fishing.

Dr. Henshall maintains that the proper function of a rod (that is, its most important office) is brought into use in playing and finally landing a fish after it is hooked.

Mr. La Branche, on the other hand, maintains that the most important function of the rod is to cast the fly lightly and accurately upon the water.

Here then we have a direct issue as to the real function of the fly-rod, and also as to the proper kind of rod to use.

You will remember that Dr. Henshall, in what he has to say about a fly-rod and its most important function, does not mention one word about a "soft" or "powerful" rod, but confines himself to the action of the rod in service and what a good rod should accomplish if properly used.

Let us consider just what it is Mr. La Branche has to say, how he says it and the meaning he wishes to convey to his readers.

First—That anyone who believes Dr. Henshall can "never become an accomplished fly fisherman."

TROUT FLY-FISHING IN AMERICA

Does not this statement, if it means anything, mean that, irrespective of the method, wet or dry, no angler who uses such a rod as Dr. Henshall describes can ever become an accomplished fly fisherman?

It may be possible that Mr. La Branche has some special or peculiar meaning for the word "accomplished," but I understand the meaning of the word to be, "having completed, effected, or finished some given thing," and that an accomplished angler or fly fisherman is one who has carried the art of fly-fishing with light tackle and the artificial fly to the desired end, that of catching game fish.

Certainly an angler who cannot catch fish is not an accomplished fly fisherman, and one who can catch them with any kind of rod must be called accomplished, and the poorer the rod used the greater must be the accomplishment.

A bald statement is one thing, a fact quite another, and in this instance the fact is, that there are many accomplished fly fishermen all over the world who agree with Dr. Henshall about the function of the fly-rod as well as many expert fly-rod makers.

Second—That the reader is told "in plain words" that the function of a rod is in the power "it gives the angler to kill fish."

In all fairness and truthfulness I ask where is there anything in what Dr. Henshall has said about a fly-rod that can be distorted into meaning, or even implying, what Mr. La Branche so boldly asserts?

TROUT FLY-FISHING IN AMERICA

Where are the words, "*in plain words*," or any other kind of words which Dr. Henshall has written, which say the function of a rod is in the power "*it gives the angler to kill fish*"?

What motive was it that called forth such a statement, and what spirit was it that prompted these words which have not one letter of truth in them?

Statements that are false on their face require no refuting—they condemn themselves.

Third—That "at the least" it enables the angler "to handle his fish with a minimum risk of loss."

The rod the Doctor describes *does enable* the angler to cast, strike, hook, play and land his fish, if handled in a scientific and skilful manner, so as to save or protect the leader and snell and also to land the fish that is lightly hooked, all due to the action of the rod; but it *does not* mean, without skill, "to handle his fish with a minimum risk of loss." Far from it, as all experienced fly-fishermen know to their sorrow and from sad, sad experience.

Fourth—"I maintain that Dr. Henshall's principle is wrong, because it presupposes a desire upon the part of the angler to possess fish, . . . and surely the desire of possession alone cannot call so many to the brookside!"

Conceive, if you can, a supposedly experienced angler making such a statement in the first place and then ask yourself if it is possible for any sane fly-fisherman in the second place to take any stock in it.



THE RAINBOW TROUT (ADULT MALE) SALMO-IRIDEUS

TROUT FLY-FISHING IN AMERICA

Consider the point of view carefully, digest the meaning of the words *presupposes* and *possess* as they are used, determine the idea their author wished to convey and then ask yourself if there is anything in what Dr. Henshall says about a fly-rod that would warrant such an unsportsmanlike statement.

If I am not in error as to the correct meaning of the word *presupposes*, he who presupposes has to assume something in advance without actual knowledge or experience. On that account, to maintain that a principle is wrong would seem, to say the least, quite far-fetched, and also it would seem to be quite within reason and common sense for no one to believe it.

These are the words, "to possess fish" . . . but why was the word *possess* selected instead of the word *catch*?

To *possess* means to have, to hold, and in the angling world it means to kill, while to *catch* means quite another thing, namely, to land your fish and then return it immediately, unharmed, to the water.

Can there be any mistake about the sense in which this word *possess* is used when it is immediately followed by the word *possession* in this manner? . . . "and surely the desire of possession alone cannot call so many to the brookside!"

The long and short of it is that Mr. La Branche more than plainly implies that all anglers who use such a rod as Dr. Henshall describes are simply desirous of *killing*, not *catching*, game fish with the fly.

TROUT FLY-FISHING IN AMERICA

As there is absolutely nothing in what Dr. Henshall says about a fly-rod, not an iota of anything, that could in all fairness have called forth such a suggestion as culminates in this expression of opinion, what was it, then, that prompted it? The reader must draw his own conclusion.

It requires something more than a mere statement of opinion based solely upon an assumption to disprove a principle, and surely some reasonable presentation of facts to convince experienced anglers that Dr. Henshall is wrong.

Fifth—That a “soft” rod is not as good as a “more powerful rod.”

Now we are informed that a “soft” rod is not as good as a “more powerful rod,” and this is a fact when it is considered that a “soft” rod is one that is very willowy, or flexible to a degree, and lacks the important feature of resilience, while a “more powerful rod” is one that has this essential characteristic to a marked degree.

But no one save Mr. La Branche has mentioned either kind of rod; surely Dr. Henshall has not done so, and the rod he does mention most certainly could not, by any stretch of the imagination, be called “soft.”

Let us again see just what it is that Dr. Henshall has to say about the fly-rod:

“It is the continuous spring and yielding resistance of the bent rod, constantly maintained, that not only tires out the fish, but protects the weak snell or leader from breakage, and prevents a weak

TROUT FLY-FISHING IN AMERICA

hold of the hook from giving way, and this is the proper function of a rod."

This fly-rod that Dr. Henshall describes has "continuous spring and yielding resistance . . . constantly maintained." Now what do these words mean? They mean to my mind, and I believe that I voice the view of Dr. Henshall as well as many experienced fly-fishermen, that this rod has, first, *resistance which is constantly maintained*; second, *it has the quality known as yielding resistance*, and, third, *on account of the yielding resistance, it has a continuous spring under strain*. In other words, it is a "resilient" rod, not in any sense a "soft" rod.

The degree of resilience that any fly-rod should possess must necessarily be determined by the angler who is going to use it, for he alone can tell whether or not it suits his physical make-up and ability.

Sixth—"Either through lack of experience or lack of confidence in their own opinion . . . if they have had any on the point . . . many latter-day writers have echoed Dr. Henshall's statement . . . in some cases, word for word . . . with the result that their readers have been misguided in their selection of rods."

And this is the way Mr. La Branche slurs at those who have had the audacity to believe the same way about fly-rods as does Dr. Henshall:

" . . . many latter-day writers have echoed Dr. Henshall's statement. . . ."

TROUT FLY-FISHING IN AMERICA

It seems there have been *many* writers (for has not La Branche said so) who have agreed with the Doctor and some have even gone so far as to echo his views "word for word." Yet all, each and every mother's son of these "many latter-day writers" is wrong, because "either through lack of experience or lack of confidence in their own opinion . . . if they ever had any on the point," they believed in the truth of what a learned, experienced and justly noted angler has said about "the proper function of a rod."

Of course it is possible, judging from the way Mr. La Branche writes, that even he and some of the "readers" he speaks of may have been "misguided," not by what these "latter-day writers" have written, but by the way their writings have been interpreted.

It is also quite possible that they have paid more attention to fly-casting than fly-fishing, and their experience has been limited to few, not many kinds of trout waters and that the casting of a long line when fly-fishing was their pleasure.

Seventh—"Is it wrong to assume that the advantage gained over the fish by using a rod which relieves the light gut leader of strain may be safely abandoned in favor of the rod which enables the angler to place his fly with more delicacy and precision, even though he risk a smash in hooking, or after, because of its stiffness?"

To this question of Mr. La Branche's, I answer that in my judgment it is decidedly wrong to assume any such false hypothesis, for the following reasons:

TROUT FLY-FISHING IN AMERICA

The ultimate aim of fishing is to catch fish, independent of the method employed, whether it be by bait, trolling or fly-fishing. As I have already said, the catching of game fish on the fly, however, does not mean the killing of fish, as is usually the case with the two other methods. Anyone who claims that the object of fly-fishing is not to catch fish is not a fly fisherman.

The act of placing a fly delicately and accurately depends more upon the skill of the angler than upon the kind of rod, assuredly such is the fact so far as the two mentioned rods are concerned.

The degree of delicacy and accuracy required is determined first, by the method used, the wet or the dry, and, second, by the conditions under which the angler has to fish. For if an angler always fishes the same way for the different species of trout found in the many different kinds of fishable water he will have but little success, and could not properly be called a good fly fisherman.

The Doctor's rod does not relieve the leader of "strain" in the way Mr. La Branche would seem to imply, it simply relieves it of "undue strain," thereby giving the angler a chance to display his skill instead of mere strength.

If light gut leaders are smashed when striking a trout, or afterward, assuming that they are made from suitable high-grade material, it is because the angler is a poor fisherman, or the rod does not suit the angler, or the rod is too powerful; and generally the smashing is due to the last-named cause.

TROUT FLY-FISHING IN AMERICA

When a light gut leader is used, naturally it is for a purpose. If the leader is smashed when a trout is struck, it then follows either the leader was too light or the rod was too powerful, and that the angler was fishing with an unbalanced equipment for his ability, which is contrary to skilful fly-fishing.

The angler who persists in the use of a rod which is so stiff or powerful that there is always a risk of smashing the leader, either in hooking or playing a fish, is not a fly-fisherman *per se*, but a fly-caster to whom the leader means nothing and the fine art of fly-fishing is unknown.

The skilful and good fly fisherman is one who always has a well-balanced equipment, consisting of rod, reel, line, leader and fly, all of which go to make up a well-proportioned whole so far as strength and balance are concerned; but when the rod is so stiff or so powerful that it repeatedly breaks leaders, although it may be a "fine casting one," it is out of place, and should be discarded, if fly-fishing, not fly-casting, is to be practiced.

Take such a rod as Dr. Henshall describes, and take another rod such as Mr. La Branche mentions, use leaders of the same kind on each. Now, if the leader in each case does not break when a strike is made and a fish is well hooked, the greater advantage is gained by the stiffer or "more powerful" rod, and not by the more pliable one, because with the former the fish can be tired out and brought to the landing net very much quicker than with the latter.

TROUT FLY-FISHING IN AMERICA

If Mr. La Branche had said that he preferred a stiff or powerful rod for fly-fishing, or that the proper rod in his opinion to use for dry-fly fishing was such a rod, owing to the great amount of work placed upon it when making many false casts between regular ones, no angler would take an exception for a moment, because it is unquestionably his right to fish as he pleases.

But when he takes such an arrogant attitude as he does toward Dr. Henshall's views about the fly-rod and its function without differentiating as to the methods of fly-fishing, the fishable waters and the governing conditions, it seems to me, in all fairness, that one is more than warranted in making a strong protest.

I am sorry to say that this same spirit seems to be in the blood of a number of fly-casters and dry-fly fishermen, but let us hope that in time they may, to some extent on account of a fuller experience and a greater knowledge, become inoculated with "the milk of human kindness" and develop "the true angler's spirit."

CHAPTER V

FOR THE BEGINNER AT FLY-FISHING

MUCH has been written about both methods of trout fly-fishing, the wet and the dry. Some has been good, more bad, and much not worth considering. On that account, it is well to do some reasoning for yourself, applying your own good common sense when reading many of the books and articles published upon the subject.

To the beginner at trout fly-fishing, I suggest that he first learn to fish with the wet-fly. When he has become proficient with this method take up the dry-fly method of angling; thus he will find the art of fly-fishing less discouraging and more easily acquired.

After both methods have been successfully practiced he will be able to derive all of the enjoyment possible out of angling, for he then can fly-fish at any time during the open season, using the method best suited to the waters he has the good fortune to fish.

The act of casting, primarily, is mechanical; therefore it follows that the more perfect the mechanism employed the more perfect will be the results accomplished, provided the motive force is properly applied. The skill in casting is the ability to apply the motive force to the

TROUT FLY-FISHING IN AMERICA

mechanism (the rod, line, leader and fly) in such a manner as to produce certain desired results, remembering that "like causes produce like effects."

There are many kinds of anglers, but all anglers are by no means good fly fishermen, even though they may have had years of experience.

It is on this account that many writers on the subject of fly-fishing have taken great delight in dividing the fly-fishing fraternity into a number of classes, such as the practical angler, the scientific angler, the theoretical angler, the good angler and the poor angler.

This division into classes is indeed very interesting, inasmuch as it discloses the different points of view of the different writers; but does much of all that is voiced about the classes lead to any logical conclusion that is at all convincing?

Fly fishermen can be divided and subdivided into as many classes as there are fishermen, but what possible benefit will thus accrue to the beginner, who is looking for something tangible to aid him in the "Art of Fly-Fishing"?

There are, as a matter of fact, just two real classes of fly fishermen, the good and the bad, which, in other words, means the successful and the unsuccessful fishermen.

The successful angler is at one and the same time the practical, the scientific and good fly fisherman, while the unsuccessful angler is the theoretical, the thoughtless and the bad fly fisherman; the one has "fish sense," and the other has none at all.

TROUT FLY-FISHING IN AMERICA

Success in fly-fishing means just one thing, and only one thing, and that is the angler's ability to catch, not needlessly kill, game fish with light tackle and the artificial fly; and it really matters not at all to which class such an angler is said to belong by any writer on the subject, including myself.

The all-important point to consider is how the beginner can become a successful angler instead of an unsuccessful one.

To every beginner in the art of fly-fishing, I say, that he can become a successful angler with patience and perseverance, provided he has or can develop what is termed "fish sense," and to a certain degree "mechanical sense," but in no other way.

At the outset the beginner should be very careful to differentiate between the art of fly-fishing and the art of fly-casting, otherwise much will have to be unlearned before the goal of the successful angler is attained.

By this I do not wish to imply for a moment that good fly-casting is not a very important requirement in the art of fly-fishing, because it is of great importance, but I am desirous of impressing upon the beginner that the casting of the wet-fly is not all there is to this method of fly-fishing.

Strange as it may seem to many beginners, the fact still remains that good tournament casters are seldom successful fly fishermen, and the very few who are only go to prove the rule.

Samuel G. Camp, in his book entitled "The Fine Art of Fishing," says on pages 65 and 66 as follows:



SHOWING HOW A ROD SHOULD BE HELD IN THE
ACT OF CASTING

TROUT FLY-FISHING IN AMERICA

"The manner in which the flies are fished distinguishes the fly fisherman from the mere fly-caster, whether or no the fly-caster, as such, be expert or otherwise."

Every beginner, first of all, should have the proper tools with which to work, then he should learn how to use them, and he should constantly observe and study the requirements and conditions incident to their use, as well as the habits of the fish.

That the art of fly-fishing cannot be learned from any book is indeed true, but the scientific principles involved can be, provided they are clearly set forth, and they will be of exceptionable advantage to any beginner or even an old-timer, if fully understood.

Every person who understands the scientific reasons for doing a given thing will, as a general rule, become more proficient in less time with less practice than one who does not understand them, and the results desired will be necessarily more quickly attained.

Every successful fly fisherman is individual in his methods of fishing, yet the principles involved always remain the same, irrespective of all methods.

The principle is one thing, the results looked for by applying a principle are quite another thing, and the most important thing of all is the development of a method that will best apply the principle and at the same time be productive of good results.

This, then, is where the individuality of the angler comes into play, and it is this feature which cannot be learned from books, because it is only by long or seem-

TROUT FLY-FISHING IN AMERICA

ingly long practice, that a successful method of applying the principle can be fully acquired.

To become a successful angler one must be patient to a marked degree under many trying and disheartening circumstances, such as broken tackle, snarled leaders, snapped-off flies, an overshot line, a leaky boat or canoe, the mistakes of a guide or companion, a ducking, the loss of a big fish, the utter indifference of the fish, and a thousand and one other "ills that flesh is heir to."

Next to having patience one must have, or acquire, a phlegmatic temperament, because nervousness plays no part in the art of fly-fishing, as no great amount of success will ever fall to the lot of the nervous fisherman.

For the beginner it may be well to state what constitutes a nervous fisherman. He is the fisherman, who, having had a rise and failing to strike and hook his fish, immediately and hurriedly casts again, with the usual result that he either gets his line or leader, or both, "hung up" on the backward or forward cast, if he is fishing on a stream, or he hammers the water with the line if he is fishing from a boat or canoe on still water. In each case the net result is no rise and no fish.

Nerves are again shown by the stream fisherman, who, having cast over a likely pool two, three or four times without having a rise, starts for the next inviting pool to do the same thing over again.

Then again nerves come to the front when from a boat or canoe the fisherman casts and gets a rise and fails to hook his fish, but just pricks him with the point of the

TROUT FLY-FISHING IN AMERICA

hook. He then casts so quickly and with so little judgment that the fly or flies land on the water with a "dull sickening thud," or else the line strikes the water well in advance of the flies.

It is indeed unfortunate that all lovers of the art of fly-fishing could not, within reason, be able to own a first-class fishing outfit. If such were the case much of the cheap and useless tackle would not be manufactured and placed upon the market to deceive unsuspecting beginners and others as each succeeding season comes around.

It is possible to-day to obtain a very good fly-fishing equipment which is not very expensive, serviceable on brook, stream or lake and it consists of the following articles:

<i>Article</i>	<i>Number</i>	<i>Kind</i>	<i>Cost</i>
Rod	(1)	Hexagonal, Split Bamboo	\$15.00
Reel	(1)	Single-Action Click	3.50
Line	(1)	Tapered or Flat Enameled	4.25
Leaders	(6)	Silkworm Gut	2.50
Flies	(36)	Snelled Hooks	4.50
Leader Box	(1)	Copper-Nickeled	1.00
Fly Book	(1)	Leather	2.00
Fly Box	(1)	Copper-Nickeled	1.00
Creel	(1)	Wicker or Canvas	1.50
Landing Net	(1)	With Rubber Cord	1.50
Total cost of equipment			\$36.75

It is mistaken economy to buy cheap tackle of any kind, and especially so for fly-fishing; first, because it costs the angler more in the long run than does high-

TROUT FLY-FISHING IN AMERICA

grade tackle; second, because it is a source of constant annoyance and suspicion.

On the other hand, I do not advise any beginner at the art of angling, even though he has plenty of money, to buy a fancy kit, because at best it is only a "pretty play-thing," but to confine himself to a good quality of tackle free from frills and made by reputable concerns.

When about to purchase a fly-fishing equipment for the first time it is advisable to ask some good angler friend if he will help you in making the selection.

Having obtained an equipment, then ask this same friend at some convenient time to show you how to set up the rod, reel, line, leader and flies and how to care for them.

After you have become familiar with the equipment, again press your friend into service and ask him to take you out on some good fishable water and give you a few pointers and so start you on the right road.

Fish as often as you can with and without your friend, and observe carefully the reasons for your success and lack of success, but never fish after you are tired, for if you do you will go backward and not forward in acquiring the art of fly-fishing.

Do not allow yourself to get discouraged, remember that only by patience and perseverance can success be attained, and always take good care of your equipment, for one that is worth having is certainly worth receiving the best of care.



SHOWING HOW A ROD SHOULD BE HELD IN THE
ACT OF CASTING

TROUT FLY-FISHING IN AMERICA

How to Hold and Grip a Fly-Rod:

The first thing a beginner has to learn about a fly-rod is how to hold and grip the handle, and so far as this feature is concerned, it does not permit of any deviation from the set rule.

The proper way to hold the rod is with the reel seat and line guides on the under side of the rod and the rod handle should be firmly grasped in the casting hand with the thumb straight out and resting on the handle.

The reason for this is because the angler is given the greatest possible command over the rod under all conditions, such as, in casting, in fishing the flies and in playing the fish.

With the thumb around the handle the ability of the angler to control the rod is materially lessened because the thumb then ceases to act as a brace. This fact is very apparent when the forward or backward cast is made; so try it and find out for yourself whether or not the thumb really acts as a brace and a very efficient one at all times.

How to "Set Up" a Fly-Rod:

After taking the rod from its form or case, carefully wipe off, with a slightly oily rag, the metal end of the tip and middle joint, being sure not to leave any visible oil.

Then, by holding both the tip and middle joint so that the line guides are on top, insert the metal end on the tip joint in the ferrule of the middle joint, being careful to see that the parts are well seated.

Now go through the same operation with the middle

TROUT FLY-FISHING IN AMERICA

and butt joint, and after this is done the rod is ready to be whipped backward and forward a few times as in the act of casting; then, if the joints are tight, proceed to attach the reel.

How to Place the Reel on a Fly-Rod:

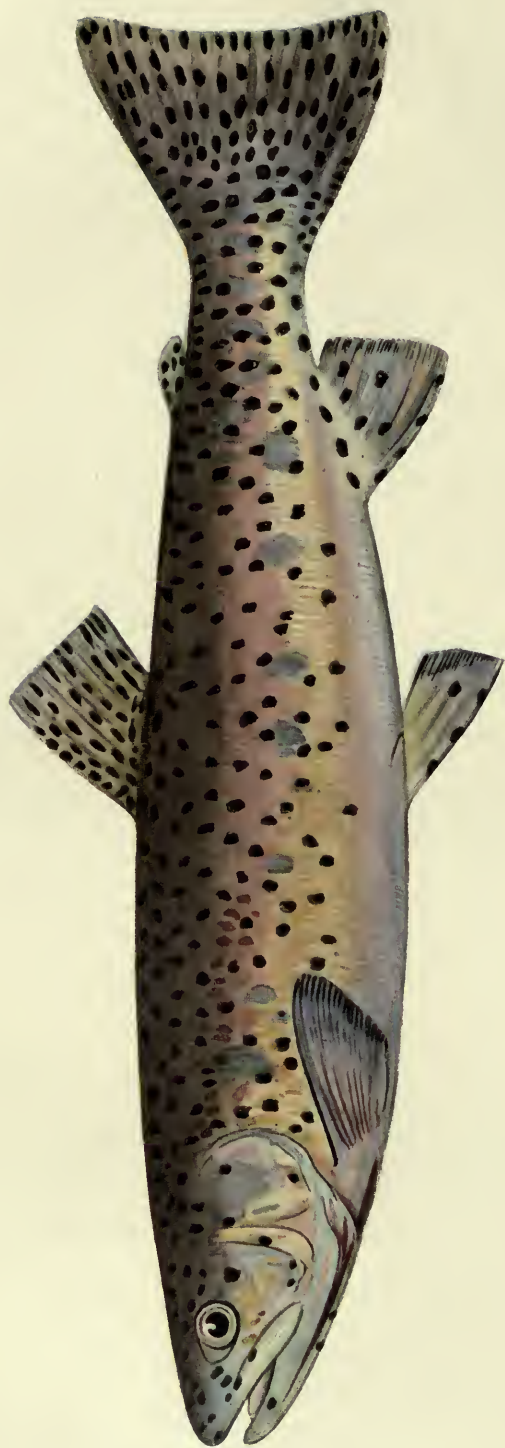
There are two ways of placing the reel on a rod, one is to have the handle of the reel, when the rod is held for casting, on the right side. The other way is to have the handle of the reel on the left side.

The first way is by far the better way to place the reel, notwithstanding the fact that some anglers prefer and use the second way.

It is, however, something that must be determined by each angler for himself.

If the first way is used, remember that the reel handle should always be placed so that it will point away from the angler's body to the side. If he is right-handed, then the handle should be to the right, if he is left-handed, then the handle should be to the left.

The reasons for so placing the reel are threefold, first, tangling or catching of the line on the reel handle is avoided when the line is being cast, retrieved or paid-out; second, it does away with turning the rod and trying to balance the reel on top of the rod handle, if for any reason the angler wishes to reel up the line or play a hooked fish on the reel; third, the reel handle can be immediately and naturally put into commission by simply transferring



THE RED THROAT TROUT (ADULT MALE) SALMO-CLARKII

TROUT FLY-FISHING IN AMERICA

the rod from the right to the left hand, or *vice versa* if the angler is left-handed.

Having securely fastened the reel in the reel seat of the rod the next thing to consider is the line.

How to Handle the Line:

Strip off about a yard or two of the line from the reel, being sure that it passes from the reel between the first and second cross bar. Now pass the end of the line through all of the guides on the rod, including the tip guide ring by stripping more line from the reel.

After this is done, pull through the tip guide at least line enough to reach to the handle of the rod, otherwise the line will slip back through the guides and the work will all have to be done over again.

Be very careful at all times not to step on the line or kink it, especially if the line is of an American make, for it will injure it by cracking or rubbing off the enameling.

How to Attach the Leader to the Line:

The next move is the attaching of the leader to the line, which can be done by one of a number of knots, all of them rather simple and effective.

There are three knots in general use, known as the tiller-hitch knot, the closed tiller-hitch knot and the jam knot.

The simplest and, at the same time, a most effective knot, as well as one much used, is the tiller-hitch knot.

It can be tied very small and, in my experience, I have

TROUT FLY-FISHING IN AMERICA

never known it to give way or come loose, but I have been told by a few anglers that they know of some cases where it has. They add, however, that they believe the fault was due to the way the knot was tied.

This knot has one advantage over all the others, in this respect, that it can be easily and quickly untied or released by simply pulling on the short free end of the line.

The closed tiller-hitch knot is a great favorite with many salmon fishermen, and it is used by some trout fishermen as well. This knot is made by first making the tiller-hitch knot with a slightly longer end of the line left free, this end is then passed through the loop of the knot and pulled tight and cut off.

How the Flies are Attached to the Leader:

Snelled flies are attached to a leader by the loop at the end of the snell and the loop on the leader by placing the snell loop over the leader loop and then passing the fly and the snell through the leader loop, the loops are then pulled tight.

Eyed flies are attached to a leader without any loops, the straight end of the leader being passed through the eye of the fly and tied with a turle knot or a jam knot.

CHAPTER VI

THE ROD, THE REEL, THE LINE, THE LEADER AND THE FLY

The Rod:

THE best and most serviceable fly-rod, from every standpoint, is probably one made of split bamboo, and this seems to be almost the universal opinion of experienced anglers all over the world.

The value of a split bamboo fly-rod depends upon the quality of bamboo cane out of which it is made and the workmanship that is put into its making.

The strength and resilience of the rod depend upon the fineness and thickness of the enameling on the cane, together with the number of silk windings.

A split bamboo rod should be made of six pieces, hexagonal in cross-section, and when one is being selected its length and weight should depend, first, upon the angler's development and natural physical capabilities; second, upon the kind of water most generally to be fished, and, third, upon the amount of fishing to be done.

A round rod is not as good nor as strong as one hexagonal in form. This is necessarily the case, because to make a round rod some of the enameling has to be cut

TROUT FLY-FISHING IN AMERICA

away, and this loss of material, which means loss of strength, cannot fully be made up by increasing the number of silk windings.

There is a natural curvature to each of the six cane strips of bamboo which go to make the finished hexagonal rod, because the strips are cut from a bamboo stalk that is circular in form, but the degree of curvature is very slight as compared to the curvature of the six small strips when they are made into a round rod.

In making a round rod each one of the separate strips is weakened in two places by cutting away the enameling to make the rod round. As there are six strips it follows there must be twelve weakened places, which are reduced to six in the finished rod, because the strips are all cemented together; but the degree of weakness remains the same.

Bamboo cane, other than the outside shell, which is the enameled part, absorbs moisture readily and rapidly, owing to its porous nature. For this reason a round rod requires considerably more attention to keep it in good condition than does the hexagonal one, on account of the weakening of the enameling, where it has been cut away.

This is especially true when the round rod is used in rainy and damp weather, because if the varnishing is cracked or chipped off, moisture will work into the seams and deterioration of the rod will follow, unless it is very thoroughly wiped off, placed in a dry atmosphere and later properly revarnished.

A round rod will also warp and twist and lose its re-

TROUT FLY-FISHING IN AMERICA

silience much quicker than will an hexagonal rod even if equally well made in the first instance.

The weakest points, in all rods, are the metal joints. On that account they should be of drawn tubing well made and snugly fitted.

It is of the utmost importance that the male and female parts of the joint seat securely; that is, the end of the male part when inserted in the female part should not only touch the end of the bamboo of the rod, but it should also enter far enough so that it will come up to the shoulder on the male part.

If this is properly done the length of the metal joints can be materially shortened without detriment to the rod.

All rods which are made proportionately flexible or bending from the tip to the handle of the butt joint are less liable to break at the joints because the strain exerted upon them is considerably less than is the case with rods having a stiff butt joint.

A good hand-made split bamboo fly-rod, hexagonal in form, is worth a dozen so-called "equally as good" rods that are machine-made; first, because the quality of the material in the machine-made rod is lacking, and, second, because the workmanship is vastly inferior.

The weight of a fly-rod depends largely upon its length, but there is always a sufficient leeway so that any angler can select a rod that is naturally well balanced for length and weight to suit his particular or peculiar requirements.

The selection of a fly-rod is not to be lightly made; it is a matter, rather, that should be given careful thought if

TROUT FLY-FISHING IN AMERICA

the purchaser expects to secure a rod that will prove even passably satisfactory.

By all means avoid rods with fancy windings, and under no circumstances purchase a rod that has not a solid, well-made cork handle.

When selecting a fly-rod let it be a hand-made one, either nine feet six inches or ten feet long, with bronze snake guides and a skeleton reel seat, and do not pay less than fifteen dollars for such a rod if you really want to get a good one.

After selecting a rod you will find it will be worth many times the cost if you have an agate tip ring guide and an agate butt ring guide put upon the rod in place of the metal guides already there.

This substitution of agate guides will make your line last longer and keep it in better condition, as well as make casting and the playing of a fish much easier, especially when a fish is lightly hooked or when fishing in the rain or when fishing on a fast running turbulent stream.

Having once fished with these two agate guides on your rod you probably will never again have any other kind on rods used for fly-fishing.

"The proof of the pudding is in the eating."

Good hand-made fly-rods are usually carried in stock by a number of reputable tackle concerns in nearly all large cities; they range from eight feet and six inches to ten feet in length, and from three and one-half ounces to six and one-half ounces in weight.

Fly-rods other than split bamboo are to be had, and

TROUT FLY-FISHING IN AMERICA

are also carried in stock by the dealers. They are made of bethabara, lancewood and greenheart, and there are a number of different makes of steel rods on the market; but I would not advise using any of them for fly-fishing, as my experience has convinced me of their inferiority to split bamboo.

The chief reason for this opinion of these rods is based upon their inability to "stand up" under constant use and retain their shape and resilience.

The relative length, weight and strength of hexagonal split bamboo rods

Length of Rod in Feet	Weight of Rod in Ounces	Maximum Strain of Rod in Pounds-Pull *
8½	3½ to 4¼	½ to ¾
9	3⅝ to 4½	½ to ⅞
9½	4 to 5	½ to 1⅛
10	4¾ to 6¾	½ to 1¼

* Note—By Maximum Strain in Pounds-Pull is meant the dead weight which the rods will stand without injury in an emergency.

The Reel:

It has been often stated by writers on fly-fishing that the reel is the least important feature of the angler's equipment because its function is limited to the mere holding of the line; this, however, is not a correct nor true statement.

The reel has two separate and distinct functions; one

TROUT FLY-FISHING IN AMERICA

is to hold the line, the other to balance the rod and line; and while these two functions cannot well be compared as to their importance, the proper balance of the rod is a most essential element to be considered.

There are many kinds of reels, but the only proper one for fly-fishing is the single action click reel, with or without the click release. As to the release it is for each angler to decide for himself whether he wishes it or not.

All good tackle stores have many patterns and styles of such reels from which the angler may choose, and it is for him to select the kind that he likes best, provided always that it is one, in size and weight, suitable for his rod.

Too much pains cannot be taken in selecting the reel that will give to the rod that proper balance which enables the angler to cast for hours without experiencing fatigue or soreness of wrist.

In selecting the proper reel for weight most beginners, as well as not a few experienced anglers, make the mistake of choosing too light a reel, with the result that the proper balance of the rod is almost entirely lost. This loss of balance becomes apparent by the tiring of the wrist after casting for a comparatively short time, but the real cause of the trouble, however, is most generally overlooked.

No absolutely set rule for securing the proper balance of the rod and reel can be given, because every angler has his own peculiarities with which to contend, due to physical conditions, such as strength of wrist, length of fingers and forearm and temperament. Therefore the

TROUT FLY-FISHING IN AMERICA

angler must choose for himself the reel that seems to him to give the proper balance and then learn from experience if the combination of rod and reel selected is the right one, all things considered, for him to use.

When selecting a reel for the first time it is really necessary, to obtain the best results, to fit the reel to the rod upon which it is to be used, otherwise it will be simply a case of "good luck" if any reasonable kind of a balance is obtained.

Of late years there has been a growing tendency to use lighter rods than those formerly in vogue, and on this account reels have been selected that were altogether too light in weight to make a proper balance.

For some reason or other the feeling seems to have taken hold of anglers that "a light rod necessarily should have a very light reel," and while a light rod should have a lighter reel than a heavy rod the idea has been carried too far, with a result most disappointing in many cases.

The angler who is persistent and who likes to fish for many hours day after day, must soon learn the combination of rod and reel that will give him the desired balance to prevent fatigue in his wrist, if he is to get all the pleasure out of fly-fishing.

Having talked with many experienced and successful anglers as to the balance of rod and reel, and finding that their views were quite in accord with my own, I suggest to the beginner and others that they first start with the idea that the reel, without the line, should weigh at least one and one-half times more than the rod and let the basis be

TROUT FLY-FISHING IN AMERICA

a 7½-ounce reel for a 5-ounce rod. As the weight of rod decreases or increases some deviation must be allowed to meet the change in weight and the individual requirements of the angler.

Speaking of what weight of reel to use on Fly-Rods it is interesting to note what one writer has to say upon the subject.

"Of course, always, the reel for a fly rod should be light, cannot well be too light, though it should be large enough to spool fifty yards of line."

This statement that a reel to be used on a fly-rod "should be light, cannot well be too light," so long as it "be large enough to spool fifty yards of line," is fundamentally wrong in principle, although in some cases it may suit the taste of a few anglers here and there.

This must necessarily be the case from a scientific standpoint, because the greater the weight of the rod, line and leader forward of the casting hand, not balanced by the weight of the rod, reel and line back of the casting hand, the greater must be the strain placed upon the wrist of the caster. This is due to the fact that weight is added to the longer part of the rod which acts as a long lever with the hand as a fulcrum without sufficient weight back of the fulcrum point or hand to make a balance.

If the reel used is as light or lighter than the rod, then the rod is unbalanced in increasing proportion as the reel used decreases in weight and moves the balance point

TROUT FLY-FISHING IN AMERICA

toward the tip end of the rod and away from the handle end of the rod.

From my experience and experiments with many different makes of split bamboo fly-rods (I use no other kind), I have reached the conclusion, after many years, that the proper balance for any fly-rod can be very nearly obtained, as a general proposition, by using a reel which, without the line, weighs, as I have already stated, one and one-half times the weight of the rod, and this is irrespective of the length of the rod.

It is well worth any angler's time to give this subject some little attention for the purpose of finding out if he has really as well balanced a rod as he ought to have if he does any amount of fly-fishing.

As an experiment it is very interesting to learn what a vast difference the proper weight of reel makes in the handling of a rod without fatigue, and what a great difference it makes in the casting of a fly.

For instance, take a five-ounce rod and try casting, first with a reel that weighs four ounces, then with a reel that weighs five ounces (the weight of the rod); now follow with a reel that weighs six ounces and finally try a reel that weighs seven and one-half ounces or one and one-half times the weight of the rod.

Having made this experiment, the chances are that you will never again use a reel that does not weigh more than the rod and probably you will elect to use a reel about the weight I have mentioned.

The weight of reel suggested as the proper one to

TROUT FLY-FISHING IN AMERICA

use, on first thought and before you have made any tests, may seem to be too heavy, because the combined weight of the rod, reel and line will amount fully to $13\frac{1}{2}$ ounces if the line is D or E size and forty yards in length.

It may also strike the angler who has been in the habit of using a four-ounce, or possibly a lighter, reel on a five-ounce rod that the additional weight will tire the wrist and hand. Such, however, will be found not to be the case upon actual trial, because it is not the weight that causes the trouble, but the lack of balance due to the improper distribution of the weight.

Tabulation Showing the Proper Weight of Reel to Use with Certain Weight and Length of Fly-Rods.

Length of Rod in Feet	Weight of Rod in Ounces.	Weight of Reel in Ounces.	Weight of Rod and Reel in Ounces.	Size of Line.
8'-6"	3 $3\frac{1}{2}$	$4\frac{1}{2}$ $5\frac{1}{4}$	$7\frac{1}{2}$ $8\frac{3}{4}$	G F
9'-0"	$3\frac{1}{2}$ 4	$5\frac{1}{4}$ 6	$8\frac{3}{4}$ 10	F F-E
9'-6"	4 $4\frac{1}{2}$ $4\frac{3}{4}$ 5	6 $6\frac{3}{4}$ $7\frac{1}{8}$ $7\frac{1}{2}$	10 $11\frac{1}{4}$ $11\frac{7}{8}$ $12\frac{1}{2}$	F-E E-F E D
10'-0"	$4\frac{3}{4}$ 5 $5\frac{1}{4}$ $5\frac{1}{2}$ $5\frac{3}{4}$ 6	$7\frac{1}{8}$ $7\frac{1}{2}$ $7\frac{7}{8}$ $8\frac{1}{4}$ $8\frac{5}{8}$ 9	$11\frac{7}{8}$ $12\frac{1}{2}$ $13\frac{1}{8}$ $13\frac{3}{4}$ 14 15	E E D D D D

TROUT FLY-FISHING IN AMERICA

Average balance point from end of butt.

For 8' 6" Rod.....12½ inches.
For 9' 0" Rod.....13 inches.
For 9' 6" Rod.....13½ inches.
For 10' 0" Rod.....14½ inches.

Actual Data About the Balance of Fly-Rods

Maker of Rods, Dame, Stoddard Co., Boston, Mass.
(High-Grade Fly-Rods, Chapman Pattern)
Point of Balance with Different Reels

Length of Rod.....	9½ Feet.	9½ Feet.	10 Feet.	10 Feet.
Weight of Rod.....	3½ Ounces.	4½ Ounces.	5 Ounces.	5¾ Ounces.
Weight of Reels, Ounces.	Balancing Point from End of Rod, Inches.	Balancing Point from End of Rod, Inches.	Balancing Point from End of Rod, Inches.	Balancing Point from End of Rod, Inches.
3	16⅛	19½	21	22⅞
3½	15⅛	18½	20	21¾
4	14⅝	17¾	19¼	21⅛
4½	13⅞	17	18⅜	20¼
5	13	16¼	17½	19½
5½	12⅜	15⅛	16⅝	18¼
6	11⅝	14⅜	15¾	17½
6½ .....	....	13⅞	15	16¾
7 .....	....	13⅜	14½	16⅜
7½ .....	....	....	14	15¾
8 .....	....	....	....	15¼
8½ .....	....	....	....	14¾

Point of balance without reel from end of butt.

Rod 9½ feet, 3½ ounces.....29 inches.
Rod 9½ feet, 4½ ounces.....31¼ inches.
Rod 10 feet, 5 ounces.....33½ inches.
Rod 10 feet, 5¾ ounces.....34½ inches.

TROUT FLY-FISHING IN AMERICA

Actual Data About the Balance of Fly-Rods

Maker of Rods, Thomas, Bangor, Maine
(One of the very best Fly-Rods made)
Point of Balance with Different Reels

Length of Rod.	9 Feet.	9½ Feet.	10 Feet.
Weight of Rod.	3½ Ounces.	4 Ounces.	5 Ounces.
Weight of Reels, Ounces.	Balancing Point from End of Rod, Inches.	Balancing Point from End of Rod, Inches.	Balancing Point from End of Rod, Inches.
3	17¼	18¼	22
3½	16¼	17¾	21
4	15¾	16½	20
4½	14½	15¾	19
5	13¾	14¾	18
5½	13¼	14¼	17¼
6	12½	13¾	16½
6½ .....	....	13	15¾
7 .....	....	12¾	15½
7½ .....	....	....	14¾
8 .....	....	....	14⅛

Point of balance without reel from end of butt.

Rod 9 feet, 3½ ounces.....31 inches.

Rod 9½ feet, 4 ounces.....31½ inches.

Rod 10 feet, 5 ounces.....34⅞ inches.

The Line:

There are many kinds of American and English-made fly-casting lines on the market. There is but one kind of line, however, to use for fly-fishing, and that is the silk enameled water-proofed line, and it may be either tapered or flat.

TROUT FLY-FISHING IN AMERICA

The tapered line gets its name from the fact the line, for a distance of fifteen to twenty feet at one or both ends, grows smaller as the end of the line is approached. If only one end is tapered it is called a "single tapered line," if both ends are tapered it is known as a "double tapered line."

The flat line is one that has the same size or diameter throughout its entire length.

Mr. Henry P. Wells says: "Nothing in reference to fly-fishing can be answered with such ease and confidence as the question what line should be used. Unquestionably the enameled water-proofed line, and no other."

There are six regular sizes of flat enameled lines and three regular sizes of tapered lines.

	<i>Flat Lines</i>	<i>Tapered Lines</i>
Largest	C = No. 1	
	D = No. 2	Largest D
	E = No. 3	Medium E
	F = No. 4	Smallest F
	G = No. 5	
Smallest	H = No. 6	

The question, "Which is the better line to use, the tapered or flat?" is one upon which anglers differ, some preferring the tapered, while others just as strongly advocate the flat line. To my mind, every angler must settle this question for himself, either by experience or otherwise.

When "wet" fly-fishing I have found there is no choice, one being just about as good as the other, while

TROUT FLY-FISHING IN AMERICA

when "dry" fly-fishing I prefer the tapered line and believe it to be the better and only line to use.

The size of line to use is governed largely by the length and weight of the rod, but no hard and fast rule can be established on account of the individual taste of the angler which, after all, is controlling. Generally speaking, the following flat lines and rods go well together:

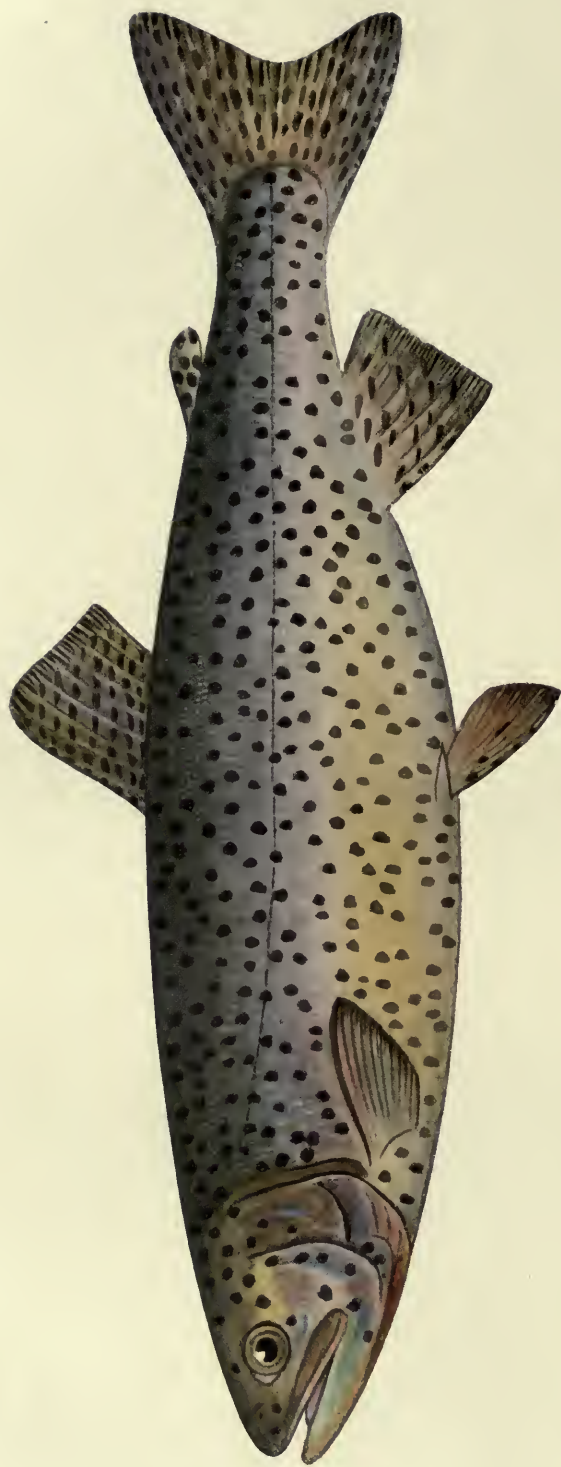
Length of Rod	Weight of Rod	Size of Line	Line often Used
8'-6"	3½ ozs.	G or H	G
9'-0"	4 ozs.	F or G	F
9'-6"	4½ ozs.	E or F	E
10'-0"	5 ozs.	D or E	E

With an 8½ and 9-foot rod use an F tapered line, with a 9½-foot rod use an E tapered line, and with a 10-foot rod use a D tapered line.

The Leader:

The leader is the connecting link between the line and fly, and it is the weakest individual member of the fly fisherman's equipment. On this account, therefore, the selection of all kinds of leaders should receive the greatest possible consideration in order that only good ones may be obtained.

Leaders are made of drawn and undrawn silkworm gut; the gut comes in three general grades known as fine, regular and heavy, and these three grades are sometimes



THE TAHOE TROUT (ADULT MALE) SALMO-HENSHAWI

TROUT FLY-FISHING IN AMERICA

subdivided into grades called extra fine, light regular and heavy regular, and extra heavy.

As most good tackle stores carry a large assortment of many grades of leaders, running from three to nine feet in length, with loops for one, two, and three flies, depending upon the length, it is not difficult to find leaders from which to make selection. The strength of leaders varies according to the grade; fine leaders should have a strength of two to three pounds, medium leaders from three to four pounds, and heavy leaders from four to six pounds.

Stock leaders can usually be obtained in white, mist, brown and black in color, but the mist color is the one most universally used, and these leaders can be either tapered or flat.

When buying or making a leader remember that its extreme length is governed by the length of the rod to be used and on that account the longest leader should be one foot shorter than the rod. If the leader is any longer it is very liable to be pulled through the end tip guide of the rod when playing or landing a large fish and thus cause trouble.

The strength of the leader to use depends upon the size trout you expect to catch and the kind of water you intend to fish; as a starter, however, it is well to use a medium grade leader that will test to a four pounds dead pull when wet; you can then land any trout you hook so far as the strength of the leader is concerned.

TROUT FLY-FISHING IN AMERICA

There is a great difference of opinion as to what force, or pounds-pull, a trout can and does exert upon the fly-fishing equipment; and for that reason it is well to consider the subject at some length in order to arrive at a logical not speculative conclusion.

Let us assume as a fair basis with which to start that trout weighing from one to ten pounds possess the ability to exert the same proportionate pounds-pull according to their weight. that is. a one-pound trout can exert a one-pound pull, a five-pound trout a five-pound pull and a ten-pound trout a ten-pound pull.

From experiments made by Henry P. Wells and mentioned in his book, entitled "Fly-Rods and Fly-Tackle," under the chapter on leaders, it would seem as if this assumption was reasonably correct as a rule, although in some instances a greater pull per pound of weight may be exerted.

My own experience and experiments lead me to believe that a trout can exert against a dead resistance a pull equal to at least its own weight in still water and a considerably greater pull in fast running water.

It should be borne in mind that this is the pounds-pull *that can be exerted* by a trout when working against a *dead resistance*, not the pounds-pull *that is exerted* against a *yielding resistance*, such as when a trout is being played with the rod, line and leader, because the pounds-pull exerted by the trout at that time will be materially less, due to the spring of the rod.

By a very simple and at the same time interesting ex-

TROUT FLY-FISHING IN AMERICA

periment any angler can conclusively prove to his own satisfaction that there is really a vast difference in the pull of a trout against a yielding resistance and a dead resistance.

Some time when a good-sized trout has been hooked and after it has been played for a short time in the usual manner, which represents a yielding resistance, straighten out the rod so that the pull of the trout will come directly upon the line, which, of course, is held fast so it cannot pay out, and you will then have the trout on a dead resistance against which it has to work. It will then be very apparent against which resistance the greater pull of the trout comes and why.

If you should have the good fortune to hook a four-pound trout, unless you happen to have a very strong leader you will find it will give way or the hook will pull out when the trout is working against the dead resistance, while when working against the yielding resistance the trout can, under ordinary conditions, be safely landed.

The moral then is, always keep the trout on the spring of the rod and make him fight against a yielding resistance if you wish to land him.

The pull exerted by a trout against a yielding resistance varies greatly and is not at all proportionate to its weight, and this is largely due to the action of the trout when being played and held on the spring of the rod, and the way the trout is hooked and is also due to the manner in which the angler does the playing.

My own experience is that a trout weighing from one

TROUT FLY-FISHING IN AMERICA

and a half to two and one-half pounds exerts, as a rule, a proportionately greater pull against a yielding resistance than does a trout weighing three pounds or more and that it requires as much skill, if not more, to play and land the former than the latter.

I have come to the conclusion that, under the ordinary conditions encountered when fly-fishing, the greatest pull exerted in playing a trout, weighing up to seven pounds, does not exceed one to one and a quarter pounds and rarely does the pull exceed more than three-quarters of a pound.

When making the statement that in my opinion a trout weighing from one to seven pounds does not exert a greater pull than one and one-quarter pounds, it must be understood that if the trout makes a sudden rush it is given line so as to offset the sudden exerted strain, which strain is double the strain exerted by a steady pull, otherwise the result will be very nearly the same as if the pull was exerted against a dead resistance.

The experienced angler never allows a pull of one and one-quarter pounds to come on his rod unless he is obliged to "give the butt of the rod" to the fish to force it away from some dangerous place or snag. He gives the trout line as the pull increases beyond half a pound, which he can both feel and see by the bend of the rod.

The question might well be asked, why is it then that leaders having a known strength of four pounds give way when big trout are hooked or are being played if

TROUT FLY-FISHING IN AMERICA

the pull seldom exceeds one to one and one-quarter pounds?

The answer is, that such a leader in the hands of a skilful angler should not give way because, if it does, it is on account of some error of judgment on his part or the trout has taken advantage of some snag.

These errors of judgment are numerous, but the principal ones are, first, striking the trout too hard; second, not keeping the trout on the spring of the rod; third, in not giving the trout line when it makes a sudden rush, and, fourth, in forcing and trying to land a trout too quickly.

It is on this account that leaders should be the best procurable, that they should be tested each day before they are used, that they should be tested while being used, and that leaders, as soon as they become frayed, should be discarded as useless.

Leaders are made from drawn and undrawn silk-worm gut, but generally from drawn gut, and sometimes they are made from both, especially for "dry" fly-fishing.

Leaders are made either tapered or flat for "dry" fly-fishing and for "wet" fly-fishing when only one fly is used.

"Wet" fly leaders having one or two loops are seldom made tapered, unless they are tied up by the angler himself.

Trout Leaders

Grade—Fine, Medium, Heavy.

Color—White, Mist, Brown.

Length—6 to 9 feet, tapered or flat.

Strength—2 to 3, 3 to 4, 4 to 6 pounds.

TROUT FLY-FISHING IN AMERICA

A tapered leader is usually made up of three different sizes of gut, while the flat leader is made up of one-size gut.

<i>Length of Rod</i>	<i>Length of Leader</i>
8'-6"	7'-6" or 90"
9'-0"	8'-0" or 96"
9'-6"	8'-6" or 102"
10'-0"	9'-0" or 108"

The Fly:

The question often asked, "What are the best flies to use?" is complex in the extreme, because so many conditions enter into a correct answer, if any approximately correct answer can be given.

After fishing for many years with the "wet" fly, in my opinion, the success or failure of any fly depends primarily more upon the angler than upon the fly itself, because the angler's method of playing the fly either upon or under the surface of the water is the all-important factor.

The ability and individuality of the angler, therefore, determine, to a remarkable degree, the fly that will prove successful on different waters, as well as upon the same waters.

For instance, take two experienced anglers when fishing the same pool (still or slow-running water), each angler using the same kind and size of fly, and let the fly be a Cow Dung.

Angler *A* catches several trout, while Angler *B*

TROUT FLY-FISHING IN AMERICA

catches none during the same period of time. Is this the fault of the fly or the angler? My experience leads me to believe the angler is at fault, not the fly. Now suppose we change the fly and have the anglers use a Parmachenee Bell.

With the Parmachenee Bell angler *B* catches four trout to every one Angler *A* catches. Thus, with different flies different anglers have different results.

This is not an assumed case, but one I have observed many times in different places, after suggesting the experiment be made. I account for the results obtained in this way:

Angler *A*'s manner of playing the fly when using the Cow Dung was more attractive to the trout than was the same fly as manipulated by Angler *B*. The converse of the proposition being the case when the Parmachenee Bell was substituted.

Here were two entirely different flies handled by two better than average fly fishermen, each of whom, had he been fishing apart, would have declared that the other fellow's fly was not a taking one. Yet both flies proved successful in precisely the same place and under the same conditions, the only difference being the individuality of the anglers.

Another uncertainty in selecting the most successful "taking flies" is the fact that trout do not always want or take the same flies every day, and often a fly that has been successful one season will, the very next season, prove to be a decided failure.

TROUT FLY-FISHING IN AMERICA

Then again, weather, wind and water conditions also play an important part, as well as the time of day the fishing is done, the latter condition, in my judgment, however, not as much so as has been generally supposed.

Probably next to the ability of the angler to play the fly comes the ability of the angler to select for color the fly that is best adapted to the particular kind of day the fishing is done.

How many flies, one, two or three, shall be used by the angler when fishing is a matter he must determine for himself. As this is a point about which anglers differ, and inasmuch as each angler can do as he pleases, it is of very little moment from the personal standpoint.

Experience and the results attained are after all the real basis upon which all anglers must necessarily rely in determining this question of the number of flies to use.

When I was a beginner at fly-fishing and for a number of years afterward I used three flies, as was customary in those days. Later I used but two, and sometimes only one. For the past five or six years I have used one and two flies for lake fishing and some large streams, and one for all other kinds of water.

Judging from my own experience and the experience of many angler friends I would suggest that the best success is to be attained by the use of not more than two flies at any time, and when fishing is very good by the use of a single fly.

If you fish with one fly for salmon, one fly for bass

TROUT FLY-FISHING IN AMERICA

and not over two flies for trout you can make no mistake and will have greater success in the long run.

Buy nothing but the best grade of flies even though you have fewer in number. The few will last longer, give better satisfaction and do better work.

Use either eyed or snelled flies as your fancy happens to be since one is about as good as the other as a general proposition so far as trout fishing is concerned. For the beginner, all things considered, the snelled fly is the better one for him to use, and the only kind all anglers who fish with more than one fly should employ.

In "dry" fly-fishing the eyed fly is the only one to use if you wish to follow the "code" of the "purist" and become a "disciple."

When selecting "snelled flies" make a practice of testing every snell, first, to see that it is securely fastened to the hook, and, second, to see that the gut of the snell is free from imperfections. This will save your feelings later on when you land "the big fish" instead of loosing him.

That trout in different waters will at times take some flies more readily than others is certainly true; but this is largely due to the fact that when trout are not feeding they insist upon having a fly cast to them that is especially inviting.

I have often noticed that beginners who have had the advantage of friendship and coaching of a successful angler after acquiring the rudiments of fly-fishing, nearly

TROUT FLY-FISHING IN AMERICA

always fall into the habit of selecting for their own use the flies generally fished by their preceptor.

This is not strange, yet it is not always the best plan to follow, because it has a tendency to restrict and not enlarge those pleasures of angling which mean so much to the true sportsman.

CHAPTER VII

THE HABITS OF TROUT

It would indeed be a very wise and courageous man who would undertake to set forth in print, to any great extent, the habits of the wary trout, so I shall only attempt to set down such of them as I have had the good fortune to observe during my many years of stream and lake fishing.

Although in most waters the principal feeding periods are between the hours of five and eight in the evening and from five to nine or ten in the morning it is undoubtedly true that trout at times, no matter where found, will feed at all hours of the day and night.

This, as a rule, will apply to every day of the open season; but there are days when it is misty, or slightly rainy, overcast or cloud, with the sun obscured, that trout will apparently feed during the entire day and will constantly rise to the fly that is properly placed before them.

Another time when trout are all-day feeders is after a hard rain, when the water is somewhat discolored or roily, and is rising in both lake and stream. Trout naturally feed at this time, because food is more plentiful, being washed down from the surrounding uplands and hills by the thousand and one rivulets formed by the rain.

TROUT FLY-FISHING IN AMERICA

Usually this condition for feeding lasts for only a day, or at most for a day and a half, and when this period is over not a trout can be induced to rise to the most enticing fly cast by a master hand.

As a general proposition, on ordinary days, clear or sun shining, fly-fishing is at its poorest during the middle of the day, or, say, from eleven in the morning until three in the afternoon. Although without doubt this is a true statement and one with which nearly all anglers will agree, nevertheless during these hours I have at times, both on streams and lakes, been fortunate enough to catch many trout, some running as large as three pounds. Such occasions, and they are few, are the exceptions that only go to prove the general rule that fly-fishing for trout in the middle of the day is of little use. An exception may possibly be made for Brown Trout in shallow, clear streams when natural flies are abundant and the "dry"-fly is used.

It also proves the truth of the statement that trout "at times feed at all hours of the day" and similar experience on moonlight nights has proved to me that they also feed as well at night.

Of all fish the trout probably is more affected by its environment, so far as habits and coloration are concerned, than any other kind of fish. On this account we must expect to find the habits of trout largely governed by their habitat; that is, the trout of streams will differ in many respects, in their habits, from those found in lakes or still, deep water.

All trout found in streams, however, do not have the

TROUT FLY-FISHING IN AMERICA

same habits, because their habitat changes in every stream; so much so that it is a very conservative statement to make that in streams (not small brooks), there are at least three well-defined and different habitats of trout which govern their habits as well as their coloration.

These three environments are, the rapids, the shallows and the pools, and each one has a peculiar effect upon its inhabitants.

The trout that live in streams have a decided advantage over all other trout in that they "live and have their being" in more aerated water than trout found in still water; and this condition, as a rule, gives the stream trout more life, makes him more active, rising more snappily to the angler's fly, and striking in a readier fashion.

In addition to the best kind of water in which to live, the stream trout have the finest trout food to live upon, consisting largely of flies, bugs and insects, and this is another reason why they show more agility, size for size, than do trout which live in lakes and still water.

The stream trout which live in "The Rapids" represent, without doubt, the nearest approach to perfection of all trout life, for it is in such places that nature has given the trout every opportunity for full development.

Here it is the trout have to work hard for their food, when rising to the surface or forging ahead against the current of the stream; this keeps the trout in good condition and develops their agility to the utmost, making them "snappy" risers to the fly and hard and persistent fighters when hooked.

TROUT FLY-FISHING IN AMERICA

Such trout are the hardest to play and land, but not to strike and hook, for being in fast running water they in many cases hook or help to hook themselves.

The angler's ability is shown after the trout is hooked and "the fight" begins. And it is well for the angler to bear in mind the fact that trout as a general thing are loath to leave their habitat, knowing every snag in their domain. It behooves the angler to be alert and steady of nerve if he wishes to land his fish.

Next in order we have the trout which live most of the time in "The Shallows." They are the trout that are prone to stay under the banks, on the lower side of rocks or boulders and near hassocks, waiting for their food, either on the surface or in the water, for which they dart when it comes within eyesight with the speed of an express train and with such accuracy that it seldom gets away.

These trout, while game and "snappy" to a great degree, are not to be compared to their brothers of "The Rapids" in their agility and ability to put up such a grand struggle for life. And they do not so greatly tax the angler's strength of wrist and patience in handling them, in spite of the fact that they know all "the tricks of the trade," because their realm of action is more favorable to the angler.

Now we come to "The Pools." It is in such places that we find the largest trout, not that large trout are not caught occasionally in "The Rapids" and "The Shallows," but it is here where the large trout "most do con-

TROUT FLY-FISHING IN AMERICA

gregate," and where the angler of experience always looks to find them in number.

These large trout are not great surface feeders. At all events, if they are, their feeding must be largely done at night, for it is seldom that they rise to the flies on the surface during the daytime. This is certainly the fact so far as the Brook Trout, the *Salvelinus-fontinalis*, is concerned; but with the Brown Trout, the *Salmo-fario*, it is different, for this trout will often rise to the flies on the surface at any time of the day or night.

When large Brook Trout are persuaded to rise to the angler's fly they do so in a stately and dignified manner, and their very size when they turn to strike makes a swirl of such proportions as to thrill the heart of the most experienced of anglers.

Large trout are not quick strikers, and in order to hook these fish the angler must use great judgment in not striking too quickly, and yet he must not be a second too late or his opportunity will be lost, because it is seldom that these large trout can be induced to rise the second time the same day.

Trout that live in "Still Water," such as lakes and ponds and large slow-running streams, do not put up such a brilliant fight when hooked as do trout that are caught in ordinary streams, owing to two important conditions, which are that the water is less aërated and of higher temperature than the water of ordinary streams.

These two conditions alone have a marked tendency to make the large trout somewhat slower and the smaller

TROUT FLY-FISHING IN AMERICA

trout less "snappy" when rising to the fly, especially during the months of July and August or the hottest period of the open season.

In May, June and September the trout of "still water" are more active and rise most readily to the fly, and this is because the water at such times seldom reaches a temperature of over 40 to 55 degrees Fahrenheit.

The *Salvelinus-fontinalis* (Brook Trout) and the *Salmo-fario* (Brown Trout) when found in lakes and ponds come nearer to having the same habits than when found in any other kind of water.

Here both are to a great extent under-water or ground feeders. Necessarily so, because this is where the greatest supply of food is to be found, but they rise to flies because they are the choice morsels which their epicurean tastes most always crave.

The natural food of trout consists of minnows, almost any kind of small fish, grubs, angle-worms, nearly all living things that they can swallow, found in water or on water bottoms and under banks; flies, bugs and insects of many, but not all, kinds; and trout will also eat almost any kind of meat, vegetables and the leavings or scraps from the table.

All trout when hungry are great foragers for food. They are insistent and persistent gourmands, yet at times they are epicures, satisfied only with the most dainty food, which in trout life consists of flies, bugs and insects.

Trout are not fastidious feeders, except now and then, but they are always clean feeders, for they will not touch



THE GOLDEN TROUT (ADULT MALE) SALMO-GILBERTI

TROUT FLY-FISHING IN AMERICA

any food that is tainted or foul at any time, whether or not it be alive or dead.

The fact that trout are clean feeders establishes two other facts: namely, that their sense of smell is well developed, and that all water in which trout can live is perfectly safe for the angler to drink.

As no two trout waters are alike, the habits and the habitats of the trout must also differ in many ways; the reader therefore must not take anything that I have said about them as applying absolutely to any particular trout water, my intention being to give only a general idea of trout habits and their environments under certain conditions.

Many conditions other than the environment of trout have to do with their habits at different times in the season and in the same place, such as weather, time of day, kind of day, the condition and temperature of the water.

"No living man can say," writes a well-known angler, "when, upon unfamiliar waters, what fly will prove most alluring. The greater his experience the more tentative does he consider his first efforts."

"Every stream has its own peculiarities not only as to the most successful fly, but as to the habits of its trout as well."

My experience has been that trout, both in streams and lakes, rise most readily to the artificial fly when they have been and are feeding, and are nearly, if not quite, gorged.

Why this should be the case I have never been able to determine satisfactorily; but that it is a fact I have no

TROUT FLY-FISHING IN AMERICA

doubt, and this seems to be the belief of most experienced anglers who have fished many waters.

This peculiarity of trout has been accounted for in several ways, but the theory that appeals most to me is, that the trout having filled their bellies with food they are attracted only by flies which are to their epicurean taste the proper morsel with which to "top off" their meal. Advocates of this theory claim that the trout in this condition having eaten well are less keen of eyesight and can less readily or quickly differentiate between the real and the artificial fly, which would explain why they are such persistent risers under such conditions.

It is not at all an uncommon thing to catch trout that have only partially swallowed a small fish and at other times to have them, while being played, disgorge one and sometimes two and even three good-sized minnows; so there seems at all events some good ground for the above theory.

These gorged trout do not rise as rapidly and take the fly as quickly as those that have not fed as well, although when hooked they seem immediately to regain their natural energy, "wake up," so to speak, and put up a fight that requires all the skill of the angler to overcome.

Trout in this gorged condition are usually found in the pools of streams and lakes, although at times they are found elsewhere. A camp float or landing where the guides have been in the habit of throwing the refuse from the table is a likely spot.

It is a well-known fact that to-day trout may be rising

TROUT FLY-FISHING IN AMERICA

well, and this may also be true for the day following, but on the third day no trout are in evidence, and so far as indications go not a trout is in the section of the stream or lake you are fishing.

At such times one will frequently hear anglers exclaim, "There are no fish here!" or "Where in the devil have the trout gone? We were catching them here yesterday."

The wise angler, however, knows in most cases that the trout have not left their habitat, but are quietly resting after feeding until nature again asserts itself in the form of hunger, when the trout will once more be in evidence much to the angler's delight.

There is a condition that is found during September in the pools of lakes and streams, of large trout coming to the surface and "Rolling," not unlike the way a porpoise rolls; but this condition is not often observed, except in the waters of the Rangeley region, where year after year in certain pools it occurs regularly.

These are the Brook Trout (*Salvelinus fontinalis*), and they indulge in this particular form of amusement to the great disgust of many an experienced angler, for at such times they will rarely take the fly, irrespective of whether or not it is a natural or an artificial one.

These "Rolling" trout range in size from two to over eight pounds, and as it is close to the spawning season they are usually highly colored, the most marked coloration being on the smaller, not the larger fish.

These large fish, at this time, will not take a fly that

TROUT FLY-FISHING IN AMERICA

is on the surface of the water, therefore, in order to stand even a remote chance of making one rise to your fly, it must be fished from two to six inches below the surface.

Why these trout indulge in "Rolling," and why they will not, save in exceptional instances, rise to an angler's fly has been and still is beyond the knowledge of most men, and I for one will not hazard an opinion.

Although the habits of trout are peculiar, although they differ in every kind of trout water, although they change greatly under varying conditions in the same water, nevertheless I say to every angler, study well their habits, consider well what you observe and never get discouraged; apply such knowledge as you gain from experience, for only by so doing will you get the greatest pleasure out of angling as well as the best sport.



THE BROOK TROUT (ADULT MALE) SALVELINUS-FONTINALIS
(Showing dark or early spring coloration)

CHAPTER VIII

THE COLORATION OF TROUT

IN the matter of fly-fishing, anglers in the past have given little consideration to the subject of trout coloration, what causes it and how it is developed; and this has been due probably to their not realizing that a knowledge of this subject, if properly applied, would add materially to their success.

It is with the hope and desire that I can interest anglers, at least to some extent, in the coloration of trout that I have written this chapter, because I know from many years of experience that a knowledge of this subject often spells success where a lack of it spells failure.

The Charr, genus *Salvelinus*, has by nature greater coloration than the Trout, genus *Salmo*; the differences in coloration, both in degree and character, are occasioned by the Charr having a greater variety and quantity of certain dominant pigment colors than the Trout.

There are four well-defined degrees of coloration. They are called dark, subdued, light and brilliant, and each degree as portrayed by the different species is produced and developed by the same conditions and elements working in unison. The character of the coloration, how-

TROUT FLY-FISHING IN AMERICA

ever, depends upon the pigment colors found in each species.

Of the genus *Salvelinus*, the Brook Trout (species *fontinalis*) represents the most remarkable development in coloration, showing more marked changes than any other species of Charr.

And of the genus *Salmo*, the Rainbow Trout (species *irideus*), and the Golden Trout (species *gilberti*), probably, everything considered, represent the greatest development and changes in coloration of all the species belonging to the *Salmo* group.

As the Brook Trout undoubtedly represents the most remarkable development of all trout coloration, it is the species I have selected to illustrate the four well-defined degrees, and I can assure my readers that they truthfully do so.

Of Brook Trout coloration, William C. Harris says:

"The coloration of this charr presents curious contrasts. Some become dark and dingy as they grow old and blind; others again have been found without red spots when living side by side with their congeners of brilliant ones; and others are born albinos. The cause of a uniform black or blackish coloration in fishes living in surface streams is due to the action of the nerves of the eye on the color glands, for when the fish become blind they always assume a dark coloration; when the nerve of the eye ceases to act, the color glands lose their motive powers. Through our eyes we receive perceptions of color, shades, or tints, which are transmitted to the brain; in fishes through the same medium, the nerve of the eye, these impressions act upon the color glands, and are of course involuntary and entirely beyond the control of the fish.

"Upon dark-colored fishes living in cave-streams or under-

TROUT FLY-FISHING IN AMERICA

ground lakes, a similar cause and like effect constantly exists; the fish cannot see, for they live in perpetual night. Why trout are found in their native waters on which the glare of the sun or the subdued light of the forest gloom are constant conditions, the fish being without characteristic red spots, and now and then assuming the abnormal coloration of the albino, is a difficult matter to explain; it doubtless arises from the defective action of the nerve of the eye upon the color glands, or petals, which lie under the scales and which open and shut when under the influence of color tints conveyed to them through the delicate nerve of the eye; certain nerve fibres in such cases producing the red spots on the trout and the diseased condition of others resulting in albinos."

It may be that Mr. Harris is quite correct in his conclusions that the eye is the chief element or factor by which trout coloration is produced and likewise controlled.

While my own investigations, experiments, experience and observations have led me to entirely different conclusions as to the causes of coloration in trout, I do not wish to be understood as saying that Mr. Harris is entirely wrong simply because our opinions differ.

That the eye has some effect upon coloration is unquestionably true, but to what extent it influences coloration and controls it, is the point upon which we differ.

My study of trout coloration has been such as to make me believe that the eyesight of trout plays but little part in color development, except in the case of complete blindness, and then only in a secondary, not primary, sense. In nature it is most rare to find blind trout, and it certainly is not common to find them with impaired eyesight, although

TROUT FLY-FISHING IN AMERICA

occasionally trout are caught having only one good eye, the other one in some way having been injured or lost.

As between normal eyesight and blindness, the two extreme conditions, coloration is indirectly influenced by sight, but as to the intermediate stages little or no effect is apparently produced as a general proposition; at all events not as far as I am able to discover.

The large majority of all trout have normal eyesight, some have one defective eye and a very few are afflicted with partial or complete blindness. Trout that are truly blind, however, are very short-lived, and specimens of such trout are difficult to obtain. They are very short-lived, because it is impossible for them to find sufficient food upon which to exist, and such fish do have dark coloration.

The dark coloration, however, in my judgment, is not due to loss of sight or blindness, but to other causes, the controlling and primary one being light.

The blind trout is an "under-surface" feeder, so much so, that it can be properly called a "ground feeder," locating its limited supply of food very largely by the sense of smell. It follows, then, that the blind trout necessarily lives its short life in the deepest water of its habitat, and is poorly nourished. I have found that it is due to these conditions that blind trout take on a subdued or dark coloration and not to the loss of sight.

Any abnormal coloration in trout is undoubtedly due to peculiar conditions in each individual case, and they come either from external or internal sources or both,

TROUT FLY-FISHING IN AMERICA

which sources control the food and pigment supply and directly affect the action of the nerves, glands and pigment cells. As abnormal coloration in trout, irrespective of the species, is the great exception and not the rule, it would seem as if, when considering the subject of coloration, such conditions might fairly be eliminated as having little material bearing upon the general subject.

The coloration of trout in the first instance, that is the characteristic coloring of each species and sub-species, depends upon the dominant pigment colors which are natural to them. Under certain fixed conditions each separate and distinct species and sub-species of trout will develop to all practical purposes the same general coloration. While under the same conditions two different species or sub-species will develop entirely different coloration, and this is due to the quality and quantity of the different pigment colors natural to each.

Change the water conditions and the coloration will change; change the character of the food and the coloration will change; change the character of the water bottom or the degree and character of light and the coloration will change. In other words, a marked change in any one of the elements that produce and make effective the coloration of trout will change that coloration.

One of the most marked illustrations of how coloration changes is found in the so-called sea-run species of trout, such as the Steelhead and the Brook Trout.

TROUT FLY-FISHING IN AMERICA

Coloration of Trout

The coloration of trout is due to a number of separate and distinct factors and elements, each one of which performs some special function. These factors are naturally divided into two classes—internal and external.

Those which influence coloration from within the fish are called internal and those which influence coloration from without are called external.

- | | |
|--------------------|------------------------------------|
| Internal Factors: | (1) Position of the pigment cells. |
| | (2) Activity of the pigment cells. |
| | (3) Kind or character of food. |
| Internal Elements: | (1) The breeding season. |
| | (2) The age of trout. |
| External Factors: | (1) Character of the water bottom. |
| | (2) Kind or degree of light. |
| External Elements: | (1) Kind of day. |
| | (2) Condition of the water. |
| | (3) Season of the year. |

The coloration of trout is made possible by the presence of innumerable pigment cells which are located at different depths of the skin and on or near the surface of the scales.

These cells, due to their nature and position, are rendered extremely sensitive and therefore are susceptible to rapid changes which make effective the different pigment colors.

The changes in coloration are caused by conditions which influence the activity of the pigment cells, thus increasing or decreasing the accumulation of the numerous



THE BROOK TROUT (ADULT MALE) SALVELINUS-FONTINALIS
(Showing subdued or early summer coloration)

TROUT FLY-FISHING IN AMERICA

pigment colors at their surface due to contraction or expansion of the cells.

BEARING OF FACTORS UPON EACH OTHER

- (1) Position of the pigment cells.
- (2) Activity of the pigment cells:
 - Character of the water bottom.
 - Kind or degree of light.
 - The breeding season.
 - The age of trout.
- (3) Kind or character of food.
- (4) Character of the water bottom.
- (5) Kind or degree of light:
 - Kind of day.
 - Condition of the water.
 - Season of the year.

The Functions of the Five Factors

Position of the pigment cells: (<i>Internal factor</i>)	{ The function of this factor is to make marked coloration possible, which is due to the location of the pigment cells in the skin and on or near the surface of the scales.
Activity of the pigment cells: (<i>Internal factor</i>)	{ The function of this factor is to make the many and rapid changes of coloration take place and it is influenced by two external factors and two internal elements.
Kind or character of food: (<i>Internal factor</i>)	{ The function of this factor is to supply both the quality and quantity of the various pigments producing coloration.

TROUT FLY-FISHING IN AMERICA

Character of the water bottom: (<i>External factor</i>)	{ The function of this factor is effectively and directly to influence at all times the many changes of coloration that take place.
Kind or degree of light: (<i>External factor</i>)	{ The function of this factor is to control the coloration of trout through its influence upon the water and the water bottom.

The *position of the pigment cells* is the factor in trout coloration which renders the cells sensitive and susceptible to the influences which make it possible for the many changes in coloration to take place.

The pigment cells are located in the skin and on or near the surface of the scales, and this holds true with all species and sub-species of trout wherever found.

The number of pigment cells, their size and the kind of pigment colors, however, vary greatly with the different species which, in a large measure, accounts for their marked differences in coloration.

The silvery and golden hues of coloration are made so very pronounced because the pigment colors producing them are contained in cells located on or near the surface of the scales and therefore are more easily and quickly influenced than are the skin cells.

Bright, white sandy bottoms under bright light, with clear, shallow water, bring out to the greatest extent the silvery sheen on trout, while bright, yellowish sandy bottoms under the same conditions of water and light bring out to the fullest extent the golden luster.

TROUT FLY-FISHING IN AMERICA

The most vivid coloration of trout, on the other hand, is produced by the darker and more brilliant pigment colors which are contained in the cells located in the skin under the scales.

The *activity of the pigment cells* is the factor which causes the many and rapid changes of coloration to take place.

*The character of the water bottom,
The kind or degree of light,
The breeding season, and,
The age of trout,*

all play important parts in influencing *activity* by causing expansion and contraction of the pigment cells, which in their turn increase or decrease the accumulation of the pigment colors in the cells.

The pigment cells, so far as coloration is concerned, are rendered *most active* when subjected to the influences of a light water bottom, bright light, clear and shallow water; they are rendered *least active* when subjected to the influences of a dark water bottom, dull light, muddy and deep water.

The activity of the pigment cells remains relatively the same as a general proposition throughout all seasons so far as the influence of these conditions alone is concerned.

The activity of the pigment cells is still further influenced and intensified by the breeding season because it is during this period that the nervous system of trout is most sensitive.

The age of trout also exerts some influence upon the

TROUT FLY-FISHING IN AMERICA

activity of the pigment cells, but judging from my own investigations, probably less than any other single element.

Mature trout have the best coloring; old trout the least coloring; and young trout vary greatly in their coloring but seldom, if ever, are they as highly colored as trout of mature age.

The *kind or character of food* eaten by trout is the factor which is directly responsible for the quality and quantity of the pigment colors developed, and which produces the marked coloration of the different species and sub-species.

All species and sub-species of trout (genus *Salmo* and genus *Salvelinus*) have their own peculiar colorings, which are, as a rule, distinctive. Although conditions increase and diminish the colorings of each, their marked distinctive coloration nearly always remains the same.

Nature in the first instance determines what the coloring of each species of trout shall be by the placement of the pigment cells, their size and number, as well as the dominant pigment colors, which are to be developed both in quality and quantity.

The effect upon coloration of the different kinds of food eaten by all species of trout seems to remain practically the same: that is, shrimp and all crustacea produce and develop light-colored pigments; flies and insects, subdued colored pigments; and worms, minnows and flesh foods of all kinds, dark and rich-colored pigments.

But these different trout foods do not produce and de-

TROUT FLY-FISHING IN AMERICA

velop the same pigment colors in all the different species of trout, for if such were the case there would be no such thing as any distinctive coloration of the various species of trout.

The *character of the water bottom* is the factor, next to light, which is the one most directly responsible for the many changes that take place in the coloration of trout, and this is due to its direct and immediate influence upon the pigment cells.

There are three well-defined and common water bottoms which differ very markedly from each other. They are known as the light bottom, the neutral bottom, and the dark bottom.

Although these different water bottoms exert different influences upon the coloration of trout under the same conditions of light, nevertheless the greatest effectiveness of the different water bottoms is increased or diminished primarily by the kind or degree of light which prevails.

A *light water bottom* is one that is composed of sand or gravel, or both, and has a bright appearance; a *neutral water bottom* is one that is composed of small rocks with a mixed soil or clay and has a subdued appearance which leans neither to light nor dark, being gray or leadeny in color; a *dark water bottom* is one that is composed largely of mud or very dark soils and has a dark brown or black appearance. Large rocks or boulders are found on all kinds of water bottoms while water vegetation is found mostly on neutral and dark water bottoms, although in

TROUT FLY-FISHING IN AMERICA

some places light water bottoms have grass or weeds, but they are, as a rule, widely separated.

Light water bottoms produce bright coloration.

Neutral water bottoms produce subdued coloration.

Dark water bottoms produce dark coloration.

A light water bottom is always a light water bottom, and a dark water bottom is always a dark water bottom, but the effectiveness of each bottom depends upon these five conditions, i. e.:

The kind or degree of light,
The color of the water,
The depth of the water,
The temperature of the water,
The season of the year.

As white reflects and black absorbs color, it follows, therefore, that the brighter the light the more effective must become the light water bottom and the duller the light the more effective must become the dark water bottom. It also follows that a neutral water bottom is the one least affected by the different conditions and degree of light.

The *kind or degree of light*, after all, is the factor which controls the coloration of trout and which makes it possible for the other factors to perform their respective functions. Because, if it were not for the fact that some degree of light exists nearly everywhere and at all times, trout, as well as all species of fish, would be without coloration, having simply a very dark appearance, such as is the



THE BROOK TROUT (ADULT MALE) *SALVELINUS-FONTINALIS*
(Showing bright or early fall coloration)

TROUT FLY-FISHING IN AMERICA

case with fish that are found in caves where but little light ever enters.

Therefore the effectiveness of light so far as kind or degree is concerned must necessarily depend upon three external elements:

The kind of day,
The condition of the water,
The season of the year.

The best or greatest coloration can only be produced when the highest degree of light is made most effective upon a light water bottom, and the poorest and least coloration when the smallest degree of light is made ineffective upon a dark water bottom.

Between these two extremes we have the normal or average coloration of trout except just before and during the breeding or spawning season.

Bearing of Factors Upon Coloration

Position of the Pigment Cells (*Internal Factor*)

Pigment cells: { Skin cells contain the dark pigment colors.
 { Scale cells contain the light pigment colors.

Activity of the Pigment Cells (*Internal Factor*)

Character of the water bottom: { Light bottom, bright coloration.
 { Neutral bottom, subdued coloration.
(*External factor*) { Dark bottom, dark coloration.

Kind or degree of light: { Bright light, bright coloration.
 { Subdued light, subdued coloration.
(*External factor*) { Dull light, dark coloration.

TROUT FLY-FISHING IN AMERICA

Breeding season: (<i>Internal element</i>) Applying only to Light Bottoms:	{	Light bottom, Bright light, Shallow water,	}	Highest coloration.
		Clear water,		
		Light bottom,		
	{	Subdued light,	}	Ordinary coloration.
		Medium water,		
		Roily water,		
	{	Light bottom,	}	Poorest coloration.
		Dull light,		
		Deep water, Muddy water,		

Age of trout: (<i>Internal element</i>)	{	Mature trout, greatest coloration.
		Young trout, ordinary coloration.
		Old trout, least coloration.

Kind or character of food (*Internal Factor*)

Foods:	{	Shrimps and other crustacea: Produce and develop bright pigment colors.
		Flies and Insects: Produce and develop subdued pigment colors.
		Worms, Minnows, etc. (all flesh foods): Produce and develop dark and rich-toned pigment colors.

Character of the water bottom (*External Factor*)

Light bottom:	{	Sandy,	}	Bright coloration.
		Gravelly,		
		Yellowish,		
Neutral bottom:	{	Grayish,	}	Subdued coloration.
		Rocky, with mixed soils,		
Dark bottom:	{	Muddy,	}	Dark coloration.
		Dark Brown,		
		Black,		

TROUT FLY-FISHING IN AMERICA

Kind or degree of light (*External Factor*)

Kind of day:
(*External element*) { Clear day—Sunshine; bright light.
 { Dull day—Haziness; subdued light.
 { Dark day—Cloudiness; dull light.

Condition of the water:
(*External element*) { *Color:* { Clear water—Good medium.
 { Roily water—Fair medium.
 { Muddy water—Poor medium.
 { *Surface:* { Calm—Best condition.
 { Ripples—Fair condition.
 { Waves—Poor condition.
 { *Depth:* { Shallow water—1 to 4 feet; best condition.
 { Medium water—4 to 8 feet; good condition.
 { Deep water—8 to 16 feet; fair condition.
 { *Temp.:* { Medium—40°-55°; good condition.
 { Low—Under 40°; fair condition.
 { High—Over 55°; poor condition.

Season of the year:
(*External element*) { Late Spring,
 { Summer,
 { Early Fall, } Best season.
 { Late Fall,
 { Early Spring, } Fair season.
 { Winter—Poor season.

A knowledge of trout coloration materially aids the fly-fishing angler in becoming a successful one. And besides this it gives him a constantly increasing sense of pleasure to apply this knowledge as it is gained and enlarged from season to season.

It is from the coloration of trout that the observing angler can tell much about their movements at different

TROUT FLY-FISHING IN AMERICA

periods of the open season, such as where and when trout are most likely to be found and caught in the many different kinds of trout waters.

Although all species of trout vary greatly in their degree of coloration, nevertheless there are some marked color characteristics which the angler can take at the different seasons of the year as a real basis from which to draw proper deductions of their movements.

During the twelve months of the year trout can be said to have four well-defined general habitats which are governed by the different seasons and very effectively influence their coloration. They are:

- | | |
|----------------------------|---|
| The Winter Season Habitat: | { November 1 to April 1—A period of five months, when coloration is dark after the spawning season is over. |
| The Spring Season Habitat: | { April 1 to June 15—A period of two and one-half months of dull or subdued coloration. |
| The Summer Season Habitat: | { June 15 to August 15—A period of two months, when the coloration is bright. |
| The Fall Season Habitat: | { August 15 to November 1—A period of two and one-half months when brilliant coloration prevails. |

It should be borne in mind that the duration of the different periods as given varies somewhat in different localities and different waters, but they are sufficiently accurate

TROUT FLY-FISHING IN AMERICA

to enable the angler during the fishing season to draw, almost anywhere, proper deductions from the coloration as to where trout are likely to be found.

The Winter Season Habitat:

The winter season habitat, as a rule, is in the very deepest water of both lakes and streams where the bottom is dark, soft and muddy. Here it is that trout, found in fresh water, hibernate during the greater portion of the closed and cold season. They burrow in the soft muddy bottom to a greater or less extent and remain there for a considerable length of time. While this period lasts trout are not actually torpid, as some animals become during the cold months, but they are in seclusion or close quarters and eat but little food.

It is these conditions, lasting as they do for several months, which produce the dark and poor coloration and render the pigment cells inactive and slow to resume their normal functions when a change in the season takes place.

The Spring Season Habitat:

The spring season habitat is in shallow and medium depth of water alongshore and on shoals and bars. It is in the early spring after the ice goes out of the streams and lakes and the sun begins to warm up the water that trout leave their winter quarters, move about and seek the shallow and warmest places.

The angler should remember that at no other period of

TROUT FLY-FISHING IN AMERICA

the year are the changes in trout coloration so sluggish and the time required for the changes to take place so long and uncertain as in the early spring.

At this time, when trout are caught which have a dark coloration, the angler can correctly surmise that such fish have within a very few days worked out of deep water.

On the other hand, if the trout have only a dull or subdued coloration he can correctly assume that such fish have been in shallow water for at least a week if not longer.

But when quite bright colored trout are caught the angler can be certain that such trout have been in shallow water with a light bottom for some time, and that they have "finished their spring cleaning" by scouring themselves on gravelly and sandy bottoms.

In lakes and fairly still water of streams trout usually stay in or near the shallow water they first seek in the spring after coming out of deep water until they have finished scouring themselves, when, as a rule, they will "school," move to other shallow places, and by the middle of June settle in some good feeding place for the summer habitat.

The Summer Season Habitat:

The summer season habitat is in medium and deep water, but not as deep water as the winter habitat. During this season trout are not, as a general thing, willing risers to the real or artificial fly, except on some streams that are largely stocked with Brown Trout. This is be-

TROUT FLY-FISHING IN AMERICA

cause the temperature of the shallow water is so high that trout seek the deep and cooler water and feed almost entirely upon under-surface food.

Trout, however, can be caught during this season, but the angler must know when and where to cast his fly, and he must be, except on rare occasions, satisfied with only a few fish to his credit because the "proper time" to fish is very limited.

During the summer period trout seem to be more shy than at any other time of the year, and I am satisfied that this is due to the fact that the brightest light then prevails and on this account shadows are more pronounced, probably scaring trout more quickly than any other one condition.

It follows, then, that the time to fish is in the very early morning or the late evening when the light is the poorest. And it is at such times that other conditions are more favorable; for instance, the temperature of the water is the lowest in the early morning and next lowest in the late evening. Then again, trout during the summer season will only go into shallow water to feed at places where the water is coolest. On this account it is necessary for the angler to select such a place to fish.

It is also necessary that the place selected to fish in addition to having cool water be one where trout can find food.

Therefore in order to catch trout in the summer season with any certainty the angler must fish when the light is

TROUT FLY-FISHING IN AMERICA

poor, in water that is cool and in such places where trout can find food.

There are just two such places in lakes and large streams and they are where brooks and small streams enter the larger body of water and at or near where springs are to be found.

The angler who will fish in such places can, with patience, usually catch trout, and sometimes those of fair size are to be taken late in the evening.

As trout in lakes and still water always seek cool and aerated water in which to feed, especially on flies and insects, as night approaches, the angler will make no mistake if he sticks to such places to the exclusion of all others while this period lasts.

The Fall Season Habitat:

The fall season habitat, except in extreme hot weather, is in medium and shallow water where there is a light or lightish bottom. It is during this period that the coloration of trout is at its best, and all of the conditions affecting coloration seem to unite in bringing about this result.

The one best time for fly-fishing on both lakes and streams, everything considered, is during the month of September. Nature seems to have selected this month as the one of all others when trout of all species should be in the finest physical condition and have the most brilliant coloring, and this is probably due to the fact that it is just before the breeding season.

Trout during the fall season, before spawning takes



THE BROOK TROUT (ADULT MALE) *SALVELINUS-FONTINALIS*
(Showing brilliant or breeding season coloration)

TROUT FLY-FISHING IN AMERICA

place, often travel from place to place in "schools" and in lakes and large streams there will be seen not infrequently a "school" of nothing but male trout and another "school" of nothing but female trout. But this separating of the males and females I have never observed except at this particular period.

Remarks About Trout Food:

While it is true that the food of trout is responsible for the different pigment colors developed, it does not follow that trout feeding exclusively on worms and minnows when confined in water having a light bottom will be dark in color. Neither will trout that feed solely on shrimp when confined in water having a dark bottom be bright in color. But the food eaten in each case will affect the degree of coloration; that is, the different foods will tend to, and in most cases do, prevent the full effectiveness of the water bottom upon coloration.

The Effect of Different Water Bottoms:

The effect of the water bottom upon the coloration of trout under usual and ordinary conditions is most marked and rapid. During the entire open or fishing season, except the early part in the spring, changes in the coloration take place in a few hours, and under most conditions completely so within twenty to thirty hours.

Experiments have been made to ascertain the effect of the water bottom upon the coloration of trout and also for

TROUT FLY-FISHING IN AMERICA

the purpose of finding out in what time complete changes in coloration will take place when trout are confined over different water bottoms.

For example: A small brook was screened in three different places; the separate sections were all about ten feet long, from three to four feet wide and about twenty to twenty-four inches deep. Section 1 had a bright, sandy and gravelly bottom; section 2 had a neutral bottom with overhanging bushes; section 3 had a dark, muddy bottom with slightly overhanging banks. Three Brook Trout (*Salvelinus fontinalis*), all about ten inches long, were caught in a pool an eighth of a mile from the screened sections, and were transferred to them, one trout being placed in each section.

Within two hours these trout all began to change color and take on the coloration characteristic of the water bottom of their new habitat, and in twenty-four hours a complete change in coloration of the three trout had taken place. During the next twenty-four hours no further change was detected in any of the trout.

Next, the bright trout in section 1 and the dark trout in section 3 were carefully netted, and each was placed in the other section with the result that a complete change in their coloration took place within the following twenty-four hours. The bright trout became dark and the dark trout became bright, but the trout in section 1 changed quicker than the trout in section 3 by about two hours.

SECTION OF BROOK



PLAN VIEW OF BROOK



THREE DIFFERENT WATER BOTTOMS

TROUT FLY-FISHING IN AMERICA

Then the trout in section 2 was placed in section 1 and became fully changed in coloration in fifteen hours.

During this experiment no account was taken of the character of the food eaten by the trout, but as this test was made in August probably the food consisted largely of flies and insects.

This test was made under natural conditions, but in order to go further and fully determine the effect of different colored water bottoms upon the coloration of trout other and unnatural conditions were substituted.

Three trout were taken, as in the other case, of about the same size, and placed in three glass tanks. One tank rested upon a black bottom, and the sides of the tank were covered with a dead black cloth. One tank rested upon a white bottom, and the sides of the tank were covered with a dead white cloth. One tank rested upon a yellowish or brownish-yellow bottom, and nothing was placed on the sides of the tank. The trout were fed on worms and liver. These tanks were in a room, and resting on large tables, and the curtains to the windows were pulled down. The ceiling of the room was of a drab color.

These trout were handled the same as those in the brook experiment, and the results obtained were practically identical, except that none of the different colorations were quite as pronounced, and it took thirty to forty hours for a complete change to take place.

As illustrating the rapidity with which the coloration of trout will take place, I would say that I have on several occasions, early in the spring, while fishing small brooks

TROUT FLY-FISHING IN AMERICA

in Massachusetts with worms, caught trout that were almost as black as your shoe and without a single red spot showing. Such trout when dead or alive have, in five minutes, while being suspended from a line, changed from the very dark color to a subdued color, having the bright red spots well defined.

Again I say to anglers, give this subject of coloration some consideration. You will find it interesting. You will also find it a great help when fishing new waters, and on old waters it may make the difference between success and failure, especially at certain seasons of the year when fishing is allowed.

CHAPTER IX

THE SIGHT AND HEARING OF TROUT

TO JUST what extent the eyesight of trout is developed has indeed been a much mooted question in the past and one that, as yet, can hardly be said to be fully and satisfactorily determined in the minds of all anglers.

There are, however, many circumstances and conditions pertaining to the sight of trout which occur so frequently in all kinds of fishable waters that they certainly can be taken as a basis of logical reasoning as to whether or not trout are near-sighted or are keen-sighted, and can distinguish one color from another.

From time to time for many years anglers have made experiments trying to obtain, if possible, some definite information about the eyesight of trout. No real or satisfactory results, however, have been forthcoming as far as I can learn, and, to my mind, never can be from the very nature of the methods employed.

In these experiments the eyesight of trout has been judged by and compared to the eyesight of the angler, and such conclusions as have been drawn from the data obtained must necessarily be erroneous on that account.

The marked differences existing between the eye of

TROUT FLY-FISHING IN AMERICA

man and of trout are such that no comparison of them can be made which will at all aid in determining whether or not trout have keen sight and distinguish color or are near-sighted and cannot do so.

A trout's eye is without eyelids. Its anterior surface (the cornea) is flat, or nearly so, and is covered with the skin of the head, which, over the surface of the eye, is transparent. The eye on this account can never be closed. How then can such an eye be properly compared to the human eye which has eyelids; a convex anterior surface and a much more tender skin or membrane covering, which is so sensitive that the sight is blurred and dimmed when submerged in water?

The human eye was designed to perform the function of seeing objects through the medium of the atmosphere, while the eye of the trout was designed to perform the function of seeing objects through the denser medium of the water, and on that account each eye has its own peculiar construction and consequent limitations of sight when subjected to unnatural conditions.

After many years of study and observation of this subject as an angler I can unreservedly say that all trout have, to my mind, keen vision and can distinguish and discriminate between different colors. The extent of their vision and their ability to distinguish colors depend solely upon the kind of water in which they are found, the position of the object to be seen, the kind of weather conditions and the season of the year.

TROUT FLY-FISHING IN AMERICA

THE EYESIGHT OF TROUT

For instance, in clear streams that are shallow and not too fast running, be they large or small, the eyesight of trout is at its best, and their vision is remarkably keen. On the other hand, in fast running streams, where necessarily the surface of the water is considerably fretted, also in deep streams which are fast running and in streams, be they shallow or deep, which are discolored or roily, the vision of trout is less effective, due entirely to these adverse conditions.

Trout are only made less keen of vision when adverse conditions prevail over which they have no control, and this is equally true when the normal eyesight of mankind is considered.

Changed conditions produce different results with every creature that lives and has eyesight.

The angler cannot see as well and as clearly under water as he can when out of it, and it is undoubtedly as true that trout can see better in the water than when they are out of it. Therefore, it follows that each must have its natural element in order to obtain its normal and best vision.

How often has the angler, walking along a small stream, seen trout lying under its banks or behind a boulder or hassock; but has it not been after his eye has become accustomed to looking through the water that he is able to see them?

If the angler on the bank remains motionless and does

TROUT FLY-FISHING IN AMERICA

not cast a shadow on the water, how often is it the trout will observe him and dart away?

This has not only been my experience but that of many anglers all over this country and every other country where trout are caught.

Is it not then a fair deduction to make that the eyesight of the angler and that of the trout are naturally less keen when the normal conditions are reversed, the angler looking through the water and the trout through the atmosphere? And is it not the movement of the angler or the trout that first focuses the vision of each upon the other?

We have been speaking of trout found in ordinary stream fishing. Now let us consider the trout found in lakes and large, deep and slow-running streams, and see what their eyesight is in such places.

After the spawning season is over, trout gradually work down the smaller streams, from the head waters, where the breeding or spawning grounds mostly are located, to the deep waters of the larger streams and lakes, where they remain during the winter months.

When the open season begins in the spring, and it varies in different States, the trout are just beginning to move about actively and seek the shallow water as the days grow warmer.

It is at such time that the eyesight of these trout is the poorest and least keen, owing to the fact that they have been for a considerable length of time in deep, dark water under ice. This condition has had its effect upon the sight



THE BROWN TROUT (ADULT MALE) SALMO-FARIO

TROUT FLY-FISHING IN AMERICA

of the trout, as the eyes have become accustomed to a subdued light, which has made them slow to resume their normal vision. At such times the angler should use flies of a much larger size than he would ordinarily use later in the season. For instance, where trout have been under ice for some time, flies tied on Number 4 and 6 hooks are the best size, and the ones most likely to prove successful, while flies tied on 8, 10 and 12 hooks will prove of little use.

This condition lasts for from twenty to thirty days, depending somewhat upon local conditions, and how long the trout have been under the ice, also whether it is a warm or cold spring season.

The eyesight of the trout grows nearer to normal each day (when the ice is gone) after the first two weeks, but in some waters they do not seem to regain their full normal vision until the last of June. This, however, is the exception, not the rule.

For years I have fished the trout waters of New York and the New England States early in the spring or just as soon as the open season for fishing has begun, and I have found these conditions I have mentioned to be the same year by year, so that personally I believe them to be a fact, not a fancy or theory.

Each season for many years I have made it a practice to start fly-fishing with small flies, Numbers 10 and 12, such as I use later in the season, but never have I had any success with these flies on waters that have been ice-covered for many weeks or on streams that have large, deep

TROUT FLY-FISHING IN AMERICA

pools where the water moves slowly. After giving the small flies a fair "try out" of several hours, and in some cases whole days without having any success, I have then changed to the larger flies, Numbers 4 and 6, and almost immediately good results have followed on precisely the same waters.

I have also at times reversed the order, using large flies first with success, then changing to small flies with no success at all, . . . not even a small trout to my credit.

A circumstance which many anglers no doubt have observed, is a large trout chasing and trying to catch a small trout that has been hooked, and is being played by the angler.

At such times the large trout is apparently very bold, and frequently comes to within three feet of the angler if he be wading a stream or within two feet of a boat or canoe, if he is fishing on a lake. This, however, does not prove anything about the eyesight of the trout other than the eyes of the trout were focused upon the small hooked fish and not upon the angler. And as proof of this statement I will say that if any angler, under either of the conditions cited, will simply move his left and free hand over the water about a foot the large trout will immediately and quickly make for deep water, indicating that up to that time the trout had not seen the angler.

As some proof, at all events, that many trout are keen of vision, I will cite an instance that happened to me at Kennebago Lake, Maine, during the season of 1912.

A large trout, weighing three and one-half pounds,

TROUT FLY-FISHING IN AMERICA

saw my fly (a silver spot) light upon the water thirty feet away from where he was lying under a bank, and darted for it like a streak of lightning. And this performance was in plain sight. Certainly this trout had keen vision, otherwise how could it have seen the fly light upon the water at any such distance as thirty feet, and this particular thirty feet was a measured distance made immediately after landing the trout.

Judging from what many experienced anglers have to say upon this subject, as well as from what I have observed and experienced year by year, it seems reasonable to assume, at least so far as the angler is concerned, that trout really have keen eyesight, and that it is only made less keen by circumstances and conditions.

Doctor James A. Henshall aptly says:

"My opinion, founded upon numerous experiments, is that fishes see and hear as well, in and through the medium of the water, for all practical purposes, as the angler does through the medium of the atmosphere; the clearer and more rarefied the medium, the clearer and greater the range of vision in both instances."

Another authority, Mr. William C. Harris, says:

"There is no question, however, as to the high development of the senses of sight, taste and hearing in the trout."

As to whether or not trout can distinguish between different colors, I believe at this time but few anglers are of the opinion that they cannot. Anglers of wide experience should know full well that trout can distinguish

TROUT FLY-FISHING IN AMERICA

color as readily as they can the artificial from the real fly after it is taken, although an entirely different sense is brought into play.

What would be the object of having the many brilliantly colored flies in addition to the white as well as the black ones if the trout were color-blind ?

Surely, if color played no part in fishing with the artificial fly, there would hardly be any good and sufficient reason for the manufacturers of such flies making an assortment, in many instances, of over two hundred different patterns.

If trout were color-blind then one fly would be just as good and just as successful as another, the question of size being the only one to consider, and anglers would only have to carry one pattern. But where will you find the angler who is content to have but one pattern or one particular fly in his book when going trout fishing?

I agree with Doctor James A. Henshall when he says:

"It is often the case that those anglers who are most strenuous in their theory that fish are near-sighted, stultify themselves by carrying a large and most varied assortment of artificial flies, of all shapes and colors in order to meet the 'fastidious taste' of the fish, that often refuse one pattern or color and rise eagerly to another, which could not be the fact were they near-sighted, as they believe.

"We can surmise that fish are not color-blind, otherwise there would be no reason for the beautiful colors that many male fishes assume during the breeding season. Fishes are possessed of keen vision, and possibly have the faculty of distinguishing colors in a fly, even when on a fretted surface, where to our eyes they are very indistinct, and where even the form cannot be well defined."

TROUT FLY-FISHING IN AMERICA

After all, is not the question of normal eyesight of angler or trout one which is governed solely by conditions and their "viewpoint" through the natural medium of each?

THE HEARING OF TROUT

That trout have the sense of hearing, or, at all events, a sense that is an equivalent, and that it is fairly well developed is probably true, but their manner or means of hearing is totally unlike that of mankind.

Fish have an internal, but no external, ear, and it is remarkably delicate in construction. On this account sound reaches the ear of a trout through the water due to vibrations caused by concussion and the concussion is produced from jars or shocks, either upon or in the water and from the earth in close proximity.

Scientists tell us that fish are incapable of hearing sound produced in the air, but to what extent this is really true is a question, in view of the number of instances that would tend to discredit this statement.

Water as a medium of sound is very dense, while air, on the other hand, is not so, and the ear of a trout is fashioned to receive sound through this dense medium just as the human ear is fashioned to receive sound through the medium of the air, which is less dense.

Therefore, it is a safe deduction to make that trout can hear better in the water than they can out of it, and that

TROUT FLY-FISHING IN AMERICA

the human ear can hear much better out of the water than it can when in or under it.

The reason being that both ears, so differently constructed, were so constructed for a well-defined purpose; namely, one for hearing sound in the water and the other for hearing sound in the air; but the capacity for hearing possessed by the trout must not be judged entirely by the hearing possessed by mankind, for to do so would be manifestly wrong.

That trout can hear sound produced in the air within such distances of the water as the air will transmit the sound waves to the water and the water will in turn take up and carry them to the trout, is undoubtedly true, provided always the trout is within the zone affected by the sound waves or vibrations produced in the water.

The degree of sound transmitted, however, is another question which is necessarily governed by distance and the quality and quantity of sound produced in the first instance.

From the practical standpoint of the angler it is a safe statement to make, that trout are not frightened or disturbed by, and do not hear, people talking when in a boat or walking along the bank of a stream, because the sound of the voice cannot possibly reach them, even if they are but a few feet from the water.

This is due to the fact that the vibrations of the air, in the form of sound waves, are not so directed as to strike the surface of the water at such an angle as effectively to

TROUT FLY-FISHING IN AMERICA

produce sound waves through the dense medium of the water.

That trout can hear the human voice under certain conditions is quite true, such as when a person leans over the side of a boat and speaks sharply and quickly with the face parallel with the surface of the water, then trout, if within the sound-affected zone, will hear and become frightened and dart for deeper water.

This is a forced condition and one seldom, if ever, encountered by anglers, or any one else, for that matter.

By what means sound is conveyed to the internal ear of the trout, I must confess I do not know, but I have a very strong leaning to the theory that sound is transmitted to the ear of the trout through the nerves that are united to the base of each scale which leads to a large ganglion, which is located on the forehead below the eyes, and which in turn is connected by nerves to the internal ear.

At all events, I am fully satisfied that trout hear, and hear very well, under natural conditions, whatever the means are by which this is accomplished.

This is what William C. Harris has to say:

"This sense of hearing in all species of fish is a matter of concussion on the surface of the water. Sit motionless in a boat, and you may sing 'I Won't Go Home 'Til Morning,' or any other gala song, to the extreme high limit of your voices, and the trout or any other fish will remain undisturbed, but scratch your toe upon the bottom of the boat and, presto! the pool is as dead and barren as a burned prairie. Approach a pool from over the bank with a careless tread, and when you reach it the trout are gone, none know where.

TROUT FLY-FISHING IN AMERICA

"Crawl to the pool noiselessly on all-fours and you will find your trout reposing without fear of danger. The avoidance of concussion is the great factor on a trout pool or stream in getting a satisfactory creel. Slide, rather than step, in wading, and your success will be greater."

CHAPTER X

A FEW WORDS ABOUT CASTING THE FLY

THERE are a number of different ways of casting the fly when fly-fishing. Some of the principal ones are the

Overhead or Overhanded Cast,
Underhand or Underhanded Cast,
Wing or Horizontal Cast, and the Switch Cast.

As the Overhead Cast and the Wing or Horizontal Cast are the ones most generally and effectively employed in this country no other casts will be considered. The principle of both of these casts is the same, the only difference between them being that the Overhead Cast is made over the head of the angler as the name would at once suggest and the Wing Cast is made horizontally to the side of the angler.

The Wing Cast or Horizontal Cast is used largely on streams when the Overhead Cast cannot be employed successfully owing to trees, bushes, high banks, large rocks, etc., being so situated as to make the cast unsafe because of the danger of getting the line hung up and the liability of breaking or injuring the rod.

In fly-fishing the casting of a line, leader and fly con-

TROUT FLY-FISHING IN AMERICA

sists of two separate and distinct movements called the "forward" and "backward" cast.

The "backward" cast is made by a backward movement of the rod toward the caster and with sufficient force to send the line with the leader and fly straight out behind him.

The "forward" cast is made after the "backward" cast has been completed by bringing the rod to the front of the caster with a wrist movement of sufficient force to carry the line, leader and fly forward of the caster such distance as the length of line will permit.

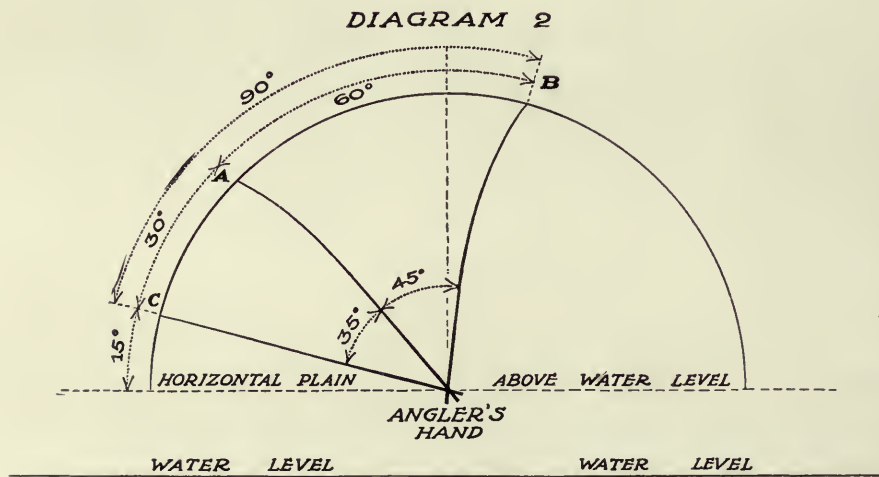
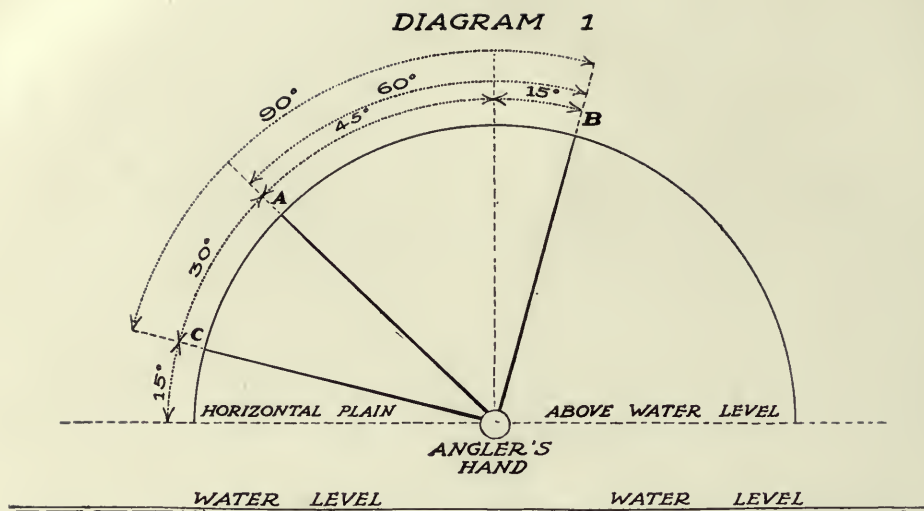
The "forward" cast is the one that places the fly upon the water in front of the caster and the "backward" cast is the one that is made after the fly has been played by retrieving the fly with a backward movement of the rod, which makes another "forward" cast possible.

The principle of casting involved in fly-fishing, and the physical elements that are brought into play in casting, can be well illustrated by comparing the rod to a "balanced" railroad crossing gate.

The fulcrum of the gate, that is, the pivot upon which the gate swings, represents the hand of the angler. The long arm of the gate represents the long or tip end of the rod, and the short arm of the gate represents the short or reel end of the rod.

The fulcrum of the gate is a fixed point as should be the caster's hand, which is the fulcrum of the rod.

The long and short ends of the rod, either side of the caster's hand, should balance when the tip of the rod is



DIAGRAMS SHOWING POSITION OF A ROD WHEN MAKING THE
"FORWARD" AND "BACKWARD" CASTS

DIAGRAM 1:

Diagram 1 shows the position of the rod at the beginning of the "backward" cast, as indicated at *A*, and the position of the rod at the ending of the "backward" cast, as indicated at *B*.

B also indicates the position of the rod at the beginning of the "forward" cast, and *C* indicates the position of the rod at the ending of the "forward" cast.

A — C indicates the distance 30° (5.23 feet) that the rod is moved in the act of playing the wet-fly.

The rod is shown straight in order that the beginner may realize what its position would be if it was stiff and had no flexibility.

DIAGRAM 2:

Diagram 2 also shows the position of the rod at the beginning and termination of the "backward" cast, and in addition the curvature which takes place in the rod.

The tip of the rod travels from *A* to *B*, covering an arc of 60° (10.47 feet), while the end of the butt joint only travels a distance of 45° (7.85 feet), the tip of the rod traveling the greater distance, owing to the spring of the tip and middle sections.

When the "forward" cast is made the tip of the rod travels a distance of 90° (15.70 feet), while the butt joint only travels a distance of 80° (13.96 feet).

NOTE:

Independent of the flexibility of the rod the positions *A-B-C* should be taken as the extreme ones when fly-fishing on lake or stream.

As the beginner becomes familiar with his rod and his casting improves he can, within reasonable limits, increase the distance he plays the fly, which will also decrease the distance of his "backward" cast, and he may at times, with advantage, decrease the limit of his "forward" cast.

TROUT FLY-FISHING IN AMERICA

about 20 degrees above horizontal, thus bringing the butt of the rod about 20 degrees below horizontal. Such a balance is obtained by having a reel of the proper weight.

In order to cast efficiently and well it is absolutely necessary on the "forward" cast that the tip of the rod—irrespective of the height of the caster's hand from the water—shall not go below a point that is 15 degrees above a horizontal line established by the height of the casting hand.

The reason for this is, that first, the fly cannot be properly landed upon the water, and, second, there will be too much slack in the line which will handicap the angler in striking a fish.

The maximum arc of a circle the tip of a fly-rod should describe when casting is 90 degrees and this arc begins 15 degrees above a horizontal line and ends 15 degrees beyond a vertical line having the casting hand as a base.

These 90 degrees represent the maximum distance the tip of the rod should travel in making a good cast, and this includes the bend of the rod which always takes place in the act of casting.

The arc described by the ferrule end of the butt joint when making a cast, however, is only about 80 degrees, the difference between the arc of the tip and the arc of the butt joint, which is 10 degrees, represents the distance covered by the tip due to the bend of the rod.

In other words, let it be assumed that the casting hand, whether the angler is in a boat or working a stream on foot, is four feet above the surface of the water. Let the

TROUT FLY-FISHING IN AMERICA

hand holding the rod represent the height of a horizontal plane parallel to the surface of the water. At right angles to this line assume another line that is vertical to it, with its base at the caster's hand. These two lines are then separated by 90 degrees, and if each is 10 feet long, the length of the rod, then the arc described by the tip of the rod is very nearly 15.7 feet in length.

This represents the maximum distance, under all conditions, the tip of the rod should travel when casting in order to make a respectable cast. The tip of the rod, however, should not be brought to the horizontal line, but to a point 15 degrees above it, or a distance of very nearly 2 feet and 6 inches from horizontal or 6 feet and 6 inches above the surface of the water.

As all this applies to the "forward" cast we must now consider the "backward" cast, which, after all, is of far greater moment, because upon the proper execution of the "backward" cast depends the proficiency of the "forward" cast.

The arc of the circle described when making the "backward" cast is much shorter than in the "forward" cast, and this is due to the playing of the fly after the "forward" cast is completed. The "backward" cast should begin when the fly has been played and retrieved so that the ferrule of the butt joint of the rod has reached a point of 50 degrees above horizontal or 40 degrees from vertical. From this point the rod is brought back with a quick, snappy motion of the wrist until the ferrule of the butt joint reaches a point 5 degrees beyond vertical, where

TROUT FLY-FISHING IN AMERICA

the motion is stopped. In making the "backward" cast the ferrule of the butt joint describes an arc of 45 degrees; the tip of the rod, however, will travel further, owing to the spring of the rod, which is about 15 degrees, thus making the total travel of the tip about 60 degrees.

When making the "backward" cast it should be borne in mind that there are two things which are to be avoided. One is, the fly should never touch the water and the other is, the fly should never be snapped. When the fly touches the water on the "backward" cast the "forward" cast cannot be as well executed because some control of the line is thereby lost. When the fly is snapped on the "backward" cast the strength of the snell or leader where attached to the fly is impaired, and if snapped several times the fly nearly always breaks off and is lost or it gives way when a fish is struck.

A very important feature in fly-casting, if not the most important one, is to have control of the line at all times. The greater the control the angler has of the line the greater will be the results attained, and the better line will be cast under the many varying conditions encountered when fishing upon lake or stream.

The beginner at fly-fishing, whether fishing the wet or the dry-fly, will soon learn what is meant by the "feel of the line" which should be constantly present under all conditions of fly-fishing.

This sense when acquired, as a general thing, marks the turning point of the beginner for the better in learning

TROUT FLY-FISHING IN AMERICA

the art of casting and it is usually only a short time thereafter before he can cast a "fair" line.

The extent or degree of curvature which takes place in any rod, when casting, depends upon how much force is exerted in making the recovery and delivery of the fly (the "forward" and "backward" cast) and also upon the character of the rod. If it is a very flexible rod the curvature will be considerable, but the degree of curvature in any rod naturally is in proportion to the stiffness of the different joints.

Remember always when casting that the line must straighten out and the fly must go just as far back of the angler on the "backward" cast as it goes in front of the angler on the "forward" cast, otherwise the fly will fall short and a bungling cast will be the result. Therefore, it is very essential to see that there is a sufficiently large and clear space behind for the "backward" cast to be properly made, and this should be done before the angler begins casting.

The natural or trained ability of the angler determines, almost, if not entirely, the distance he can cast; but in wet-fly fishing the mere question of distance or length of cast is of little real importance.

Under no circumstances should an angler cast a line such a distance that it is left slack after the fly touches the water, except in dry-fly fishing, for when such is the case the ability to strike a rising fish is materially lessened.

In fly-fishing there is what is called the "short cast," the "medium cast" and the "long cast" and under ordinary

TROUT FLY-FISHING IN AMERICA

conditions found on all kinds of fishable trout waters these relative casts remain the same.

A "short cast" is from 20 to 30 feet.

A "medium cast" is from 30 to 40 feet.

A "long cast" is from 40 to 50 feet.

Anything over 50 feet is a "very long cast," but such casts are seldom attempted by experienced wet-fly fishermen, because they realize they are of little use.

When casting the dry-fly there is but one requirement other than accuracy, and that is the landing of the fly upon the water as gently and delicately as possible with the fly "cocked," because the movement of the fly should depend entirely upon the current of the stream.

This is not, however, the case when casting the wet-fly so far as having the fly always fall upon the water lightly, because the angler fishes the fly instead of depending upon the current doing so, but the cast should not be poorly made on that account.

When fishing the wet-fly in still water for trout, such as is found in large pools of lakes or certain pools of large streams, extreme lightness or delicacy in the landing of the fly upon the water is not essential for success if one is fishing for big trout.

As a matter of fact, if big fish are what the angler is after, it is a decided mistake to cast a very light fly on a pool if he expects to be successful in making them rise.

For many years I have noticed when fishing various pools, under the conditions named, big fish are seldom

TROUT FLY-FISHING IN AMERICA

made to rise to a fly that is cast so as to land like a zephyr, because, before any big trout, which is usually lying near the bottom of the pool, can get to the fly, even if he sees it, the fly has been taken by one of the smaller fish near the top of the water.

In all large pools there are, as a general rule, trout that vary greatly in size from small to very large, and they arrange themselves in the water of the pool, as to depth, according to their size.

The big trout are almost always to be found at the bottom of the pool and the size of the trout decreases as the depth of water decreases, consequently the smaller trout are found to be near the top of the water.

And it is on this account I make the above statement, having proved such to be the fact from long experience and careful observation.

This same condition, however, does not often exist in fast-running streams where the water naturally is more aerated and the trout on that account distribute themselves differently, hence in such places the fly should be cast more lightly.

The experienced angler endowed with "fish sense" can generally determine when unusual conditions in "big pools" make it wise for him to deviate from his customary practice and fish the fly more lightly.

A knowledge of abnormal conditions is generally the result of close observation and wide experience, and no definite rules for attaining it are possible.

In running water trout always head toward the cur-



THE GREAT LAKE TROUT (ADULT MALE) CHRISTIVOMER-NAMAYCUSH

TROUT FLY-FISHING IN AMERICA

rent or up stream, except when going with the current down stream.

All trout have a wide range of vision due to the position of the eyes in the head and the way they are set. The range covers very nearly, if not quite, 300 degrees of a circle, with the greatest vision to the front and sides and the least and none at all directly to the rear.

It is on account of the wide range of vision in trout, together with the fact that they always head up stream or toward the current that dry-fly advocates and some wet-fly anglers have insisted that the proper way was to cast "up stream" whenever it was possible to do so.

My experience leads me to believe that no hard and fast rule can be made and observed with success as to the direction a wet-fly should be cast when fly-fishing. There are too many circumstances and conditions which have to be taken into account to say absolutely that a wet-fly should always be cast "up stream," or even say, as a general proposition, it should be so cast.

On the other hand, the very nature of dry-fly fishing is such as to make "up-stream casting," as a rule, "the proper and generally accepted way" that it should be done.

As it is the current of the stream and not the angler that "fishes the dry-fly," it is at once apparent why "up-stream" casting gives to this method of fly-fishing its greatest opportunity for success due to the longer travel of the fly upon the water in the direction the trout are heading.

The wet-fly angler who fishes by rule seldom if ever

TROUT FLY-FISHING IN AMERICA

meets with much success because it is the "rule" and not the "science of the game" which claims his attention and consequently he loses much of the real "sport of angling."

If the wet-fly angler, like the dry-fly advocate, feels that he must fish by rule, let him make his "little book" from knowledge gained by personal experience, observation and study of the many conditions that are encountered both on lake and stream as well as the "ways and means" employed by successful wet-fly fishermen.

If he will observe this suggestion I feel quite certain that his "little book" of rules will never be fully written and that he will become a good and successful wet-fly angler without having any set rules to hamper him.

CHAPTER XI

HOW TO FISH THE WET-FLY

As has already been said the playing of the fly is the most important element in wet-fly fishing. The fly can be played either upon the surface, just below the surface, or in the water to a depth of four to eight inches, and under certain conditions, even to a greater depth, with success.

The fly or flies should not, however, be fished so deep in the water that the swirl of the trout, which takes place immediately before the strike occurs, cannot be seen, for if the angler, when fishing the deep fly, waits until he feels the trout before striking, he will almost invariably fail to hook his fish, because the trout can expel the fly from its mouth much quicker than the angler can strike and set the hook. The reason for this is, the trout has but a very short distance to move the fly to get rid of it, and he can do it so quickly and forcibly that the angler, in striking, cannot hope to move his wrist, rod, line, leader and fly as quickly, not to mention taking up such slack as there may be in the line at the time of striking.

In ninety-five per cent. of such cases the trout has expelled the fly before the angler can act after he is aware of the fact, from the feel, that a strike has occurred. There-

TROUT FLY-FISHING IN AMERICA

fore, on both stream and lake, when fishing the wet-fly, strike when the swirl takes place and under no circumstances wait until you feel the trout if you wish to hook your fish.

The object in fishing the fly is to attract and make trout rise to it. It then follows that it should be done in such a manner as to deceive and make them believe your artificial fly is something good to eat.

Whether or not trout take artificial wet-flies because they believe them to be natural flies no one can positively know as a fact. The very best the angler can do in this direction is to make deductions logically from what he has observed during his experience.

The fly should never be played against the current of a stream, and when cast "up," "across" or "down" stream the angler should guard against fishing the fly by jumps as if it were hurdling the ripples.

The best way is to cast slightly "up and across" the stream allowing the current to carry the fly down the stream while the angler plays the fly diagonally across the stream. Keep the fly on or just under the surface of the water in most cases and *always* make a recovery for another cast just before the fly comes to a full stop due to the straightening of the line.

In some large pools through which there is a swift or rather swift current, with slow and still water on the sides, the best success is attained by fishing the fly on either side of the swift current, for it is there the large trout are generally to be found.

TROUT FLY-FISHING IN AMERICA

Always, and by this I mean there is *no* exception, the fly should be allowed to remain on the water after the cast is made for a perceptible length of time before it is played by the angler. The perceptible time should be of longer duration when fishing still water than when fishing fast water in streams, because the trout that are to be attracted by the fly are, in most cases, lying still or slowly moving in deep water.

In stream fishing it is a mistake to fish with more than one fly while in lake and still-water fishing two flies can often be used to advantage.

When two flies are used it is well so to play the flies that the dropper fly will touch the water occasionally and when it does let it rest for a second or so before retrieving it further. The tail fly will then be fished about one to two inches below the surface of the water.

At no time should the fly or flies be played quickly on or through the water, because the trout should be given time to see and be attracted by them, which will not be the case if they are played rapidly.

When the fly is played on the surface, or nearly so, it can be done to advantage by the straight backward movement of the rod, but when it is played four or more inches below the surface it is better to play it with a side and upward movement of the rod, which throws the broad side of the fly to the trout, making it easier for the trout to see, and its action more like a drowned or injured real fly.

When the water is calm, without a semblance of any kind of a ripple, I have found the best success to be ob-

TROUT FLY-FISHING IN AMERICA

tained by fishing the fly below the surface of the water from four to six inches. It is seldom at such times that trout are surface feeders, and on that account a surface fly does not seem to have any attraction for them.

A fly under the surface, played broad side to the trout, often causes them to rise. Why this is the case I am unable to say, except possibly the trout think they can get the fly with less than the ordinary exertion.

Remember that the greatest skill is shown by the angler who persuades the trout to rise to his fly when they are not feeding, and it is then he experiences the greatest pleasure and satisfaction if success rewards him.

The saying, "Oh! He is a lucky fisherman!" is one that beginners as well as old-stagers at fly-fishing would do well to discount as having no meaning nor significance for, after all, SUCCESS in fly-fishing is not a question of luck. It is rather the result of judgment and knowledge in knowing how to select the proper fly for the particular occasion and then knowing how to place and play it so as to make it prove most attractive as well as acceptable to the trout.

At times, when trout are rising to food on the surface of the water, it is a very good plan to make several false casts over the water where they appear, letting your fly come to within an inch or two of the water at each cast and finally landing it quietly on the surface and playing it very slowly.

CHAPTER XII

HOW AND WHEN TO STRIKE TROUT

EXPERIENCE is by far the best teacher in learning how and when to strike a trout that rises to your fly because the personal equation of knowledge is, after all, the real controlling factor which spells success.

Nevertheless a few remarks about this subject may not go amiss in giving a general idea of why certain features should be carefully taken into consideration as to how and when to strike the rising trout.

When speaking about the striking of trout the two extreme conditions encountered in fly-fishing are probably best stated by saying that one is stream fishing and the other lake or still-water fishing.

Trout in one respect are like people, in that their movements and habits are to a great extent governed by their weight, their size and often by their age.

Of the several species of trout it can well be said that the natural peculiarities of each resemble to quite a marked degree the characteristics of some of the different nationalities of the world.

Although there are marked differences between the various trout species, yet they all have certain character-

TROUT FLY-FISHING IN AMERICA

istics in common so far as their movements are concerned, and these should be carefully observed.

The small trout is generally very quick and rather headstrong in its movements, lacking all judgment, and is not unlike the small-sized youth.

The medium-sized trout, while undoubtedly quick in many of its movements, is decidedly less impetuous in action and has some idea of what he is doing, more like a middle-aged man.

The big trout, on the other hand, is deliberate and comparatively slow in its movements, usually acting with considerable judgment and much caution and resembles more the strong, healthy, elderly man.

It is on account of just these marked differences in trout that it is necessary to study "how and when to strike" in order to be able to hook and land them.

Then it is necessary to have some knowledge of the kind and size of trout that are usually caught in the waters where you are fishing.

It also makes a great difference in many waters, as well as the time of season the fishing is done, whether the angler should strike very quickly or with a moderate degree of speed or with what might be called a "slow" strike.

The clearness of the water also has much to do with determining just how the strike should be made. For instance, with a quick, snappy rise in clear water the angler can hardly strike too quickly, while on the other hand, when fishing the same water, if it is roily, the strike should

TROUT FLY-FISHING IN AMERICA

be less quick because the rise would not be the same. In a general way it can be said:

In clear water and snappy rise, strike very quick; in roily water and ordinary rise, strike quick, in clear or roily water and slow deliberate rise, strike slow.

When fishing a lake in the spring more fish will be hooked by striking deliberately and slow, irrespective of their size, for at that time they are cold and much less active than in the later months of the season.

This does not apply, as a rule, to stream fishing, because the trout are in more aërated water and are more active, but this fishing comes a little earlier than lake fishing.

In the spring, whether fishing on lake or stream, more success will be had by using larger flies than those generally used in August and September, because the eyesight of the trout is not then so keen.

The amount of force that should be used when striking a trout is something that each angler has to find out for himself and it is one of the features of fly-fishing that determines to a large extent whether the angler is a good or poor fly fisherman.

It is probably true that more anglers strike too hard rather than not hard enough and that more fish are lost for this same reason than any other.

So many different things govern the ability of an angler to strike trout successfully that it is easier to mention what should *not* be done instead of what should be

TROUT FLY-FISHING IN AMERICA

done, so for the present I will name a number of things it is well "not to do" when striking:

Do not get nervous.

Do not strike with an arm movement. Let the force come entirely from the movement of the wrist.

Do not always strike with the same degree of force, for if you do you will often tear the hook from the mouth of the trout.

Do not strike with a force that is greater than the strength of the leader or snell.

The force with which to strike a trout should be, in a great measure, determined by the amount of slack there is in the line at the time the rise takes place.

Within reason, the greater the slack the greater the force should be that is put into the strike. When the fly is fished on the surface, or very nearly so, less force is required than when the fly is under the surface from six to eight inches. It goes almost without saying, that small trout under all circumstances should not be struck as hard as medium-sized or large trout. It is from the character of the rise that the angler has to judge the size of the trout and the amount of force to be exerted in striking.

Judgment, "fish sense" and experience eventually determine for every angler the force required to strike and hook properly the trout that rises to his fly.

Fish hooks are sharp, very sharp, as all anglers know from experience not necessary to mention, and it does not take a tremendous force to seat a hook firmly in the mouth of any trout, be it large or small; but on the other hand, the force that should be properly applied in striking a

TROUT FLY-FISHING IN AMERICA

large trout would lift a small or medium-sized trout out of the water and sometimes land it in the boat or out on the bank.

As a general proposition one does not strike as hard when fishing fast-running water as when fishing lakes or slow-running streams, because in fast water the fish helps to hook itself, especially a Brown Trout.

The proper striking of a trout is one of the most important elements in fly-fishing, be it wet or dry, and the angler who cannot strike and hook the trout that rise to his fly without yanking them out of the water, or tearing the hook from their mouth, or repeatedly breaking leaders, is not a good fly fisherman.

And this remains true, no matter how perfectly he may cast or how well he may play his flies. Unless he can properly strike and hook his trout he is not, as I have said, a good fly fisherman.

Patience, observation and experience, if properly applied, will enable any angler to acquire the ability of striking and hooking his fish under most conditions.

Whether or not to "strike from the reel" or from a "hand-held line" is one that has been discussed by anglers for many years and perhaps I am not far wrong when I say it still is quite a subject of conversation among them when around the camp-fire after a day's sport with the rod.

The temperament of the angler and his ability to control his strike, to my mind, are what eventually determine the question for every fisherman. Personally I never

TROUT FLY-FISHING IN AMERICA

"strike from the reel," and do not advise any one to adopt this method, because less control is had over the line, likewise the fish, and therefore much of the pleasure, as well as the skill, of angling is lost on that account.

On the other hand, Mr. F. M. Halford, in his new book, entitled "The Dry-Fly Man's Handbook," has this to say upon the subject:

"The strike must be made with sufficient force and no more. If insufficient, the hook will not penetrate far enough to hold the fish in its subsequent struggles, and if the force is excessive the gut will break at its weakest point, and leave the fly and possibly one or more strands of gut in the trout's jaws. The angler should acquire the habit of striking from the reel, i. e., without holding the line in the hand. Many old fishermen prefer holding the line when striking, but it is at best a risky proceeding, and too likely to result in a breakage of the gut."

It is to be regretted that Mr. Halford has not gone more fully into this subject and given us more of his reasons for striking trout from the reel.

To "strike from the reel" may be the better method to adopt when dry-fly fishing on English streams for the Brown Trout (*Salmo-fario*), and unquestionably there is less likelihood of breaking a fine-gut leader if the rod is in the hands of an inexperienced angler, but does it not require greater skill for the angler to strike and land his fish from a "hand-held line"?

In this country the best fly-fishing anglers almost universally have given up the "strike from the reel," and it is because, first, actual control of the line is lost for a certain

TROUT FLY-FISHING IN AMERICA

duration of time; second, the line must be necessarily slackened, the extent of which is determined by the length of line run off the reel when a strike is made; third, a slack line, even when the trout is well hooked, means in most cases, especially with the Brook Trout (*Salvelinus fontinalis*), its loss.

After all is said in favor of either method, the fact remains that the proper method for any angler to adopt is the one best suited to his own peculiar make-up, and with which he has the best success. For the truth is, that success, and success alone, must determine eventually the ability of every angler, be he a wet or dry-fly fisherman.

CHAPTER XIII

WHEN TO FISH DARK AND LIGHT-COLORED FLIES

FOR years much has been said by anglers and writers on the subject of fishing about the use of different colored flies at different times of the day. They have agreed fairly well in their main ideas, which are, that dark-colored flies should be used during the daytime and that light-colored flies should be used in the early morning and evening hours.

They have not, however, differentiated sufficiently between water and weather conditions, or given reasons, to make their views of any great value to the beginner at fly-fishing.

As a general proposition, irrespective of the waters to be fished, the angler should use flies that the trout can most quickly observe under the varying conditions above mentioned, because the eyesight of trout is largely governed by these conditions.

These are the physical conditions that exist: as the trout are in the water, they see any fly presented to them on the surface of the water, or a few inches under the surface, through the medium of the water. The distinctness with which they see the fly must necessarily depend upon both the water and weather conditions existing at the time

TROUT FLY-FISHING IN AMERICA

the fly is displayed and, in addition, the coloration of the fly and its size.

Therefore, there are four conditions that the angler must consider whenever fly-fishing for trout, namely, the condition of the water, the condition of the weather, the color of the fly and its size, in order to select one or more that can quickly be seen by the trout.

Bearing in mind these four conditions, let us now consider what element it is that enables trout to see any fly, to a greater or less extent, under different conditions.

If the background is dark and the object placed against it is dark, little or no contrast exists, therefore the object is not distinct: and this is equally true if against a light background a light object is placed. Consequently, in order to get a distinct outline of any object, the background which brings out the form of the object must be of marked color contrast with the object.

Then is not the element which brings out the form and coloration of the fly the contrast between the fly and the background, and is not this background the surface of the water and the sky above?

This is the fundamental principle which exists, upon which must be based the selection of the color of the fly which will be most clearly visible to the trout with the different kinds of backgrounds.

As a basic proposition it can be said that to get the greatest contrast between a dark object and the background, the background should be light; and if the object is light the background should be dark.

TROUT FLY-FISHING IN AMERICA

There is another element which now enters into the consideration of this subject, namely, the distance from the object that the real or effective background is located.

The real background is always the sky-line; but the effective background varies with conditions, the most marked variation being when the fly is under the surface of the water four or more inches; and this is the only one it is necessary for the angler to consider in relation to the subject of what colored flies to use under different background conditions.

When the fly is upon the surface of the water, or just under the surface, not more than two to three inches, the background can be taken as the sky-line above, and although the background is made more or less effective by conditions it is too nice a point for the angler to take into consideration.

When the fly is under the surface of the water four or more inches the effective background may be either the surface of the water or the sky-line above, depending almost entirely upon the coloration of the water and the weather conditions.

Let me say here in relation to this subject, that we will consider black and white to be colors and that they represent the two extremes of fly and background coloration and the degree of coloration diminishes as we leave the black and approach the white, bearing in mind the while that White reflects and Black absorbs both color and light.

In fly coloration the White Miller represents White and the Black Gnat represents Black. Place the White



THE GOLDEN TROUT OF SODA CREEK, CALIFORNIA (ADULT MALE)
SALMO-GILBERTI-WHITEI

TROUT FLY-FISHING IN AMERICA

Miller on a dead black background and the Black Gnat on a dead white background and you have a condition in each instance where the greatest contrast is produced and each fly is most defined. Reverse the two flies, leaving the two backgrounds as they are, and you then have the least contrast and each fly is least defined.

From these facts it becomes apparent that if the evening is very dark and overcast the light fly will be the best defined against such a background, and it is equally true that the dark fly will be the best defined against a sky background that is clear and of lightish color.

As water is dark in color when compared with the sky and more dense than the atmosphere, trout at all times during both day and night when looking toward the surface of the water are looking from a darker to a lighter area. It then follows that the fly which will most quickly be seen is one which makes the greatest contrast with the background. This, I think, we may take as a fact, irrespective of any change there may be at times in the degree of darkness in the water.

Following this principle out in practice, I have found that dark flies get more rises than light ones during the evening hours, except on very dark and overcast evenings when the lighter flies prove more successful.

This is especially true with dark flies that have silver bodies, such as the Silver Doctor, the Silver Spot and the Silver Gnat; and this is undoubtedly due in a measure to the gleam of the silver in the water when the flies are being played.

TROUT FLY-FISHING IN AMERICA

One reason why anglers have believed that light-colored flies, such as the White Miller, the Coachman, the Royal Coachman, the Parmachenee Bell, the Jenny Lind, the Professor and the Yellow Miller, are the best flies to use for evening fishing, without regard to conditions, is because they can best see these flies when cast upon the water and they assume that the trout can do likewise.

They evidently have not stopped to consider that their seeing the flies is an entirely different proposition from the trout seeing them from the opposite direction.

In the first instance the angler is looking at light flies resting directly upon a dark background, while the trout are looking at the same flies against a much lighter background which is a long distance from them.

Remember that the nearer in color is the sky background, the water background and the atmospheric area between them, the less distinct appear all objects to the trout irrespective of color, for if the sky, the atmosphere and the water were all to have the same dark color, then objects on or in the water could not be seen from any direction, no matter what their color.

The color of flies to use at certain times under certain conditions, in the main, applies equally well to both stream and lake fishing; the very light fly, however, I have found to be less effective for stream fishing, but this applies to fast running water.

When the fly is fished under the surface of the water four or more inches, the effective background gradually changes from the sky-line to the water line as the light

TROUT FLY-FISHING IN AMERICA

above the water diminishes. The sky-line prevails as the background as long as the water and sky are clear, and there is good light. When the sky-line is dark there is little light for the water to absorb; consequently the background becomes the water line and the outline of the fly is made against the water, which is lighter above than below the fly.

It is well to consider the flies as being divided into three classes of color, such as:

Light-Colored Flies,
Medium-Colored Flies,
Dark-Colored Flies.

The *Light-Colored Flies* are those that have a decided lightish shade, and where white, light blue, light gray and light yellow predominate.

The *Medium-Colored Flies* are those that are more neutral in shade, having no very marked leaning to either dark or light colors.

The *Dark-Colored Flies* are those that have largely black, dark brown, dark green, red and indigo in their make-up and their general aspect is of a dark shade.

The many fancy patterns of colored flies should be classed as medium, although some belong to the other classes.

The résumé of all that has been said in connection with my experience of many years in applying the principles I have advanced, amounts to just this:

TROUT FLY-FISHING IN AMERICA

WHEN FISHING WITH FLIES ON OR JUST UNDER THE SURFACE OF THE WATER

If fishing in the early morning:

Use light-colored flies, independent of water conditions, if sky is very overcast.

Use medium or dark-colored flies under all other conditions.

If fishing in the daytime:

Use dark-colored flies when the water is calm or there is a slight ripple and there is a clear sky background.

Use light or medium-colored flies when the water is calm or there is a slight ripple and there is a dark sky background.

Use any kind of fly, light, medium or dark in color when the water is rough, irrespective of what the background may be, because the sky background is made less effective, owing to the absorption of light by the waves.

If fishing in the evening:

Use dark-colored flies always when the water is calm or has quite a ripple and the sky background is blue or gray in color, preferably using flies with silver on the body or those having large bodies.

This selection of flies also applies to moonlight nights.

TROUT FLY-FISHING IN AMERICA

Use light-colored flies when the sky is very dark and overcast, or it is misty or rainy, no matter what the water conditions may be at the time.

WHEN FISHING WITH FLIES FOUR OR MORE INCHES UNDER THE SURFACE OF THE WATER

If fishing in the daytime:

Flies fished under the surface of the water four or more inches during the daytime, *when the sky is clear*, should be dark or medium in color and, *when the sky is dark*, the flies should be light in color, disregarding water conditions at all times.

If fishing in the evening:

When fishing in the dusk of the evening it makes very little difference what colored flies are used, for one fly is as good as another and just about as well defined, irrespective of their color.

The following list of flies gives an idea of how they should be classed for color:

Light-Colored Flies	Medium-Colored Flies	Dark-Colored Flies
White Miller	Queen of the Water	Black Gnat
Lady of the Lake	King of the Water	Black June
Coachman	Professor	March Brown
Gilt Coachman	Brown Coughlan	Montreal
Royal Coachman	Royal Governor	Brown Adder
Deer Fly	Lake Green	Blue Bottle

TROUT FLY-FISHING IN AMERICA

Light-Colored Flies	Medium-Colored Flies	Dark-Colored Flies
Fin Fly	Gray Drake	Dark Stone
Parmachenee Bell	Hamlin	Governor
Dorset	General Hooker	Cahill
Fern	Grizzly King	Great Dun
Beaverkill	Camlet Dun	Hawthorn
Gosling	Light Cow Dung	Prime Gnat
Jenny Lind	Cinnamon	Orange Black
Neversink	Beauty	Carmen
Reuben Wood	Alice	Furnace
Sunset	Alder	Wasp
Yellow May	Abbey	Silver Gnat
Yellow Hackle	August Dun	Silver Spot
Gray Drake	Marston's Fancy	Silver Doctor
Blue Dun	Hare's Ear	Silver Horns

I suggest that anglers give some of these flies "a try-out." It costs but little, and may prove productive of successful results, as it has with me; but, at all events, it should have some little element of interest for those who have not already applied these principles.

CHAPTER XIV

THE "EXPERT" FLY FISHERMAN

It is not an uncommon thing as each fishing season comes around to see in the various sporting papers that such and such a fly fisherman is described as an expert angler.

In some cases the application of the term expert is undoubtedly properly applied, but in the large majority of cases, I am sorry to say, it is used with little or no judgment, and frequently with absolutely no knowledge of what the term expert fly fisherman really means.

So much has been said upon this subject, and the term expert has been so persistently misapplied, that to-day the large majority of beginners and not a few semi-experienced anglers have come to believe that an angler who is a good caster must naturally be an expert fly fisherman.

Nothing, as a matter of fact, could be farther from the truth, because a good, or even an expert, caster, solely as such, is not and never can be an expert fly fisherman.

It is not alone by casting that a man may become an expert fly fisherman, nor can the angler who only plays his fly properly or the one who excels merely at playing the fish be so described. The true expert with the arti-

TROUT FLY-FISHING IN AMERICA

ficial fly is the man who sacrifices no one branch of his art to the rest (even if he excels particularly at some one of them), and by a skilful use of them all is able, season after season, and in many kinds of water, to catch fish.

You will note when you read books on fly-fishing that most writers on the subject seldom use the word "successful" in connection with the word "expert."

This is due in a great measure to the fact that by far the larger numbers of writers are not anglers of much experience or they would not so easily fall into the habit of calling all good casters expert fly fishermen.

It will sound strange to many anglers when I say that not one in twenty of the really expert fly-casters is a really good angler with the fly and to call such an expert is indeed a misnomer.

Do not accept what writers have to say upon this subject as "gospel truth" before making some little investigation for yourself if you are desirous of becoming a successful fly fisherman.

In the large majority of cases the expert caster and the expert fly fisherman are two distinct beings, so much so that the man that excels at either art is practically excluded from ever excelling at both.

The fly-caster seeks to excel in fly-casting, and he takes his pleasure in so doing, while the expert fly fisherman seeks to excel in catching game fish, and his pleasure is obtained in that way.

The man who endeavors to perfect his casting of the

TROUT FLY-FISHING IN AMERICA

fly to the exclusion of all other elements of fly-fishing will find himself sadly unsuccessful in catching game fish.

These remarks are not in any sense directed against the fly-caster or any one who desires to excel in some one branch of fly-fishing, because, as I have stated in a previous chapter, casting is an important factor in wet-fly fishing. My intention is to call anglers' attention to the fact that in many cases the term expert is not properly and correctly applied by writers on the subject.

I have little patience with writers who seek to throw a halo around the art of fly-fishing and who try to impress upon the beginner at fly-fishing that there are many almost insurmountable obstacles that stand in the way of his ever becoming a good fly fisherman unless he is an expert caster of the fly.

This is because it is unfair in the first place, and because so far as wet-fly fishing is concerned it is untrue in the second place.

There is nothing analogous between being a good caster and a good fly fisherman, and there never can be so far as wet-fly fishing is concerned.

Success in wet-fly fishing means the catching of game fish with the artificial fly, irrespective of what element or elements of fly-fishing may or may not be perfected to the expert point by the angler.

If an angler can catch game fish with the wet-fly and he can do so consistently year after year, it stamps him as a successful fly fisherman, but it does not stamp him as a good or expert fly-caster.

TROUT FLY-FISHING IN AMERICA

The successful wet-fly fisherman as such must necessarily cast and play his fly in such a manner as to deceive and attract the fish, and he must also be able to strike and play his fish, otherwise no results could possibly follow.

This, however, does not mean that the angler must be an expert caster, an expert fisher of the fly, an expert striker of the fish, or an expert player of a hooked fish, but it does mean most decidedly that he is good in all of these branches of wet-fly fishing, and when he is a consistent performer at catching game fish he is entitled to be called an expert fly fisherman.

The truth of what I have said can be verified at almost any place during the open season where wet-fly anglers congregate on either lake or stream.

There are really two classes of wet-fly anglers, the greater and the lesser experts. Those of the former class are the anglers who can catch game fish consistently on many different kinds of water, and the lesser experts are the anglers who can only catch fish on certain kinds of water. There are comparatively few anglers in the first class, while there are quite a number in the second and lesser class.

Although the dry and the wet-fly angler cannot properly be judged from the same standpoint, nevertheless the principle involved in determining what constitutes an expert fly fisherman in either case must be the same.

Dry-fly anglers are somewhat prone to consider the

TROUT FLY-FISHING IN AMERICA

expert dry-fly fisherman to be the angler who can cast a good fly, and who can cause the fish to rise to it, irrespective of whether or not he can land his fish.

This idea is impressed upon me when I read from time to time the articles written by them, and which appear in many of our sporting papers.

As an illustration of this attitude, I will mention what a well-known angler and writer on the subject has to say when speaking about dry-fly fishing.

"Having prepared a gossamer leader, . . . preferring to risk a smash to not getting a rise, . . . I dropped the small silver sedge, which I used, because it could be more plainly kept in sight, . . ."

If these words mean the idea they convey to me then they must imply that this angler-writer, first, was fishing with the idea of making the fish rise to his fly; second, with the idea that he was fishing with a leader that was known to be so light and lacking in strength that it was liable to give way when a fish of any size was struck or while it was being played; and, third, that he was not fishing with the idea of landing his fish.

To call such an angler an expert fly fisherman, although he might be the most expert of casters, is certainly misapplying the term in the extreme.

Imagine giving any angler the title of expert fly fisherman, who, before ever a cast is made, knowingly selects such a weak leader that it is liable to a smash if a fair-

TROUT FLY-FISHING IN AMERICA

sized fish rises to his fly, and who says in so many words that he prefers "a smash to not getting a rise."

I do not intend to convey the idea that this very writer is not an expert fly fisherman, but I do say most emphatically that if his words express his idea of the proper use of leaders for wet or dry-fly fishermen then he ought immediately to relinquish all claim to being an expert fly fisherman, no matter how well he can cast a fly or how successful he may be in causing fish to rise to it.

The personal pleasure or gratification of the angler has nothing to do with determining whether or not he is an expert with either the wet or dry-fly; but no one has the right to gainsay how he shall fish or derive his greatest pleasure at the sport. This, however, in no way entitles any angler to be called an expert fly fisherman, no matter what his method of fly-fishing may be.

Let us consider this matter a little further and from another viewpoint: the experienced angler who is an expert, or even one who is not an expert, ought to know in the large majority of cases how hard he should strike with any leader he elects to fish with, otherwise of what use to him is his experience at the game?

If in a number of instances he smashes leaders either when striking or playing his fish he is not a good fly fisherman or a successful one, and therefore he cannot properly be called an expert.

The real expert fly fisherman, be he a wet or dry-fly angler, is not the man who deliberately selects a weak leader when he knowingly is about to cast for a good-

TROUT FLY-FISHING IN AMERICA

sized fish; but he is the man who selects a leader suitable for the work he intends to put upon it and one that will not smash if well handled under the circumstances and conditions surrounding its use.

The expert fly fisherman can be likened to the old-time machinist. He was a man who was versatile, having a knowledge of mechanics gained from a well-rounded experience which brought to him success and who never knowingly used an inferior quality or strength of material for a given piece of work.

The so-called expert fly fisherman of to-day, on the other hand, is to be likened to the one-machine man who can do only one thing well, but this latter is not a machinist any more than an expert caster is an expert fly fisherman.

By all means and at all times, give credit where it is due, but give it properly and to the point; for instance, call the angler what he really is, not something he is not.

If he is a good caster, a good fisher of the wet-fly, a good player of a hooked fish, or a good lander of fish, call him so, and if he excels in any one or more of these branches of fly-fishing by all means call him an expert in these branches.

But do not call any angler who excels in any one or more of the branches an expert fly fisherman unless he is a successful fisherman with the fly and is a consistent performer season after season; otherwise you will be misapplying the word "expert."

CHAPTER XV

HOW TO MAKE YOUR OWN LEADERS

For the angler who has the inclination and opportunity it will prove a pleasant pastime for him to make his own leaders, and within a comparatively short time he can learn to make leaders that will be superior and more reliable to any which he can purchase and at much less cost.

Leaders are made from drawn silkworm gut and the things that are necessary to learn in order to be able to make good leaders are:

1. How to select the silkworm gut.
2. How to prepare the gut for tying.
3. How to handle the gut when making a leader.
4. How to tie the gut strands into a leader.
5. How to tie end and dropper loops.
6. How to dry the new leader.
7. How to test the new leader.
8. How to color the new leader.
9. How to preserve leaders.

How to select the silkworm gut:

When buying drawn-silkworm gut for leaders, select the very best and be sure to get new gut free from imper-

TROUT FLY-FISHING IN AMERICA

fections, otherwise you will have hard luck in making your leaders no matter how well they are tied.

In speaking of how to select silkworm gut, I cannot do better than quote from that versatile and expert fly-fisherman, Mr. Henry P. Wells, who states as follows on page 103 in his great book, entitled "Fly-Rods and Fly-Tackle":

"The features to be sought are good color, a hard, wiry texture, roundness, even diameter from end to end and length. From these are to be inferred the strength and wearing quality of the gut, which are what we wish to estimate.

"From the color we infer whether the gut is fresh or stale, its probable strength in relation to its thickness, and, in part, its wearing quality. In all these respects fresh gut is superior to old gut of original equal quality.

"The color can best be judged from the fuzzy end of the hank, and should be clear and glassy, and by no means dull or yellowish. The wearing quality of the gut may be judged partly by its color, partly by its springiness when bent and released, and also by its hardness. It should feel like wire."

Silkworm gut can be purchased in hanks of one hundred strands, white in color or in packages of twenty-five, fifty, and one hundred strands, that have been selected for grade and dyed mist color. My advice to the amateur leader maker is to buy the latter-mentioned kind of gut, for, in the long run, better results will be obtained, unless great study and care is given to the matter of selecting the white gut in hanks and the dyeing of the same.

Even when selected gut is used it is of the utmost importance to see that the strands are regraded for size by

TROUT FLY-FISHING IN AMERICA

passing each strand between the thumb and the middle finger. You will generally find that at least ten per cent., or ten strands of the hundred purchased, will have to be discarded as unfit for use, and that the ninety per cent., or ninety strands remaining, will have to be divided into two grades, in the proportion of thirty medium and sixty heavy, provided you have bought heavy gut.

In selecting gut for leaders, whether light, medium, or heavy, discard any that is twisted or cracked, retaining only round gut free from visible defect.

How to prepare the gut for tying:

After the gut has been graded, to prepare it for making into leaders, it should be softened by soaking in water from one to two hours, preferably in water the temperature of which is between seventy-five and one hundred degrees Fahrenheit, in order to get the required softness or pliability of the gut.

I would not advise using water over one hundred degrees, although some leader makers use water only a little below the boiling point, or, say, two hundred degrees.

The greater heat will soften the gut more quickly, but will, in my opinion, weaken it and make the leader liable to give away where it is tied.

The gut will also have a tendency to "rough-up" on the surface of the strands when handled in making the leader, and especially so when tying and pulling the strands to set the knot.

Avoid, then, very warm water, but allow sufficient time



THE GOLDEN TROUT OF VOLCANO CREEK, CALIFORNIA (ADULT MALE)
SALMO-GILBERTI-ROOSEVELTI

TROUT FLY-FISHING IN AMERICA

for softening the gut so that it will have become properly pliable before using.

How to handle the gut when making a leader:

When handling gut that has been soaked in water for a sufficiently long time to make it soft and pliable, great care should be observed not to kink, twist or bend short a single strand. If this happens, and it will at times, the injured strand should at once be destroyed so as to prevent any possibility of its getting into a leader by mistake.

The soaked strands out of which a leader is to be made should always be kept in the water until used, otherwise the gut will not all be of the same softness and pliability which is of so much importance in accomplishing good results.

Before removing any strand from the water just prior to tying it into the leader be sure to run your fingers over it from end to end to see that it is clean and free from all grit.

How to tie the gut strands into a leader:

There are a number of knots that can be used in the making of leaders, but the three knots in general use are the single water loop knot, the double water loop knot, and the single hitch or single surgeon's knot.

All of these knots are good and serviceable if properly tied, but the single water loop knot naturally is not as strong as the other two if all are equally well tied. It is, however, of ample strength for all practical purposes.

TROUT FLY-FISHING IN AMERICA

In tying the single water loop knot take two strands of gut, hold them end to end, then lap them about two inches. Now take the lapped strands between the thumb and forefinger of the left hand, holding them near the left-hand end of the lap. With the right hand take the free end of the left-hand strand and make a loop around the straight right-hand strand, passing the end through the loop thus made, being sure to pull the loop tight.

After this is done, reverse the strands, end for end, and make exactly the same loop with the other free end strand. After these two loops are made take hold of the two long ends of the tied gut and pull the two loops together, being sure to jerk the gut sufficiently to set the finally completed knot so that it cannot slip.

The short gut ends on each side of the knot can then be cut off close to the knot with a curved pair of scissors.

The double water loop knot is made in exactly the same way as the single water loop knot, except two loops instead of one are made around the straight part of the gut strands.

The single hitch or single surgeon's knot is a very simple one, but one that requires considerable care and experience to make well, because if not properly made it will slip and on that account become useless. This knot is made by first lapping the gut strands about two inches in just the same way as when making the water loop knots.

Having lapped the strands, this is followed by making one complete loop, keeping the strands parallel, and then passing both ends, the short and the long, through the

DOUBLE SURGEON'S KNOT — PLATE A

FIG. 1

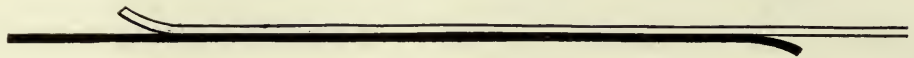


FIG. 2



FIG. 3



SINGLE SURGEON'S KNOT

FIG. 1



FIG. 2



FIG. 3



LEADER KNOTS

TROUT FLY-FISHING IN AMERICA

loop. After this is done the loop is pulled tight, being sure that an even strain comes on the four strands, and the knot is then complete and the short ends of gut can be cut off.

Personally, I use the single water loop knot and the single surgeon's knot, but very seldom the double water loop knot as it is not possible to tie this as small as either of the other two.

How to tie end and dropper loops:

There are several kinds of knots that can be used in tying end and dropper loops on leaders, but I am satisfied that both loops can be thoroughly and well tied by the use of the single surgeon's knot, and for years I have used no other kind of knot for this purpose.

It is the "common" knot used by many leader makers for end loops, and it is criticised by some because they say the pull is not a direct one, and it is claimed that "one strand of gut is liable to cut the other."

This is probably true in a sense, and essentially so if the knot is poorly or hurriedly made; but if properly made it will stand a much greater strain than should ever be placed upon it when in use.

The end loops are made by simply doubling over about two inches of the end gut strand, then making a complete loop, passing the bent-over end through the loop and pulling the loop tight, leaving the end loop thus made as long as desired.

A dropper loop is made in the same way as the knot

TROUT FLY-FISHING IN AMERICA

used for tying the gut strands into a leader, except that one strand is doubled over just as is done when making an end loop.

How to dry the new leader:

After a leader is made, put it to soak for half an hour, so that the entire leader may become equally pliable throughout its length.

Having selected some convenient place for drying the leader, such as a side wall of a room or better yet a pine board made for the purpose that is twelve inches wide and ten feet long, planed on both sides, with small brass hooks one inch apart, placed at one end of the board.

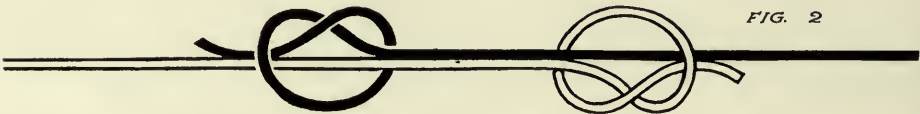
Now pass one of the end loops of the leader over one of the brass hooks, then gently pull the leader straight with sufficient force so as to make a slight tension on the leader from end to end. Now secure the free end of the leader to the board by passing a large pin or small bradawl through the remaining end loop.

Keep the leader in this position until thoroughly dry, then take down and coil, being sure to keep the leader straight while so doing.

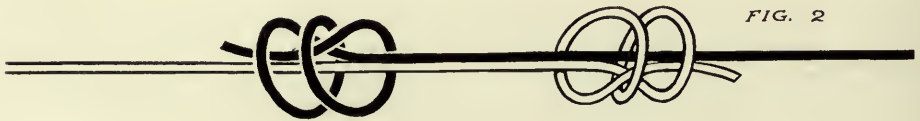
How to test the new leader:

Leaders should be tested both when wet and dry, in order to know their real durability and strength. Take a dry leader and place one end loop over a brass hook, then straighten out the leader, being sure that it is not twisted. Through the other end loop place the hook of

KNOTS USED IN MAKING LEADERS
SINGLE WATERLOOP KNOT—PLATE B



DOUBLE WATERLOOP KNOT



TROUT FLY-FISHING IN AMERICA

a standard spring balance scale and pull steadily and slowly until the scale shows that a pull of three pounds is being exerted, provided it is a heavy or medium leader that is being tested. If it is a light leader, do not exert a pull of over two pounds. If the leader has not given way under this pull, you can assume for the time being that this particular leader is good for the pounds-pull exerted. Now take this leader, after carefully coiling same, and soak it in water just as it comes from the faucet until it is pliable. This will take about an hour, then test the leader as before, only this time you will put a gradual pressure on the leader until it breaks, noting, of course, at what pounds-pull it gave way. Again soak the leader, after cutting off about an inch of each end of the gut where it gave way, for a little while, then tie the two parts together. Test it again up to four-fifths of its breaking strength, and if it holds set it up to dry.

When dry, tag it the pounds-pull at which it broke, coil and place in an oil paper envelope. The coiled leader should not be less than three and one-half inches in diameter and four inches is much better.

How to color the new leader:

Personally, I am a believer in coloring the finished leader, not the separate strands of gut out of which the leader is made, because my experience and experiments have convinced me that better results are thus obtained.

Leaders can be given almost any kind of color with hot dye, and the color can be made fast to a greater or less ex-

TROUT FLY-FISHING IN AMERICA

tent, usually the faster the color the weaker the leader is made, owing, in a great measure, to the heat of the dye and the length of time consumed by the process. There are, in my judgment, just two leaders to use, the white and the mist, the former requires no coloring, while the latter does.

The mist-colored leader, to my mind, is the best color to use, and it can be made any shade from very light to very dark, depending entirely upon the desire of the angler, and without much detriment to the gut.

The shade of the mist-dyed leader depends only upon the length of time it remains in the solution, provided it is properly prepared in the first place.

Before dyeing a leader mist or any other color the leader must first be thoroughly washed or wiped to remove all dirt and any oily or greasy film that may be on the gut. This can best be done with a piece of clean chamois and ninety-five per cent. pure alcohol. After the leader has been cleaned it should be soaked in cool water for at least one-half hour, then taken out and pressed gently between two pieces of cotton cloth to remove all surface moisture. After this it should be submerged at once in the cold coloring fluid until the proper shade is obtained. Either Arnold's or Stafford's writing fluid can be used as the dye, and I have found little if any choice between them, as both answer better than other dyes, with less bad effect, than any I have been able to discover.

To make the proper dye solution, take one pint of Arnold's or Stafford's writing fluid, pour it carefully into

TROUT FLY-FISHING IN AMERICA

a two-quart china or enameled ware pitcher, avoiding, as far as possible, getting any sediment into the pitcher, if there is any. To the fluid in the pitcher add a full pint of clear cold water (not ice water), now stir the ink and water with a clean white pine stick or paddle, afterward strain the solution through at least four thicknesses of cheesecloth. The dye is now ready to receive the leader that is to be dyed, and it is better to suspend the leader in the solution in such a way that it can be raised from time to time so that the effect of the dye upon the leader can be observed.

When washing the leader taken from the dye great care must be observed to remove all of the free dye clinging to the leader, and this is best accomplished by using three sets of cool water. After washing, press the leader between two cotton cloths to remove all moisture, then stretch the leader out to dry, preferably in such a manner that it will not come in contact with anything except the hooks that hold it at each end. When the leader is thoroughly dry, take it down, coil and put it away to be tested in about a week in the manner already described.

Any number of leaders can be dyed at the same time. It is my custom to dye about twenty with one solution.

How to preserve leaders:

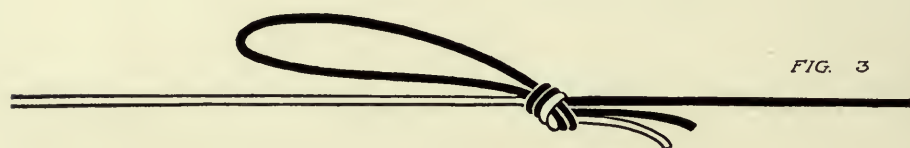
All silkworm gut leaders, when they are dry, are best preserved by keeping them in a dark place. They should be stored where they will not touch each other and where they will not be subjected to any great artificial heat.

TROUT FLY-FISHING IN AMERICA

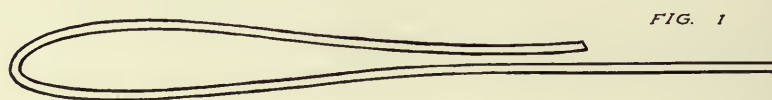
During the winter months or the closed season for fly-fishing leaders can be absolutely protected from deterioration by placing them in a large mouth jar of 95 per cent. pure alcohol.

The jar should have a tight cover to prevent evaporation, and it should be kept in a dark place or covered with a black piece of cloth. When the leaders are submerged in alcohol it does not make any difference if they do touch each other, as no injury to them will result.

LEADER DROPPER LOOP — PLATE C



LEADER END LOOP



LEADER KNOTS

CHAPTER XVI

TROUT FLY-FISHING IN THE RANGELEY REGION

THE Rangeley Region is in the northwestern part of Maine. It comprises a section in which are located the lakes and headwaters of the Androscoggin River.

They are, starting at the extreme northern point and working south, the Seven Ponds, the upper section of Kennebago Stream, Little Kennebago Lake, through which Kennebago Stream runs, the middle section of Kennebago Stream, which connects with Kennebago Lake, and then continues south to Kennebago Falls, where the middle section of the stream ends.

Continuing south from Kennebago Falls there is the lower section of Kennebago Stream, which joins Rangeley Stream, which stream connects Rangeley Lake with Cupsuptic Lake. Then comes Mooselucmaguntic Lake, Upper Richardson Lake, Lower Richardson Lake, and Umbagog Lake, the last-named emptying into the Androscoggin River.

In addition to these lakes there is Parmachenee Lake, which is to the northwest of Cupsuptic Lake and located about parallel with Little Kennebago Lake and separated from it by West Kennebago Mountain and Cupsuptic Stream.

TROUT FLY-FISHING IN AMERICA

Parmachenee Lake empties into the Magalloway River, which in turn runs into the Androscoggin River at Umbagog Lake.

Besides the lakes and streams mentioned there are a number of small lakes and streams connected with the larger ones, in all of which there is good fly-fishing to be had for the Brook Trout.

Even at this late date comparatively little is really known about this remarkable portion of Maine, notwithstanding the fact that much has been written about the fly-fishing to be had there.

Anglers who fish almost exclusively in the streams of New York and Pennsylvania, within easy reach from New York City, have little or no knowledge of the wonderful sport on lake and stream that is to be had in this region. These anglers, in many instances, have been prone to call fly-fishing in Maine waters "wilderness fishing," and have rather assumed the attitude that little skill was required to catch the trout found in these waters.

Such an assumption, however, is far from the truth, as these anglers would quickly realize if they were to take just one fishing trip to any of the many good trout waters found in the Rangeley Region and elsewhere in the State of Maine.

It is true that this region has been, and is being, more civilized year by year, and some of the charms of wild life are disappearing slowly but surely, yet for a long time to come nature lovers and anglers will find many places where they can enjoy the best of sport on stream and lake

TROUT FLY-FISHING IN AMERICA

away up among the mountains, and where real health and strength, in addition to the best of fly-fishing, are to be found.

In the "Rangeley Lakes," which consist of Rangeley Lake (Oquassoc Lake), Cupsuptic Lake, Mooselucmaguntic Lake, the Upper Richardson Lake (Welokenebacook Lake), the Lower Richardson Lake (Molechunke-munk Lake), and Umbagog Lake and the streams connecting and running into them, no other fish than the Brook Trout and land-locked Salmon are found, except four varieties of fish upon which the trout and salmon feed. These four varieties are the Chub, the Sucker, the Minnow and the small "Blue-Back" trout, and on this account fly-fishing has an added pleasure.

The angler in these waters is not restricted to fly-fishing, as the law permits him to bait-fish and troll, but it is sincerely hoped that before many years go by bait-fishing for trout and land-locked salmon will be done away with, by law if necessary, but preferably by the education of the anglers themselves.

The best section of the Rangeley Region for fly-fishing, considering everything from the angler's viewpoint, is Kennebago Lake, Little Kennebago Lake, the upper Kennebago Stream and the Seven Ponds. In all these waters there are but four varieties of fish, all told. They are the Brook Trout, the land-locked Salmon, the Smelt and the Minnow, the two latter varieties furnishing the food for the two former.

Fishing on Kennebago Stream below the Falls and in

TROUT FLY-FISHING IN AMERICA

this last-named section is restricted entirely to fly-fishing with the artificial fly, which naturally keeps this method of fishing "at par" year after year.

The Fish and Game Commission of the State of Maine is doing great work in preserving the fishing all over the State, and especially in the Rangeley Region, by stocking the waters yearly and by having wise laws passed by the Legislature restricting the number of trout and salmon that shall be killed in one day by one angler.

All the waters so restricted are well watched by fish wardens, and the guides, in almost every instance, see to it that their patrons observe the laws.

It is only fair, however, to say that nowadays and for a few years past anglers have seldom intentionally broken the laws, for they are beginning to realize that "their sport," if it is to be perpetuated, must be carried on with judgment, and that game fish should not be needlessly or wantonly killed.

The laws do not restrict the fly-fishing angler, in certain places, from catching in numbers both trout and salmon. They simply restrict the number he shall catch and kill in one day.

This is a wise law, because the angler is not deprived of the pleasure of catching fish by the number of fish he may legally kill, and the fish that are caught on the fly and returned to the water are seldom hurt.

For a number of years I have carefully studied and observed the fish and the fly-fishing conditions in Kennebago Stream, both above and below the Falls and in the upper

TROUT FLY-FISHING IN AMERICA

Rangeley Region section, and my experience has been that of the trout or salmon caught on the fly and immediately returned to the water not more than one out of an hundred dies even after being weighed.

At present, 1914, the law permits one angler to kill in one day two fish caught on the fly in the stream below Kennebago Falls and to kill ten fish caught on the fly above the Falls and in the waters of the upper section.

It is with a great deal of satisfaction that I am able to say that few sportsmen (be they tyros or experienced anglers) when fishing these waters avail themselves of the privilege of killing their legal number of fish a day. This condition, in a modest way, I have in some degree helped to bring about with the aid of the guides. It is the exception, not the rule, to-day that the angler kills his legal limit. On the other hand, he saves no more fish than he wants to eat or desires to have mounted or preserved for scientific purposes.

In what I have called the upper Rangeley Region section, but more especially in Kennebago Lake, Little Kennebago Lake and the upper section of Kennebago Stream, is to be had the finest of trout fly-fishing.

In these waters the trout range in weight from one-quarter of a pound to four pounds, and it is not unusual in the early Spring and during the month of September to catch trout weighing up to five pounds actual weight.

Trout have been caught weighing seven pounds, and it is an established fact that there are many such fish in

TROUT FLY-FISHING IN AMERICA

these waters, but they seldom rise to the fly of even the most expert of fly fishermen.

But the fact alone that these "big trout" are there and are seen "rolling" is sufficient to make the ardent angler fish for them both early and late with the hope that some time he will induce one of them to take his fly.

And when the time comes he will have one of the greatest pleasures of his life, short in a sense, but lasting from half an hour to an hour and a half, depending upon the fighting qualities of the trout.

These "big trout" are slow but steady fighters, as a rule, and it does not do for the angler who has one of them on his hook to try and land him in a hurry if he has any wish to net him.

And here let me impress upon all sportsmen that the proper method of landing a trout, no matter how large it may be, is with the net and never with the gaff. Do not degrade yourself in the eyes of others and in your own estimation, if you are a high-minded fly-fishing sportsman, by thrusting the barbarous gaff into the body of "the most beautiful fish that swims," the *Salvelinus-Fontinalis*.

Large trout, even those that weigh up to ten and twelve pounds, can be successfully netted with the proper-sized net, a little care and a reasonable amount of judgment. The judgment is displayed in not trying to net the fish before the proper time, which is after it has been played to such an extent that it has turned on its side or is under absolute control.

When speaking of fly-fishing in the entire Rangeley

TROUT FLY-FISHING IN AMERICA

Region and particularly in the upper section, there is one subject that must not be overlooked, and that is the guides.

These guides are licensed and registered, and are a most remarkable lot of men. They are in most cases skilful fishermen, willing workers, courteous and obliging to a degree, patient with their patrons under trying circumstances, and they know where and how to fish on lake and stream at all times.

The guides of this section are largely natives and come from families where the fathers and grandfathers before them, in many cases, have been guides. So it is not strange that they know their business of guiding, and know it well, and nearly always have the "fish sense" well developed. In addition, they are such efficient boatmen and powerful canoeists that any angler (male or female) is absolutely safe in their hands.

When fishing Kennebago Stream below the Falls (the lower section of the stream), it is compulsory for the angler to have a guide, and he must fish in the presence of this guide.

On all other waters it is *not* compulsory to employ a guide; but if the angler wishes to have the best sport and obtain the greatest amount of pleasure and success, a guide is essentially desirable and absolutely necessary if the waters are to be properly fished.

The open season in Maine begins when the ice goes out of the lakes in the Spring and lasts until the first day of October in each year, except in a few places where special restrictions are imposed by law.

TROUT FLY-FISHING IN AMERICA

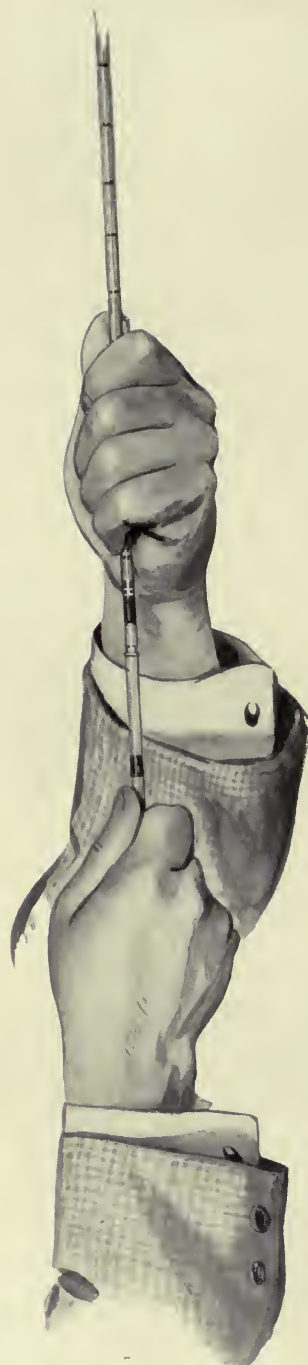
All through the Rangeley Region the angler can find good camps at which to put up where the food is good and plentiful, and where guides are to be obtained, as a rule.

Board at the camps costs from \$2.50 to \$3.00 per day, but special rates can be obtained for a stay of a week or more. Boats or canoes cost 50 cents per day, or \$3.00 if hired by the week. It costs \$3.00 per day for a guide, and the angler has to pay for the guide's board, which varies from \$1.00 to \$1.25 per day, depending upon the camp.

If two anglers go together, then the cost of the guide, his board and the cost of the boat or canoe can be cut in half.

Provided that anglers can afford it, the better way is for each angler to have his own guide and boat, because in this way greater pleasure and success are to be had while fishing.

After having fished many waters in the States where the Brook Trout is to be found in streams and lakes, and having fished the Rangeley Region for years, and more especially the upper section, both in the Spring and Fall, I am prepared to say without reservation that there is no place in the United States which offers to the angler such wonderful fly-fishing for the Speckled Beauty, and where they are so plentiful and grow to such a great size as in the Rangeley Region of Maine.



SHOWING HOW TO DISJOINT A ROD WITH TWO HANDS

CHAPTER XVII

WET-FLIES USED IN VARIOUS STATES

SOME years ago, about 1890, Mr. Charles F. Orvis, of Manchester, Vermont, wrote to many anglers in the United States, asking them for their views as to the favorite or successful flies used by them in fishing the waters of their State.

A number of replies were received and were published in 1892 by Mary Orvis Marbury, a daughter of Mr. Orvis, in her book entitled "Favorite Flies," and she geographically classified them therein.

In order that the angler reader can more readily ascertain the favorite and successful flies of any State mentioned, I have tabulated the flies, giving the name of the State, the number of letters received from each State, the number of different flies named and the number of times each fly is mentioned.

There is also a list of the 126 different flies arranged alphabetically mentioned by the 124 anglers.

There are two recapitulations. One showing the total number of flies mentioned and the different flies mentioned in each State; the other giving the order, the names of the twelve most popular or favorite flies, the number of

TROUT FLY-FISHING IN AMERICA

States in which each fly is mentioned and the number of times each fly is mentioned.

Names of States and Groups of States

1	Maine	7	Michigan
2	{ New Hampshire and Vermont	8	{ Minnesota and Wisconsin
3	{ Massachusetts, Rhode Island and Connecticut	9	Montana
4	New York	10	Colorado
5	{ New Jersey, Pennsylvania and Delaware	11	Washington
6	{ Virginia and West Virginia	12	California
		13	Oregon
		14	Wyoming
		15	Arizona
		16	Nevada

TROUT FLY-FISHING IN AMERICA

MAINE

Letters Received from 17 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Montreal	14
2	Silver Doctor	10
3	Parmachenee Bell	9
4	Brown Hackle	7
5	Grizzly King	5
6	Professor	5
7	Scarlet Ibis	5
8	Red Ibis	3
9	Blue Jay	3
10	White Miller	3
11	Yellow May	3
12	B. Pond	2
13	Jenny Lind	2
14	Jungle Cock	2
15	Toodle Bug	2
16	Quack Doctor	2

The following 28 flies were mentioned only once:

Reuben Wood	Richardson
Royal Coachman	Bumble Bee
Golden Pheasant	Seth Green
Tinseled Ibis	Webster
Black Hackle	Hamlin
Yellow Sally	Hill Fly
Yellow Moose	Red Hackle
Lord Baltimore	Prouty
Magalloway	Nameless
Tim Pond	Bemis
Coachman	New Lake
Cabinet	Portland
Cow Dung	Abbey
Queen of the Water	Black Gnat

Total number of different flies mentioned, 44.

TROUT FLY-FISHING IN AMERICA

VERMONT and NEW HAMPSHIRE

Letters Received from 8 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	3
2	Grizzly King	3
3	Professor	3
4	Black Gnat	3
5	Alder	2
6	Seth Green	2
7	Fin Fly	2
8	White Miller	2
9	Grasshopper	2
10	Brown Hackle	2

The following 12 flies were mentioned only once:

Blue Jay	Scarlet Ibis
No Name	Leadwing Coachman
Parmachenee Bell	Black Hackle
Governor	Royal Coachman
Gray Hackle	Coch-y Bonddu
Brown Hen	Hackles

Total number of different flies mentioned, 22.

TROUT FLY-FISHING IN AMERICA

MASSACHUSETTS, RHODE ISLAND and CONNECTICUT

Letters Received from 8 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	3
2	White Miller	3
3	Montreal	2
4	Yellow May	2
5	Scarlet Ibis	2
6	Red Hackle	2
7	Silver Doctor	2
8	Parmachenee Bell	2
9	Grizzly King	2

The following 11 flies were mentioned only once:

Black May	Perch Fly
Red Spinner	Silver King
Alder	Raven
Brown Hackle	Black Prince
Jenny Lind	Royal Coachman
Polka	

Total number of different flies mentioned, 20.

TROUT FLY-FISHING IN AMERICA

NEW YORK

Letters Received from 24 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	11
2	Brown Hackle	9
3	Professor	7
4	Green Drake	5
5	Grizzly King	5
6	Queen of the Water	4
7	Red Ibis	4
8	Cow Dung	4
9	Governor	4
10	Montreal	4
11	Beaverkill	3
12	Black Gnat	3
13	Reuben Wood	3
14	Ginger Hackle	3
15	Black Hackle	3
16	Seth Green	3
17	White Miller	3
18	Orange Miller	3
19	Silver Doctor	2
20	Van Patton	2
21	Scarlet Ibis	2
22	Royal Coachman	2
23	Quaker	2
24	Alder	2

The following 14 flies were mentioned only once:

Yellow Professor	Blue Professor
Magpie	Babcock
Griffith	Brown Hen
Gov. Alvord	Proctor Fly
Soldier Palmer	Blue Jay
Romeyn	Davidson Hackle
Brown Palmer	Claret

Total number of different flies mentioned, 38.

TROUT FLY-FISHING IN AMERICA

PENNSYLVANIA, NEW JERSEY and DELAWARE

Letters Received from 10 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Queen of the Water	5
2	Coachman	4
3	Cow Dung	4
4	Grizzly King	3
5	Silver Doctor	2
6	Polka	2
7	Stone Fly	2
8	Black Gnat	2
9	Yellow Sally	2

The following 12 flies were mentioned only once:

Professor	Jenny Lind
Bright Fox	Brown Palmer
Hamlin	Montreal
Seth Green	King of the Water
Red Fox	Bishop
Gray Hackle	Lord Baltimore

Total number of different flies mentioned, 21.

TROUT FLY-FISHING IN AMERICA

VIRGINIA and WEST VIRGINIA

Letters Received from 10 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Queen of the Water	6
2	All Hackles	6
3	Coachman	4
4	White Miller	4
5	Black Gnat	3
6	Cow Dung	2
7	Montreal	2

The following 10 flies were mentioned only once:

Jock Scott
Lord Baltimore
Green and Gold
Red Ibis
Blue Dun
Professor
Yellow Fly
Scarlet Ibis
The Owner
Royal Coachman

Total number of different flies mentioned, 17.

TROUT FLY-FISHING IN AMERICA

MICHIGAN

Letters Received from 8 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	6
2	Professor	5
3	Hackles	3
4	Yellow May	2
5	Black Gnat	2
6	Cow Dung	2
7	Grizzly King	2
8	Silver Doctor	2
9	Bee	2
10	Scarlet Ibis	2

The following 8 flies were mentioned only once:

Seth Green
Widow
March Brown
Gray Miller
Fire Fly
Royal Coachman
White Miller
Montreal

Total number of different flies mentioned, 18.

TROUT FLY-FISHING IN AMERICA

MINNESOTA and WISCONSIN

Letters Received from 4 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Brown Hackle	2
2	Montreal	2

The following 10 flies were mentioned only once:

Gnats
Millers
Parmachenee Bell
Coachman
Deer Fly
Leadwing Coachman
Abbey
Seth Green
Professor
Academy

Total number of different flies mentioned, 12.

TROUT FLY-FISHING IN AMERICA

MONTANA

Letters Received from 6 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	4
2	Brown Hackle	4
3	Professor	3
4	Black Gnat	2

The following 11 flies were mentioned only once:

Grasshopper
Imbrie
Cheney
Captain
White Miller
Deer Fly
Royal Coachman
Gray Hackle
Jungle Cock
Gray Alder
Queen of the Water

Total number of different flies mentioned, 15.

TROUT FLY-FISHING IN AMERICA

COLORADO

Letters Received from 8 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	6
2	Brown Hackle	5
3	Royal Coachman	3
4	Black Gnat	2
5	Leadwing Coachman	2
6	Grizzly King	2

The following 9 flies were mentioned only once:

Gray Drake
Governor
Willow
New Fly
Gray Hackle
Professor
Queen of the Water
King of the Water
Brown Caughlan

Total number of different flies mentioned, 15.

TROUT FLY-FISHING IN AMERICA

WASHINGTON

Letters Received from 6 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Brown Hackle	6
2	Professor	5
3	Coachman	5
4	Black Gnat	2
5	Royal Coachman	2

The following 8 flies were mentioned only once:

Red Hackle
Scarlet Ibis
Hackles
Governor
Cow Dung
White Miller
Curtis
Lord Baltimore

Total number of different flies mentioned, 13.

TROUT FLY-FISHING IN AMERICA

CALIFORNIA

Letters Received from 4 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Royal Coachman	2
2	Black Gnat	2
3	White Miller	2
4	Brown Hackle	2

The following 17 flies were mentioned only once:

Hackles
Caddis
Coachman
Professor
Brown Hen
Yellow Bumble
Willard Gray
Wilson's Ant
Bicknell Fly
Beans Fly
Shain Fly
Spider
Governor
Duns
Cow Dung
Gray Drake
Green Drake

Total number of different flies mentioned, 21.

TROUT FLY-FISHING IN AMERICA

OREGON

Letters Received from 7 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	5
2	Brown Hackle	5
3	Professor	3
4	Royal Coachman	2
5	Cow Dung	2
6	Jungle Cock	2
7	Green Drake	2
8	White Miller	2
9	Soldier Palmer	2

The following 18 flies were mentioned only once:

Black Midge	Claret
Grizzly King	Nicholson
Montreal	Silver Lady
Romeyn	Maid of the Mill
Yellow Drake	Queen of the Water
Yellow May	Humming Bird
Deer Hair Fly	Reuben Wood
Governor	Jock Scott
Bee	Donkey

Total number of different flies mentioned, 27.

TROUT FLY-FISHING IN AMERICA

WYOMING

Letters Received from 2 Anglers

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Black Gnat	2
2	White Miller	2
3	Coachman	2

The following 6 flies were mentioned only once:

Royal Coachman
Professor
Dark Cow Dung
Scarlet Ibis
Imbrie
Montreal

Total number of different flies mentioned, 9.



SHOWING HOW TO DISJOINT A ROD WITH FOUR HANDS

TROUT FLY-FISHING IN AMERICA

ARIZONA

Letter Received from 1 Angler

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Brown Ant	1
2	Yellow Sally	1
3	Coachman	1
4	Royal Coachman	1

Total number of different flies mentioned, 4.

NEVADA

Letter Received from 1 Angler

<i>Order of Popularity</i>	<i>Name of Flies</i>	<i>Number of Times Mentioned</i>
1	Coachman	1
2	Brown Hackle	1
3	Black Hackle	1
4	Professor	1
5	Black Gnat	1
6	Cow Dung	1
7	Alder	1
8	Abbey	1

Total number of different flies mentioned, 8.

TROUT FLY-FISHING IN AMERICA

List of the different flies named by 124 anglers in 16 States or groups of States, tabulated from Mary Orvis Marbury's book, "Favorite Flies."

Number of States in which each fly is mentioned, shown in brackets

Abbey	(3)	Claret	(2)
Academy	(1)	Coachman	(16)
Alder	(4)	Coch-y Bonddu	(1)
		Cow Dung	(9)
Babcock	(1)	Curtis	(1)
Beaverkill	(1)		
Bean's Fly	(1)	Dark Cow Dung	(1)
Bemis	(1)	Davidson Hackle	(1)
Bee	(2)	Deer Fly	(2)
Bishop	(1)	Deer Hair Fly	(1)
Bicknell Fly	(1)	Donkey	(1)
B. Pond	(1)	Duns	(1)
Black Gnat	(12)	Fin Fly	(1)
Black May	(1)	Fire Fly	(1)
Black Midge	(1)		
Black Hackle	(4)	Ginger Hackle	(1)
Black Prince	(1)	Gnats	(1)
Blue Dun	(1)	Golden Pheasant	(1)
Brown Ant	(1)	Gov. Alvord	(1)
Brown Hen	(3)	Governor	(6)
Brown Hackle	(11)	Gray Alder	(1)
Brown Palmer	(2)	Gray Drake	(2)
Blue Jay	(3)	Gray Hackle	(4)
Blue Professor	(1)	Gray Miller	(1)
Brown Caughlan	(1)	Green and Gold	(1)
Bright Fox	(1)	Green Drake	(3)
Bumble Bee	(1)	Grizzly King	(8)
		Grasshopper	(2)
Cabinet	(1)	Griffith	(1)
Caddis	(1)		
Captain	(1)	Hackles	(5)
Cheney	(1)	Hamlin	(2)

TROUT FLY-FISHING IN AMERICA

Hill Fly	(1)	Red Hackle	(3)
Humming Bird	(1)	Red Ibis	(3)
Imbrie	(2)	Red Spinner	(1)
Jenny Lind	(3)	Reuben Wood	(3)
Jock Scott	(2)	Richardson	(1)
Jungle Cock	(3)	Romeyn	(2)
King of the Water	(2)	Royal Coachman	(13)
Leadwing Coachman ...	(4)	Scarlet Ibis	(8)
Lord Baltimore	(4)	Seth Green	(6)
Magpie	(1)	Shain Fly	(1)
Maid of the Mill	(1)	Silver Doctor	(5)
Magalloway	(1)	Silver King	(1)
March Brown	(1)	Silver Lady	(1)
Millers	(1)	Soldier Palmer	(2)
Montreal	(9)	Spider	(1)
Nameless	(1)	Stone Fly	(1)
New Fly	(1)	The Owner	(1)
New Lake	(1)	Tim Pond	(1)
Nicholson	(1)	Tinseled Ibis	(1)
No Name	(1)	Toodle Bug	(1)
Orange Miller	(1)	Van Patton	(1)
Parmachenee Bell	(4)	Webster	(1)
Perch Fly	(1)	White Miller	(11)
Polka	(2)	Widow	(1)
Portland	(1)	Willow	(1)
Proctor Fly	(1)	Willard Gray	(1)
Professor	(14)	Wilson's Ant	(1)
Prouty	(1)	Yellow Bumble	(1)
Quack Doctor	(1)	Yellow Drake	(1)
Quaker	(1)	Yellow Fly	(1)
Queen of the Waters ...	(7)	Yellow May	(4)
Raven	(1)	Yellow Moose	(1)
Red Fox	(1)	Yellow Professor	(1)
		Yellow Sally	(3)

TROUT FLY-FISHING IN AMERICA

List of Trout Flies mentioned under the headings of the following States are tabulated from data taken from Mary Orvis Marbury's book, entitled "Favorite Flies."

<i>Number</i>	<i>Name of State</i>	<i>Total No. Flies Mentioned</i>	<i>Different Flies Mentioned</i>
1	Maine	105	44
2	New Hampshire and Vermont	36	22
3	Massachusetts, Rhode Island and Connecticut	31	20
4	New York	107	38
5	New Jersey, Pennsylvania and Delaware	38	21
6	Virginia and West Virginia.	37	17
7	Michigan	36	18
8	Minnesota and Wisconsin...	14	12
9	Montana	24	15
10	Colorado	29	15
11	Washington	28	13
12	California	25	21
13	Oregon	43	27
14	Wyoming	12	9
15	Arizona	4	4
16	Nevada	8	8

TROUT FLY-FISHING IN AMERICA

Tabulation showing the most popular or "Favorite Fly" of all the States mentioned.

<i>Order</i>	<i>Name of Flies</i>	<i>Number of States in which the fly is mentioned</i>	<i>Number of times fly is mentioned by anglers</i>
1	Coachman	16	58
2	Professor	14	38
3	Royal Coachman	13	19
4	Black Gnat	12	25
5	Brown Hackle	11	44
6	White Miller	11	24
7	Montreal	9	28
8	Cow Dung	9	18
9	Grizzly King	8	23
10	Scarlet Ibis	8	15
11	Queen of the Waters	7	19
12	Silver Doctor	5	18

These twelve flies make an especially good assortment for use anywhere in the sixteen States mentioned.

Classification of these flies for coloration

<i>Light</i>	<i>Medium</i>	<i>Dark</i>
(1) Coachman	(2) Professor	(4) Black Gnat
(3) Royal Coachman	(8) Cow Dung	(5) Brown Hackle
	(9) Grizzly King	(7) Montreal
(6) White Miller	(10) Queen of the Waters	(10) Scarlet Ibis
		(12) Silver Doctor

CHAPTER XVIII

DRY-FLIES USED IN ENGLAND AND AMERICA

ALTHOUGH there are a number of different patterns of dry-flies used in England, those in vogue and used by the greater number of good dry-fly men are the ones suggested by the dean of dry-fly fishermen, Frederic M. Halford.

In America we have not as yet any one who fills just such a place in the dry-fly fishing world as does Mr. Halford in England, because the application of the art in this country is not old enough, in the first place, and because the American method fundamentally differs from the English method in the second place.

The difference between the English and American method being that with the former the angler only "fishes the rise," while with the latter he "fishes the stream"; in other respects the two methods are practically the same.

The following pages give Frederic M. Halford's latest patterns of dry-flies, a list of dry-flies taken from George A. B. Dewar's book, entitled "The Book of the Dry-Fly," a list of dry-flies given by Emlyn M. Gill in his book, called "Practical Dry-Fly Fishing," and a list of dry-flies used in America:

TROUT FLY-FISHING IN AMERICA

List of Dry-Flies

Latest Patterns of Frederic M. Halford

(The great English authority)

- | | | |
|----|-----------------------------|-------------------|
| 1 | Green May-fly, | } Male and Female |
| 2 | Brown May-fly, | |
| 3 | Spent Gnat, | |
| 4 | Olive Dun, | |
| 5 | Dark-Olive Dun, | |
| 6 | Olive Spinner, | |
| 7 | Pale Watery Dun, | |
| 8 | Pale Watery Spinner, | |
| 9 | Iron-blue Dun, | |
| 10 | Iron-blue Spinner | |
| 11 | Blue Winged Olive, | |
| 12 | Sherry Spinner, | |
| 13 | Black Gnat, | |
| 14 | Welshman's Button, | |
| 15 | Olive (red) Spinner, Female | |
| 16 | Brown Ant | |
| 17 | Small Dark Sedge | |
| 18 | Medium Sedge | |
| 19 | Cinnamon Sedge | |

TROUT FLY-FISHING IN AMERICA

List of dry-flies taken from George A. B. Dewar's book, entitled "The Book of the Dry-Fly":

ENGLISH

- 1 May-fly (light)
- 2 Great Red Spinner
(Imago of March-brown)
- 3 Grannom
- 4 Jenny Spinner
(Imago of Iron-blue Dun)
- 5 Little May Dun
- 6 Red Spinner
(Imago of Blue Dun)
- 7 Black Gnat
- 8 Blue Dun
- 9 Alder
- 10 Iron-blue Dun
- 11 Yellow Dun
- 12 May-fly (dark)
- 13 March-brown

TROUT FLY-FISHING IN AMERICA

List of dry-flies taken from Emlyn M. Gill's book, entitled "Practical Dry-Fly Fishing":

AMERICAN.

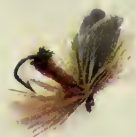
- 1 Whirling Dun
- 2 Wickham's Fancy
- 3 Pale Evening Dun
- 4 Jenny Spinner
(Hackle Fly)
- 5 Willow Fly
(Hackle Fly)
- 6 Orange Fish Hawk
(Hackle Fly)
- 7 Olive Dun
- 8 Soldier Palmer
(Hackle Fly)
- 9 Silver Sedge
- 10 Red Spinner
- 11 White Miller
- 12 Coachman
- 13 Black Gnat

TROUT FLY-FISHING IN AMERICA

List of Dry-Flies Used in America

Apple Green	Pale Evening Dun
Black Gnat	Pink Lady
Blue Quill	Professor
Brown Sedge	Parmachenee Bell
Beaverkill	Pink Wickhams
Cahill	Queen of the Waters
Coachman	Red Spinner
Cow Dung	Red Ant
Flight's Fancy	Red Quill
Grannom	Royal Coachman
Governor	Red Tag
Gordon	Rube Wood
Grizzly King	Silver Sedge
Gold Ribbed Hare's Ear	Soldier Palmer
Ginger March Brown	Whirling Blue Dun
Ginger Quill	Whirling Dun
Hare's Ear	White Miller
Iron Blue Quill	Wickham's Fancy
Iron Blue Dun	Willow
Jenny Spinner	Yellow Sally
Little Yellow May	Welshman's Button
Little Marryat	Dark Sage
Medium Olive Quill	Autumn Dun
Medium Olive Dun	Alder
March Brown	Orange Sedge
Mole	Needle Brown
Orange Fishhawk	Orange Bumble
Pale Olive Quill	Yellow Bumble
Pale Watery Quill	Furnace

PLATE OF 10 POPULAR DRY FLIES USED BY ANGLERS
IN THE UNITED STATES AND WHICH ARE OBTAINABLE
AT ALMOST ANY GOOD TACKLE STORE



RED ANT



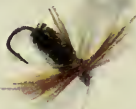
BLACK GNAT



SILVER SEDGE



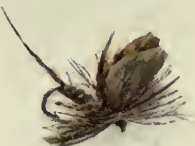
HARES EAR



COACHMAN



HOFLAND'S FANCY



MARCH BROWN



GREENWELL'S GLORY



WICKHAM'S FANCY



PALE EVENING DUN

CHAPTER XIX

LIST OF WET-FLIES

THE following list of wet-flies comprises the flies made by a number of fly manufacturers, many of them are carried in stock by tackle dealers, while others can only be had by giving a special order for them.

Many of them are seldom used, and many of them are of little use, except in special waters, but to make the list fairly complete I have included them with flies that are used every day during the open season for trout.

Abbey	Ben Butler
Adder	Bissett
Adirondack	Bicknell
Alder	Black Gnat
Allerton	Black Ant
Alexander, Geo. L.	Black May
Alexandria	Black June
Alice	Black Prince
Ashy	Black Hackle
Ash Fox	Block House
August Dun	Blue Blow
Autumn Dun	Blue Bottle
	Blue Professor
Baldwin	Blue Upright
Beaverkill	Bostwick
Ben Bent	Bowman

TROUT FLY-FISHING IN AMERICA

Brown Adder	Cheney
Brown Ant	Chittenden
Brown Drake	Claret
Brown Gnat	Cinnamon
Brown Hackle	Cow Dung
Brown Spinner	Cody
Brown Coffin	Cabinet
Brown Hen	Coch-y Bonddu
Brown Caughlan	Curtis
Bright Fox	Caddis
Bright Claret Gnat	Critchley Fancy
Blue Jay	
B. Pond	Dark Stone
Bee	Dark Blue Dun
Bumble Bee	Dark Fox
Bemis	Dark Spider
Babcock	Dark Claret Gnat
Brown Palmer	Dark Stone
Bishop	Deer Fly
Blue Dun	Dave Holmes
Bean's Fly	Dr. Beatty
Black Midge	Dewey
Barrington	Dun-Spinner
Brandreth	Dorset
Buck Tail	Dusty Miller
	Dark Cow Dung
Coachman	Davidson Hackle
Caldwell	Donkey
Camlet Dun	
Canada	Egg
Cahill	Emerald Gnat
Caparer	Emerald Dun
Carmen	Ethel May
Captain	Esmeralda
Captain Scott	Epting Fly
Carleton	Equinox Gnat
Carter H.	English Pheasant

TROUT FLY-FISHING IN AMERICA

Fern	Gray Miller
Ferguson	Gray Alder
Ferris	Gray Hackle
Fœtid Brown	Griffith
Fiery Brown	Green and Gold
Francis Fly	Golden Pheasant
Flight's Fancy	Grasshopper
Fœtid Green	Governor Russell
Fin Fly	
Fire Fly	Hare's Ear
Fox Hackle	Hamlin
Findlay	Hamlin (Middle Dam)
	Hammond's Adopted
General Hooker	Hawthorn
Gray Drake	Hod
Gray Caughlan	Hoskins
Governor	Hofland's Fancy
Great Barrington	Hill Fly
Greenwell's Glory	Humming Bird
Golden Spinner	
Golden Monkey	Imbrie
Governor Alvord	Iron Blue Dun
Ginger Hackle	Indian Crow
Gosling	
Gauze Wing	Jenny Lind (Blue)
Grannom	Jenny Lind (Lavender)
Green Drake	Jenny Spinner
Great Dun	Jewel
Grizzly King	Josephine
Grizzly Dutchman	Jock Scott
Good Evening	Jungle Cock
Gray Gnat	
Green Hackle	King of the Water
Grizzly Hackle	Katy Did
Gray Coffin	Kingdon
Guinea Hen	Kingfisher
George Wood	

TROUT FLY-FISHING IN AMERICA

Kitson	Orange Miller
Kineo	Oak Fly
Lake Green	Olive Gnat
Lady of the Lake	Orange Gnat
Laramie	Orange Dun
Lady Sue	Orange Hackle
Lady Martha	
Lowry	Pale Evening Dun
Logan	Parmachenee Bell
Lord Baltimore	Parmachenee Beau
Leadwing Coachman	Parker
Lake George	Puffer
Lester	Pheasant
	Portland
March Brown	Poorman's Fly
Marston's Fancy	Polka
Magpie	Plum
Major Pitcher	Prime Gnat
Mead Fly	Perch Fly
Montreal (Dark)	Proctor Fly
Montreal (Light)	Professor
Morrison	Prouty
McGinty	Page Fly
Maid of the Mill	Preston
Magalloway	
Marsters	Queen of the Waters
Moose Head	Quaker
Mosie Grub	Quack Doctor
Mill's No. 1	
Neversink	Raven
Number 68	Red Ant
Nameless	Red Ash
New Fly	Red Head
New Lake	Red Spinner
Nicholson	Red Fox
No Name	Red Spider
	Red Hackle

TROUT FLY-FISHING IN AMERICA

Reuben Wood
Romeyn
Ronald's Stone
Red Ibis
Richardson
Royal Coachman

Sand Fly
Seth Green
Scarlet Ibis
Soldier Palmer
Shad Fly
Shoemaker
Soldier
Soldier Moth
Sedge Fly
Shain Fly
Soldier Gnat
St. Patrick
Southside
Spider
Stone Fly
Silver Black
Silver Horns
Silver Doctor
Silver Spot
Silver Dun
Silver Nail
Sunset
Stalkneck
Stebbins

Thacher
Teal
Treehopper
The Owner
Tim Pond

Tinseled Ibis
Toodle Bug

Van Patton

Wren Tail
Wimbrel
Wasp
Witcher
White Miller
White Moth
White Wings
Widow
Willow
Wickham's Fancy
Wilson's Ant
Wyoming
Woodcock
Webster
Willard Gray
White Hackle
Wren Fly
Widgeon
Wood Duck
Western Bee

Yankee
Yellow Bumble
Yellow Drake
Yellow Fly
Yellow Moth
Yellow Moose
Yellow Professor
Yellow Sally
Yellow Coachman
Yellow Hackle
Yellow Montreal

CHAPTER XX

MISCELLANEOUS MATTERS

Subjects:

- 1 Rules of the road
- 2 In relation to fly-rods
- 3 In relation to reels
- 4 In relation to lines
- 5 In relation to leaders
- 6 In relation to flies
- 7 In relation to nets
- 8 How to net a fish
- 9 How to carry a set-up rod
- 10 How to kill trout
- 11 How to clean trout
- 12 How to prepare trout to carry or ship
- 13 How to tell the weight of trout
- 14 The strength of fly-rods
- 15 About large trout
- 16 Knots used in fly-fishing
- 17 Angler's clothing

THIS chapter, devoted to matters about which every beginner ought to know, is written with the hope that what is said will be of some lasting interest to them, not only as tyros, but later, perhaps, as experienced fly fishermen.

PLATE OF THE 12 MOST POPULAR WET FLIES USED BY ANGLERS
IN THE UNITED STATES; DATA TAKEN FROM MARY ORVIS MARBURY'S
BOOK ENTITLED "FAVORITE FLIES"

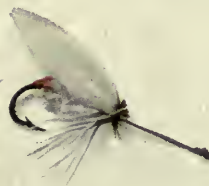
LIGHT
COLORED FLIES



(1) COACHMAN



(3) ROYAL COACHMAN



(6) WHITE MILLER

MEDIUM
COLORED FLIES



(2) PROFESSOR



(8) COWDUNG



(9) GRIZZLY KING



(11) QUEEN OF THE WATERS

DARK
COLORED FLIES



(4) BLACK GNAT



(5) BROWN HACKLE



(7) MONTREAL



(10) SCARLET IBIS



(12) SILVER DOCTOR

NOTE:
THE NUMBER GIVES THE ORDER
OF POPULARITY

TROUT FLY-FISHING IN AMERICA

Rules of the Road:

There are certain unwritten rules governing the actions of anglers that every true sportsman should observe, and they are called "the rules of the road."

When in a boat or canoe never go through good fishing water where an angler is fishing. Go around it.

Never fish any water within casting distance of another angler, unless invited to do so.

Never disturb any fishing water more than is absolutely necessary. Remember that other anglers are likely to take your place when you move along.

Before passing an angler who is on a stream, fishing from a boat or canoe, notify him of your intention to pass, and apologize for so doing, and pass as close to the angler's boat as possible, so as not to disturb his fishing water more than is necessary.

When through fishing on a small stream or brook, do not tramp along the banks like a longshoreman going home from work. Remember some other angler may be following after you, who likewise enjoys the sport of fishing, and trout are more scared by vibrations set up by a pounding walker than almost anything else.

Courtesy, good nature, fair-mindedness and a kindly spirit should be the universal attitude between sportsmen at all times.

In Relation to Fly-Rods:

Never set up a rod in a hurry; do it deliberately and carefully, and you will find it is time well invested.

TROUT FLY-FISHING IN AMERICA

When taking down a rod never twist the joints; always separate them with a straight pull, since, in this way, you will not wring or injure the rod.

Do not take down a rod any oftener than is really necessary when on a fishing trip. No advantage is gained by so doing.

A rod should always be wiped after using, irrespective of whether or not it is wet, and it should be thoroughly done.

Never stand a rod upright so as to bend the tip, but place it when possible in a horizontal position on rests that are about eighteen or twenty inches apart.

When rods are taken down, the ferrules should be wiped with an oily rag, but care should be taken that no free oil is left after so doing.

As more fly-rods are injured when being taken down or disjoined than any other way, especially when they are very tightly set, I suggest that it be done by two persons facing each other. Both should place a hand on the rod each side of the joint, then by each pulling with one hand and pushing with the other, doing so steadily (not jerking), the rod will quickly be disjoined and without injury.

In Relation to Reels:

Reels should be kept clean and well oiled, but no oil should be allowed to creep to the exposed surface of any part of the reel.

TROUT FLY-FISHING IN AMERICA

When reeling or unreeling a line, other than when fishing, it should be done with the click of the reel off.

The reel will last longer if this is observed.

In Relation to Lines:

Be careful never to step on or kink an enameled line, for it will ruin it at such places.

Lines that have become wet should be stripped off the reel and dried to keep them in good condition.

Test a line every now and then to see that the leader end has not lost any of its strength due to usage; if it has, cut off a sufficient length, a foot or two, to make it safe for future fishing.

Occasionally wipe the line thoroughly with a rag that has been soaked in melted deer fat. After doing so, wipe the line again with a clean, soft cotton rag to remove all excess of fat. This treatment will not only clean the line but will keep the enameling pliable and in good condition.

In Relation to Leaders:

Leaders should always be well soaked before using.

A leader should always be tested with the hands before using, even if it is a new one. This is a wise precaution.

Never fish with a frayed leader, unless it is the only one you have at hand. The inevitable always happens.

Everything else being equal, the strength of a leader depends upon its length. The longer the leader the less the strength.

TROUT FLY-FISHING IN AMERICA

In Relation to Flies:

Flies should have the same colored snells as the leader to be used with them. This is most important.

Everything considered, mist is the best color for gut used for the snells of flies.

After fishing, examine your used flies to see that they are fit for future use, also to see if the snells are sound.

Always keep the snells of flies straight.

Test the snells of flies before using them by holding the hook in one hand and the loop of the snell in the other, then give two or three sharp, quick jerks. If the snell starts ever so little, discard the fly as useless. Otherwise it is all right to use.

When putting flies away after the open season do so by placing them in a moth-proof box or case, where the temperature will not be over sixty degrees during the winter months.

In Relation to Nets:

Examine your net carefully the first time it is taken out at the beginning of the open season to see that it is in good condition, and then examine it from time to time to see that it remains so.

Do not use too small a net for the size fish you expect to catch. Be governed by the largest, not the smallest, fish caught in the waters you are fishing.

Deep nets, with a fine mesh, made of linen twine, are the ones most reliable, and wear the longest. On that account they are the best.

TROUT FLY-FISHING IN AMERICA

How to Net a Fish:

There is but one correct way to net a fish, and that is head-on.

The net should first be thoroughly wet before attempting to net a fish, and this should be done, if in a boat or canoe, on the side opposite to the one the fish is being played.

Never dive or scoop for a fish with the net when trying to land him. Have the net entirely under the surface of the water, and as the fish is brought toward the net, raise the net slightly at the handle end, so that the fish can enter it head-on.

Do not try to net any fish before it is ready, and it has been sufficiently worked so as to be under absolute control, otherwise you are liable to lose it.

Be very careful not to touch the fish with the metal ring holding the net, because more fish are lost this way than any other.

How to Carry a Set-Up Rod:

First wind the line and leader around the rod from tip of rod to reel seat with turns 8 to 10 inches long, then slip the point of the hook under the reel ring of the reel seat. The rod is now as safe to carry as it can well be made.

When traveling over an open country, such as fields and roads, carry the rod with the tip end in front of you. At such times hold the rod at a balancing point that will

TROUT FLY-FISHING IN AMERICA

bring the tip about the height of the head. With the rod in this position there is no danger of injuring the tip.

When traveling through brush, grown-up wood roads or trails, always carry the rod with the tip end behind you, holding the rod as near a horizontal position as possible.

In case of a fall, always throw the rod from and in front of you, if carrying it in front; and when carrying it to the back of you, just drop it or throw it to one side. I have never known of a rod being injured when handled in this way.

How to Kill Trout:

Make a point to kill your fish immediately it is caught if you intend to keep it, otherwise return it at once to the water.

It is a very easy matter to kill a trout if struck in the right place, which is on the head between the eyes, and unless it is a large fish no great amount of force is necessary. Almost any trout weighing half a pound or under can be killed by snapping the right place on the head with the middle finger. Larger trout can be killed by striking the head with a hunting knife or a fair-sized pocket knife. Very large trout must be struck with greater force, or the point of a knife can be inserted at the spot between the eyes, which will accomplish the same thing, and will not disfigure the fish.

For killing fish when wading a stream, it is convenient to carry a small round piece of hard wood, billy-shaped,

TROUT FLY-FISHING IN AMERICA

attached to a string, which can be tied to your coat, or it can be carried in the pocket of your coat.

When fishing from a boat or canoe, a fish can be killed by striking the head on the gunwale, but this is not as good a way as using the piece of hard wood.

If in a position where you have nothing with which to strike the fish, insert your thumb in its mouth, then bend the head backward and break its neck.

How to Clean Trout:

Insert the point of a knife in the anus opening, which is just ahead of the anal fin, and cut the belly of the fish straight up to the jawbone.

It is an easy matter then to remove the entrails by grasping them near the head and pulling forward.

If the trout weighs a pound or less, the gills will be removed without any further cutting. If, however, it is a large fish, cut the gills at the two places where they are attached to the head.

Having removed the entrails, then run your knife the entire length of the backbone on the inside of the fish, cutting the membrane over the coagulated or venous blood, which always accumulates along this bone. Now thoroughly wash out the blood, scraping the backbone with your thumb to be sure all the blood is removed. When this operation is completed the fish is properly dressed, and will keep fresh for a considerable time if kept in a cold place.

No trout should ever be placed directly upon the ice.

TROUT FLY-FISHING IN AMERICA

To do so will soften the flesh and take away much of the flavor. Besides they will not keep as long. Hence, first place the trout on a platter and then on the ice, and they will remain in fine condition.

How to Prepare Trout to Carry or Ship:

When trout are to be transported by hand or otherwise, I have found, to have them arrive at their destination in good condition, the following method of packing them produces the best results.

First, wipe the trout carefully and place a little salt along the entire length of the backbone on the inside; second, roll the fish in a cold moist strip of old cotton cloth, which is wider by a few inches than the longest fish. Each trout should be handled separately, and the cotton strip so placed around each fish that the flesh of one fish cannot come in contact with any other fish. If there are a number of fish to pack, use a number of strips and make several rolls, then do each roll up separately in three thicknesses of paper. Each roll should be tied securely, then as many rolls as desired can be tied into one large package.

Trout packed in this way will remain in good edible condition for a long time, even when the weather is quite warm. I have shipped trout so packed that have been four days in transit, and they were in fine condition when removed from the package on reaching their destination.

When going off on a fishing trip, I always take with me an old cotton sheet, from which to get the strips for packing. The strips should be soaked for some little

TROUT FLY-FISHING IN AMERICA

time in ice or cold spring water before using, and then wrung out so as not to leave any free water in them.

This method of packing trout almost entirely excludes the air, keeps the fish moist and cool, keeps the natural moisture of the fish in the fish, which prevents their drying, and the separating of the fish by the cotton strips prevents any fermentation taking place for a considerable length of time.

How to Tell the Weight of Trout by Their Length:

The following tabulation has been taken from Henry P. Wells' book, "Fly-Rods and Fly-Tackle," and is given here because I have found the figures to be most reliable:

9	inch	trout	weigh	$\frac{1}{4}$	pound
11 $\frac{1}{4}$	"	"	"	$\frac{1}{2}$	"
13	"	"	"	$\frac{3}{4}$	"
14	"	"	"	1	"
15	"	"	"	1 $\frac{1}{4}$	pounds
16	"	"	"	1 $\frac{5}{8}$	"
17	"	"	"	2 $\frac{1}{8}$	"
18	"	"	"	2 $\frac{1}{2}$	"
19	"	"	"	3	"
20	"	"	"	3 $\frac{1}{2}$	"
21	"	"	"	4	"
22	"	"	"	4 $\frac{3}{4}$	"
22 $\frac{1}{2}$	"	"	"	5 $\frac{1}{8}$	"
23 $\frac{1}{2}$	"	"	"	6	"
24 $\frac{1}{2}$	"	"	"	7	"

The weights for length are very nearly correct, and, as a general proposition, will be found not to vary more than

TROUT FLY-FISHING IN AMERICA

one-half to one ounce from actual weight, the greatest variation being with the larger fish.

There is one exception, however, that must be made to which these figures do not apply, namely, to "Racers."

"Racers" are trout that are very thin (shad-like) and long, and this condition in most cases is due to old age; but such trout are not often caught on the fly.

I once caught a "Racer" (September, 1907) that measured $28\frac{1}{4}$ inches in length and 8 inches in depth, and weighed, one hour after landing, $5\frac{1}{2}$ pounds.

It took one hour and ten minutes to net this trout, which was hooked in the pool at the head of Dodge Pond, and landed in the middle of the pond over one mile away from the pool. Dodge Pond empties into Rangeley Lake at Hunter's Cove, which is about one-quarter mile away.

Had the "Racer" been a trout in good condition it would have weighed at least ten pounds.

The Strength of Fly-Rods:

In the chapter on "The Rod" you will find that I have stated, when referring to the maximum strain of a rod, as follows: "By maximum strain in Pounds-Pull is meant the dead weight which rods will stand without injury in an emergency."

For some reason the average beginner, as well as many semi-experienced and not a few experienced fly-fishermen, have little real knowledge about the strength of fly-rods.

On this account it may be of interest for them to know some facts in relation to their strength.

TROUT FLY-FISHING IN AMERICA

The ultimate breaking strength of any fly-rod is represented by the pounds-strain that is placed upon it which will cause it to fracture or break.

The maximum safe strain in pounds-pull is represented by the pounds-strain that can be placed upon any fly-rod, which strain when removed, allows the rod to at once return to its straight or normal position without having received any injury from the applied strain.

Between the ultimate breaking point and the maximum safe-strain point there is quite a margin; but this margin is of little avail to the angler, because when a rod is subjected to a strain that exceeds the maximum safe strain the elastic limit of the rod is passed, which results in putting a permanent set or bend in the rod.

It is on this account that the maximum safe strain (pounds-pull) that an angler's rod will stand without injury should necessarily be of great interest to him if he has a good rod and is desirous of keeping it in serviceable condition.

The best *split bamboo fly-rod* ever made that was ten feet in length and weighed six ounces, never had a maximum safe strength of over one and one-half pounds.

This statement will no doubt sound strange to some, nevertheless it is true, and to any angler who believes otherwise, I suggest that he take his own fly-rod and with great care, so as not to injure the rod, see to what a degree the rod will bend in trying to lift a one-half pound weight clear of the ground.

In making this experiment or test be sure to set up

TROUT FLY-FISHING IN AMERICA

the rod with great care, having the guides in proper alignment. Then attach the reel and pass the line through the guides running off about four or five feet of line, afterward secure the line at the reel so that it cannot pay out. Having done this attach to the free end of the line a one-quarter pound weight, as a starter, and lift it with the rod held as in the act of fishing and observe the bend of the rod.

After having made this test try a one-half pound weight and again observe the bend of the rod when the weight is lifted clear. Continue increasing the weight, if by this time you are not satisfied, until a pound weight has been tried, but do not try any greater weight, that is, if you value your rod.

By the time these tests have been completed, or if they remain uncompleted, you probably will have changed your views about the safe strength of fly-rods.

About Large Trout:

My experience has been that large trout, by which is meant trout that weigh three pounds and over, are seldom caught in water that is over eight feet in depth, and this is exceptionally the case throughout the entire Rangeley region.

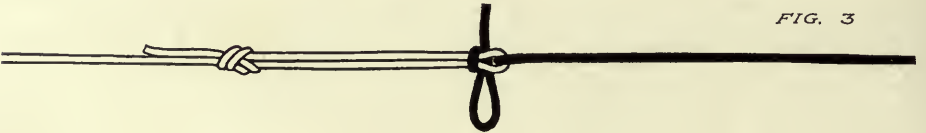
Large trout are more easily played and landed when caught on small hooks, 8, 10 and 12 in size (preferably the two smaller sizes), than when caught on larger ones.

This is because the bend of the small hook is usually completely filled when set in the mouth of the fish, while

JAM KNOT — PLATE D



TILLER HITCH



JAM KNOT AND TILLER HITCH KNOT

TROUT FLY-FISHING IN AMERICA

with the larger hooks this same condition does not exist, and therefore the barb of the hook often wears out the hold, especially if the trout puts up a good fight.

Anglers, as a rule, have such a desire to land large trout that they play them far too hard, place far too much strain upon the rod, line and leader, and try to net them long before they should, with the result that many more large trout are lost than are landed.

Beginners especially should try to remember this, for it will help them materially when they have succeeded in hooking a large trout, and they should also remember that every trout that is hooked should be played, with the idea strongly fixed in the mind that it is lightly hooked, until it has been proved otherwise, and even then the wise angler will never force his fish unless it is in danger from some snag.

Naturally, when fishing for large trout, some days are better fishing days than others, and the best days are those when the trout are feeding, no matter what the weather and water conditions may be at the time.

The ideal day for fishing for large trout is when the sky is overcast, with a fairly strong ripple on the water, the wind, however, not so strong as to prevent casting with ease in any direction, and when the temperature of the water is not over 45 to 48 degrees Fahrenheit.

It is at such times the angler expects, and rightly so, to find large trout feeding, and in the large majority of cases his expectations are realized; but as to his hooking a large trout, that "is another question."

TROUT FLY-FISHING IN AMERICA

Knots Used in Fly-Fishing:

There are a large number of different knots used by anglers for joining eyed hooks to snells and leaders, lines to leaders and in making leaders and leader loops.

It is not necessary, however, for the angler to devote any time in learning how to tie a large number of knots, because a few good knots, if well made, will answer every purpose and give satisfactory results.

Having used and experimented for many years with the various knots employed in fly-fishing, I have finally reached the conclusion that there are only four knots it is necessary for the angler to know how to make, and they are: the "Turle Knot," the "Jam Knot," the "Tiller-hitch Knot," and the "Single Hitch" or "Single Surgeon's Knot."

The "Turle Knot," in my opinion, is by all odds the best and only knot to use for attaching the dry-fly to the leader, and the "Jam Knot" for attaching the wet-fly to a snell or a line to a leader, provided a hard knot is what the angler wishes to use. On the other hand, if the angler desires to use a knot that can quickly be untied, then there is no better knot than the "Tiller-hitch Knot" for attaching the line to the leader.

The "Single Hitch" or "Single Surgeon's Knot" I have always found to be strong, reliable, and to answer every purpose in tying leaders of all descriptions, and it has the decided advantage of being a small knot.

TROUT FLY-FISHING IN AMERICA

Angler's Clothing:

As to the matter of clothing a fly fisherman should wear, and how much of an outfit he should have, this is something that, in my opinion, must be determined by each angler for himself, because he alone knows what his physical requirements are for hot or cold weather and how he can best meet them.

For use in stream fishing when wading one can choose:

Rubber trousers with heavy leather soles.

Rubber trousers with stocking feet to be worn with woolen stockings outside and wading shoes.

Rubber stockings with heavy leather soles.

Rubber stockings to be worn with woolen stockings outside and wading shoes.

Rubber boots, hip-length with belt.

Rubber boots, three-quarter length without belt.

Rubber or rubber and canvas wading shoes.

Whatever selection of footwear is made, always wear woolen stockings.

For use in stream fishing when fishing from banks:

Low moccasins, high moccasins or long-leg moccasin boots, leather shoes, long-leg leather boots, canvas shoes or canvas boots.

In bank fishing, one can wear almost any kind of boot or shoe, and it is a fine time to finish any partially-worn footwear one happens to have on hand and does not know what to do with.

For use in boats and canoes when fishing:

Moccasins or canvas shoes with rubber soles, but any kind of footwear can be worn; in canoes, however, leather boots or shoes are out of place.

TROUT FLY-FISHING IN AMERICA

Shirts:

Any kind of shirt will do, but for continuous wear flannel shirts are the best, all things considered.

Coats:

Coats made especially for fishing can be had which are made up from many different kinds of material, such as:

Khaki, Canvas, Corduroy, Leather, Wool, and other kinds of goods.

Vests:

Vests can be made of the same material as the coat, or otherwise, as fancy dictates.

Trousers:

Trousers can be made of the same material as the coats, except leather, and made either short or long.

Hats or Caps:

Any kind of a hat or cap, made from almost any kind of material, will fill the bill.

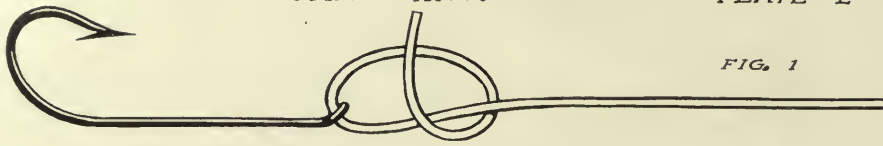
In addition to the articles mentioned, all anglers who do much fly-fishing should have a good sweater and rubber cape with arms or a rubber coat, and they should be of ample size for comfort when casting.

While I have dwelt almost entirely upon the practical and somewhat scientific side of trout fly-fishing, I am nevertheless desirous that my readers should realize the many pleasures and benefits that necessarily must be asso-

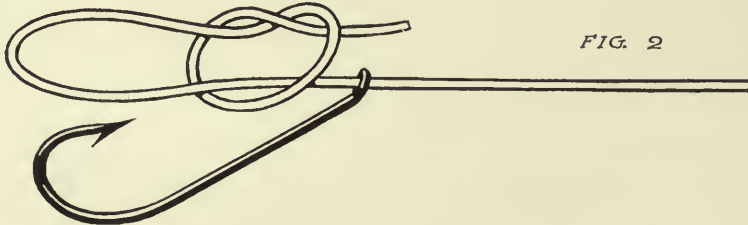
FOR ATTACHING LEADER TO FLY

JAM KNOT

— PLATE E



TURLE KNOT



JAM KNOT AND TURLE KNOT

TROUT FLY-FISHING IN AMERICA

ciated with the sport, especially if the angler has the true spirit of Izaak Walton, the Master Angler of years ago.

Of all sport, I know of none that seems to develop in the individual such a kindly spirit, such a full appreciation of all living things, and such an absorbing love for the many and varied charms of "the open" as fly-fishing.

It matters little where one fishes for the "speckled beauty," for Nature always supplies in one form or another surroundings which are interesting, instructive, ever-changing and beautiful, and the wonderful part of it all is that no two places are alike or have the same attractive features.

Fly-fishing is not only a real, artistic and scientific sport, but it is a true panacea for "tired nerves," and its application offers a most wonderful opportunity to recuperate, among surroundings which are at the same time healthful, beautiful and peaceful.

I have not touched upon the many charms of the lakes and streams it has been my good fortune and privilege to fish, year after year, because other writers have done so much to bring the beauties of the country to the public notice; and also because this book was written with the view of giving to the young anglers, as well as older ones, some ideas about trout fly-fishing that might benefit them, and with the hope of arousing in them and others a greater enthusiasm for the clean, healthful, dignified and delightful pastime.

GLOSSARY

A CAST. A leader with one or more flies attached.

A DISCIPLE. A follower of some method or person.

A DROPPER-FLY. A fly that is attached to a loop on a leader other than the end loop.

A PRICKED FISH. One that has not been hooked, but has felt the point of the hook when struck.

A RACER. An unusually long and very thin fish.

A RISE. A fish coming to the surface of the water, or nearly so.

A STRIKE. A fish taking a fly.

A SULKING FISH. A fish, after being hooked, that goes to the bottom and remains nearly motionless.

AN END-FLY. The fly that is attached to an end loop of a leader.

AN EYED-FLY. A fly having only an eye to which the leader or snell can be attached.

BREAK WATER. When a fish jumps out of the water it is said to "break water."

CAUGHT FOUL. A fish hooked otherwise than in the mouth.

DRY-FLY PURIST. The dry-fly angler who observes all the set rules of dry-fly fishing to a nicety.

FISHING "UP-STREAM." Fishing against the current.

FISHING "ACROSS STREAM." Fishing at right angles to the stream.

GLOSSARY

FISHING "DOWN STREAM." Fishing with the current.

GIVING THE BUTT. Putting a heavy strain on a hooked fish, thus bending the tip toward the butt of the rod.

FISH SENSE. A peculiar gift possessed by some anglers by which they know about fish and their ways without reasoning.

HAMMER THE WATER. When casting to strike the water hard with the line, leader and fly.

HUNG UP. An expression used when in casting, the fly, leader, or line, becomes caught in any way.

JIGGING. When a fish shakes its head repeatedly from side to side.

LARGE FLY. A fly tied on a Number 4 or larger hook.

LIGHT HOLD. A fish that is lightly hooked.

MEDIUM FLY. A fly tied on a Number 6 and 8 hook.

OVER-RUN LINE, OR OVER-SHOT LINE. A line that has been unwound rapidly on the reel and on that account has become tangled.

PAYING OUT A LINE. Giving line to a hooked fish when making a rush or pulling hard.

POWERFUL ROD. One that is stiff and well balanced.

RESILIENT ROD. A rod that has the element of resilience; the power to spring back to its original or natural position after being bent.

RETRIEVING A LINE. Taking in a line either by hand or by the reel.

SLACK LINE. A line that is not taut, one that is loose, not tight.

SMALL FLY. A fly tied on a Number 10, 12, 14 and 16 hook.

SNELL OR SNOD. The silkworm gut that is attached to a fly.

GLOSSARY

SNELLED FLY. A fly having a snell attached.

SOFT ROD. One that is very willowy, flexible or bending.

STIFF ROD. One that is not easily bent.

STRIKE FROM THE HAND. Striking a fish with the line held in the hand with no pull coming on the reel.

STRIKE FROM THE REEL. Striking a fish with the line pulling directly on the reel.

THE CODE. The rules and regulations for the application of dry-fly fishing.

WELL-HOOKED. A fish that is securely hooked.

INDEX

A

AMERICAN ARCTIC TROUT, 10.
 AMERICAN DRY-FLIES, 250, 251.
 AMERICAN SAIBLING, 8.
 AMERICAN WET-FLIES, 246-252, 253-256.
 ANDROSCOGGIN RIVER, 218, 219.
 ARCTIC TROUT, 10.
 AUTHOR'S CLASSIFICATION OF NORTH AMERICAN TROUT, 8, 9, 11, 12.
 ARIZONA,
 Favorite wet-flies, 242.

B

BEARDSLEE TROUT, The
 Classification, 11.
 Habitat, 23.
 Size, 23.
 BLACK SPOTTED TROUT, The
 Classification, 7, 9.
 BLUE BACK TROUT, The
 (See Rangeley Trout.)
 BLUE BACK TROUT OF LAKE CRES-
 CENT (Wash.), The
 Classification, 6, 11.
 BROOK TROUT, The
 Activity in May, June and September,
 128.
 Best temperature for, 73, 74.
 Blindness of, 134, 135, 136.
 Classification of, 5, 8, 12.
 Difference between Brown and, 73,
 74.

Effect of environment on, 124, 125,
 126, 129, 136.
 Extermination of, 1.
 Feeding time of, 123, 132, 184, 185.
 Food of, 125, 127, 128, 129, 136, 153,
 155, 156.
 Gaminess of, 15.
 Habitat, 14, 177.
 Habits of, 123, 132, 184, 185.
 How to clean, 264, 265.
 How to kill, 263, 264.
 How to prepare and transport, 265,
 266.
 How to tell weight from length, 266.
 In southern streams, 15.
 Marine and migratory habits, 15.
 Markings of, 5.
 Northern limits of, 14.
 Propagation in western waters, 5.
 "Racers," 267.
 Rapid growth of, 15.
 Ready rise to artificial fly, 15, 128.
 "Rolling" of, 131, 132, 223.
 Size of, 14.
 Teeth of, 5.
 Transplantation of, 4.
 Weight of, 15, 222, 223.
 BROWN TROUT, The
 Characteristics of, 37.
 Classification of, 8, 9, 12.
 Color of, 37.
 Differences between Brook and, 73,
 74.
 English, The, 38.
 Feeding time of, 124, 127.
 Habitat, 37.

INDEX

Hardiness, 38.
Importation, of, 37.
Markings of, 5.
Propagation in western waters, 5.
Striking from reel when fishing for,
189.
Suitable temperature for, 73, 74.
Transplantation of, 37.

BULL TROUT
Classification, 8.

C

CALIFORNIA
Favorite wet-flies, 239.
CAMP, SAMUEL G.
On fishing the fly, 90, 91.
"The Fine Art of Fishing," 57.
CANADA
Red trout of, 18.
Size of trout along coasts of, 15.
CASTING, Fly
Backward cast, 171, 173, 174.
Control of line in, 174.
Curvature of rod in, 175.
Differences in methods, 60.
"Expert casters," 201, 202, 203.
Fly Caster versus Fly Fisherman, 201,
202.
Forward cast, 171, 173, 174.
La Branche, Mr., on accuracy, 50.
"Nerves" in, 92.
Overhead casting, 170.
Primarily a mechanical art, 88.
Requirements in, 47.
Short, medium and long casts, 175,
176.
Switch cast, 70.
Tournament casting, 47.
Underhand cast, 170.
Upstream casting, 178.
Wing or horizontal cast, 170.

CHARR

Characteristics of, 13, 14.
Classification of, 5.
Markings of, 5.
Teeth of, 5.
(For other particulars refer to Brook
Trout.)

COLORADO

Favorite wet-flies, 237.

COLORADO RIVER TROUT

Characteristics, 29, 30.
Classification, 7, 12.
Habitat, 29.

COLORATION OF BROOK TROUT

Abnormal coloration, 137.
Changed coloration due to water con-
ditions, 137.
Degrees and varieties of pigmentation,
133, 134, 142.
Factors and elements in, 138.
Four degrees of coloration, 133,
134.
Harris, Mr. Wm. C., on coloration,
134, 135.
Influence of water bottoms on, 140,
141, 143, 144, 145, 146, 153, 154,
156.
Position of pigment cells, 140.

COLUMBIA RIVER TROUT

Characteristics, 34.
Classification, 7, 12.
Habitat, 33, 34.

CONNECTICUT

Favorite wet-flies, 230.

CRESCENT TROUT

Classification, 10.

D

DAME, STODDARD Co., Boston, Mass.
Data concerning balance of fly-rods,
109.

INDEX

DELAWARE

- Favorite wet-flies, 232.
- English origin of, 44.
- Especially-made flies, 48.
- False casting in, 54.
- Favorite dry-flies (American), 250, 251.
- Favorite dry-flies (English), 248, 249.
- Fly, The, 54.
- Halford, Frederick M., list of English dry-flies, 248, 249.
- Leaders used in, 54.
- Lines used in, 54, 112.
- Physical conditions in, 64.
- Requirements in, 48, 176.
- Restrictions in, 65.
- Skill required in use, 59.
- Tapered lines in, 112.

DEWAR, GEO. A. B.

- "The Book of the Dry-fly," 71, 72.
- List of dry-flies, 249.

DOLLY VARDEN TROUT, The (See Malma Trout.)

DRY-FLY METHOD OF FLY-FISHING

- Casting, 54.
- Comparison between wet and, 60, 61, 62, 67, 68.
- Comparison of both methods by G. A. B. Dewar, 71.
- Defended by exponents, 42.
- Drag, the, 55.
- Elimination of playing fly in, 55.

DUBLIN POND TROUT, The

- Classification, 5, 9.
- Length, 16.
- Markings, 16.

E

ENGLISH BROWN TROUT, The (See Brown Trout.)

EYESIGHT OF TROUT, The

- Color-blindness disputed, 163, 164.
- Coloration of fly, 192.
- Differences between eye of man and trout, 157, 158.
- Harris, Wm. C., on the, 163.
- Henshall, Dr. James A., on the, 163.
- In lakes and deep streams, 160.
- Normal eyesight in June, 160, 186.
- Poorest eyesight in Spring, 161, 186.
- Testing sight with Nos. 10 and 12 flies, 161.
- Testing sight with Nos. 4 and 6 flies, 161.
- Wide range of vision, 178.

F

FIELD AND STREAM

- "Trying-out" wet and dry-fly methods, 67.

FLOEBERG TROUT, The

- Classification, 10.
- Habitat, 20.

FLY, The

- Brook trout rising to, 74.
- Brown trout rising to, 74.
- Care of, 261.
- Color classification of, 199.
- Color of flies to use at different periods of day, 197, 198.
- Cost of flies, 36.
- Dark and light colored flies, 191-199.
- Fishing the fly, 118, 181, 182, 183.
- Fly-book, 93.
- Fly-box, 93.
- List of favorite wet-flies, 246-252, 252-256.
- List of favorite dry-flies (American), 250, 251.
- List of favorite dry-flies (English), 248, 249.

INDEX

List of favorite wet-flies in
 Arizona, 242.
 California, 239.
 Colorado, 237.
 Connecticut, 230.
 Delaware, 232.
 Maine, 228.
 Massachusetts, 230.
 Michigan, 234.
 Minnesota, 235.
 Montana, 236.
 Nevada, 242.
 New Hampshire, 229.
 New Jersey, 232.
 New York, 231.
 Oregon, 240.
 Pennsylvania, 232.
 Rhode Island, 230.
 Virginia and W. Virginia, 233.
 Vermont, 229.
 Washington, 238.
 Wisconsin, 235.
 Wyoming, 241.
 Method of playing, 118, 182, 183,
 188.
 Number of flies to be used, 120, 182.
 Size of fly, 182, 269, 270.
 "Snapping" the fly, 174.
 "Sodden" or "Sunken" flies, 51, 52,
 68.
 Weather conditions affecting choice of
 flies, 192.

GOLDEN TROUT, The
 Characteristics, 35.
 Classification, 8, 9, 12.
 Coloration, 38.
 Game qualities, 35.
 GOLDEN TROUT OF MOUNT WHITNEY
 Classification of, 7, 11.
 GOLDEN TROUT OF SODA CREEK
 Classification, 7, 11.
 Habitat, 36.
 GOLDEN TROUT OF SOUTH FORK,
 KERN RIVER
 Classification, 11.
 Habitat, 36.
 GOLDEN TROUT OF VOLCANO CREEK
 Classification, 7, 11.
 Habitat, 36.
 GRAY TROUT, The
 (See Dublin Pond Trout.)
 GREAT BASIN OF UTAH TROUT
 (See Utah Lake Trout.)
 GREAT LAKE TROUT, The
 Classification, 6, 9, 10, 12.
 (See Lake Trout.)
 GREEN-BACK TROUT, The
 Classification, 7, 12.
 Habitat, 31.
 Characteristics, 32.
 GREENLAND TROUT, The
 Classification, 6, 10.
 Habitat, 20.
 Size, 20.

G

GAFFING, 223.
 GERMAN TROUT, The
 (See Brown Trout.)
 GILL, MR. EMLYN M.
 "Practical Dry-fly Fishing," 59, 66,
 67, 68, 69.
 List of American dry-flies, 250.

H

HALFORD, MR. FREDERICK M.
 List of works, 451.
 List of favorite English dry-flies, 248.
 On force of strike, 189.
 On striking from reel, 189.
 HARRIS, MR. WM. C.
 Brook trout coloration, 134, 135.

INDEX

- Hearing of trout, 168, 169.
Sight of trout, 163.
- HEARING OF TROUT
Concussion affecting, 166, 167, 168, 169.
Delicate construction of internal ear, 166, 168.
Harris, Wm. C., on acuteness of hearing, 163, 168, 169.
Water as a medium, 166.
- HENSHALL, DR. JAMES A.
Eyesight of trout, 163, 164.
Functions of the fly-rod, 76-84.
- I
- ICHTHYOLOGISTS' CLASSIFICATION OF NATIVE TROUT, 5-8.
- K
- KAMLOOPS TROUT, The
Classification of, 6, 10.
Coloring, 23.
Habitat, 23.
- KERN RIVER TROUT, The
Classification, 7.
Habitat, 36.
- KNOTS
Attaching flies to leader, 98.
Tying end and dropper loops on leader, 212.
Tying leaders to line, 97, 98.
Used in fly-fishing, 271.
Used in making leaders, 210, 211.
- L
- LAC DE MARBRE TROUT, The
Classification, 6, 10.
Habitat, 18.
- LAKE TROUT OF LAKE SUPERIOR, The
Characteristics, 39.
Classification, 6, 10.
Habitat, 24.
- LAKE TAHOE TROUT, The
Classification, 8.
Habitat, 34.
Markings, 34.
- LAKE TROUT, The
Classification, 9.
Great size of, 39.
Habitat, 39.
- LOCH LEVEN TROUT, The
(See Brown Trout.)
- LONG HEADED TROUT OF LAKE CRES-
CENT (Wash.), The
Classification, 6, 11.
Habitat, 20.
- LONG FINNED TROUT, The
Classification, 6, 10.
- LOWER CALIFORNIA RAINBOW TROUT,
The
Classification, 7, 11.
Habitat, 26.
Small size, 26.
- LA BRANCHE, MR. GEORGE M.
On the functions of the rod, 76-87.
"The Dry-fly in America," 50.
- LANDING NET
Best kind of, 261.
Care of, 261.
Cost of, 93.
Use in preference to gaff, 223.
- LEADER
Attaching leader to line, 97.
Best color for, 113, 117, 118.
Care of, 216, 217, 260.
Coloring of, 214.
Cost of, 93.
Cost of leader box, 93.
Deerfat used for drying, 54.
Drying, 213.
Gossamer leaders, 204.
Grades of, 112, 117.
How to attach flies to, 98.

INDEX

- How to handle gut in making lead-ers, 210.
- Knots used in tying flies to, 98.
- Knots used in tying leader to line, 97.
- Length of leaders, 113, 117, 118.
- Preparation of gut, 209.
- Selection of silkworm gut in making, 207, 208.
- Strength of, 113, 117, 118.
- Tapered leaders, 54, 117, 118.
- Test of, 117, 213.
- Tying gut strands into, 210, 211, 212.
- LINE, The
 - Agate guides for, 102.
 - Care of, 260.
 - Control of, 174, 189, 190.
 - Cost of, 93.
 - "Feel" of, 174.
 - Flat lines, 110, 111.
 - Handling, 97.
 - How to attach leader, 97.
 - Kinds of lines, 110.
 - Tapered lines, 54, 110, 111, 112.
 - Wells, Mr. Henry P., on choice of, 111.
- LONDON "FIELD"
 - Rarity of expert wet-fly fishermen, 66.
- LONDON "FISHING GAZETTE"
 - Rarity of expert wet-fly fishermen, 66.
- LUNGE, The
 - (See Lake Trout.)
- M
- MAINE
 - Androscoggin River, 218, 219.
 - Bait-fishing in, 220.
 - Blue-back trout, 220.
 - Camping in, 225.
 - Cost of boats, food, guides, 225.
 - Cupsuptic Lake and Stream, 218.
 - Favorite wet-flies, 228.
 - Fish and Game Commission, 221.
 - Growth of trout in, 15.
 - Guides, 224, 225.
 - Kennebago Falls, 218, 220, 224.
 - Kennebago Lake, 218, 220.
 - Kennebago Stream, 218, 220, 224.
 - Little Kennebago Lake, 58, 162, 218.
 - Lower Richardson Lake, 218, 220.
 - Minnow in Rangeley Lakes, 220.
 - Molechunkemunk Lake, 220.
 - Mooselucmaguntic Lake, 218, 220.
 - Open season in, 224.
 - Oquassoc Lake, 220.
 - Parmachenee Lake, 218, 219.
 - Rangeley Region, 218-220.
 - Seven Ponds, 218, 220.
 - Size of trout, 15, 221, 222, 224.
 - Spawning, 16.
 - Trolling, 220.
 - Umbagog Lake, 218, 220.
 - Upper Richardson Lake, 218, 220.
- MACKINAW TROUT, The
 - (See Lake Trout.)
- MALMA TROUT, The
 - Classification, 8, 10.
 - Habitat, 21.
 - Markings, 21.
- MARBURY, MARY ORVIS
 - "Favorite Flies," 226.
- MARSTON TROUT, The
 - (See Lac de Marbre Trout.)
- MASSACHUSETTS
 - Favorite wet-flies, 230.
- MICHIGAN
 - Favorite wet-flies, 234.
- MINNESOTA
 - Favorite wet-flies, 235.
- MONTANA
 - Favorite wet-flies, 236.
- N
- NARESI TROUT, The
 - Classification, 6, 10.
 - Habitat, 19.

INDEX

NATIVE GAME FISH, 3.

NEVADA

Favorite wet-flies, 242.

NISSUEE TROUT, The
(See No-Shee Trout.)

NO-SHEE TROUT, The
Classification, 7, 11.
Habitat, 26.
Size and voracity, 26.

O

OQUASSA TROUT, The
(See Rangeley Trout.)

OREGON

Favorite wet-flies in, 240.

ORVIS, CHARLES F.
"Favorite Flies," 226.

P

PARAFFIN OIL

Used in drying dry-flies, 54.

PENNSYLVANIA

Favorite wet-flies in, 232.

PIGMY TROUT, The
(See Lower California Trout.)

R

RAINBOW TROUT, The

Classification, 6, 9, 11, 12.

Coloring, 134.

Evermann, Professor, on, 25.

Jordan, David Starr, on, 25.

Large scales and head, 24.

Propagation in western waters, 5.

Transplantation, 4, 25.

RAINBOW TROUT OF LOWER CALIFORNIA, The

Classification, 7, 11.

RAINBOW TROUT OF McLOUD RIVER, The

Classification, 7, 11.

Habitat, 26.

RAINBOW TROUT OF WEST OREGON, The

Classification, 6, 11.

Habitat, 25.

RANGELEY TROUT, The

Changed habits of, 18.

Classification, 5, 8, 9, 12.

Gradual disappearance, 17.

Seymour, Mr., on, 17, 18.

Weight of, 15, 17.

RED THROAT TROUT, The

Characteristics, 27, 28.

Classification, 7, 9, 11, 12.

Evermann, Professor, on, 28, 29.

Game qualities, 28, 29.

Habitat, 27.

Jordan, David Starr, 27, 28.

Sea-run, 28.

Size, 28.

Teeth, 5.

Variation, 28.

REEL, The

Balance, 104, 171, 172.

Care of, 259, 260.

Cost, 93.

Function of, 103, 104.

Halford, Mr. F. M., on striking from, 189.

Kinds of, 164.

Mistake in choosing too light a reel, 104.

Single-action click, 104.

Striking from reel, 188, 189, 190.

Striking from reel in fishing for Brown Trout, 189.

Tabulation showing proper weight, 108.

Weight, 104.

RHODE ISLAND

Favorite wet-flies in, 230.

RIO GRANDE TROUT, The
Characteristics, 30.

INDEX

- Classification, 7, 11.
- Habitat, 30.
- RIO SANTA ANA RAINBOW TROUT, The
 - Classification, 7, 11.
 - Habitat, 26.
- ROCKY MOUNTAIN TROUT
 - Classification, 7, 9.
- ROD, The
 - Agate tip and butt ring guides, 102.
 - Arcs described by tip and butt, 172, 173, 174.
 - Bathabara wood, 103.
 - Breakage at joints, 101.
 - Bronze snake guides, 102.
 - Care of, 259.
 - Carrying a "set-up" rod, 262, 263.
 - Cost, 93.
 - Curvature of rod in casting, 175.
 - Data concerning balance, 109, 110, 171.
 - Disjointing, 258.
 - Fitting reel to rod, 105.
 - Functions, 75-87.
 - "Giving the Butt," 116.
 - Greenheart, 103.
 - Henshall, Dr. James A., on, 76.
 - How to hold or grip, 95.
 - Lancewood, 103.
 - Length, 118, 268.
 - Materials, 103.
 - Placing reel on rod, 96.
 - Resilience, 54, 103.
 - Round rods, 99.
 - Setting-up rods, 259.
 - Split bamboo rods, 99, 103, 107.
 - Stiffness, 54.
 - Strength of rods, 267, 268.
 - Table of relative weight and strength of hexagonal split bamboo rods, 103.
 - Table of weights of reels to use with rods, 108.
 - Warping of round rods, 100.
 - Weakest points of rods, 101.
 - Weight, 107, 268.
- RULES OF THE ROAD, 258, 259.

S

- SAIBLING, The American, 8.
- SALMON
 - Landlocked, 220.
- SALMONIDÆ
 - Characteristics, 13, 14.
 - Classification, 6, 7, 8.
 - Food, 220.
 - Position of fins, 13.
- SALMON TROUT, The
 - Classification, 9.
- SALMON TROUT OF LAKE SUTHERLAND, The
 - Classification, 7, 12.
 - Habitat, 33.
- SILVER TROUT, The
 - Classification, 12.
- SILVER TROUT OF LAKE TAHOE
 - Classification, 8.
 - Habitat, 35.
 - Size, 35.
- SISCOWET
 - (See Lake Trout.)
- SPAWNING
 - Coloration of trout in, 145.
 - Time of, 16.
 - Working downstream after, 145.
- SPECKLED BEAUTY, The
 - (See Brook Trout.)
- SPECKLED TROUT OF LAKE CRESCENT, The
 - Classification, 6, 10.
- SPOTTED TROUT OF LAKE SUTHERLAND, The
 - Classification, 7, 12.
 - Habitat, 33.

INDEX

- SQUARE TAIL
(See Brook Trout.)
- STEELHEAD TROUT, The
Breaking water, 15.
Classification, 6, 9, 10, 12.
Coloration changes, 137.
Gameness, 15, 22.
Habitat, 22.
Marine habits, 22.
Markings, 22.
Propagation in eastern waters, 5.
Small scales, 22.
Transplantation, 4.
- STONE'S TROUT
(See No-Shee Trout.)
- STREAMS
Casting across stream, 61, 69.
Casting downstream, 61.
Casting upstream, 54, 69.
Conservation, 2.
Depletion, 2.
Fishing the stream, 71.
- STRIKING THE TROUT
Clearness of water a factor to be considered, 186.
"Don'ts" in, 187.
Force used, 186, 187, 189.
Halford, Mr. F. M., on striking from reel, 189.
Striking from hand-held line, 188.
Striking from reel, 188.
- SUNAPEE TROUT, The
Classification, 6, 8, 10, 12.
Habitat, 19.
Large size, 20.
Transplantation, 19.
- T
- TAHOE TROUT, The
Classification, 9, 12.
Finest of the Cutthroat series, 34.
Habitat, 34, 35.
- THOMAS, Bangor, Me.
Data concerning balance of Fly-rods, 110.
- TOGUE, The
(See Lake Trout.)
- U
- UTAH LAKE TROUT, The
Classification, 7, 12.
Habitat, 30.
Pale coloring, 31.
- V
- VERMONT
Favorite wet-flies in, 229.
- VERTEBRÆ
Number in trout, 13.
- VIRGINIA AND WEST VIRGINIA
Favorite wet-flies in, 233.
- VON BEHR TROUT, The
(See Brown Trout.)
- W
- WAHA LAKE TROUT, The
Characteristics, 33.
Classification, 7, 12.
Habitat, 32.
- WASHINGTON
Favorite wet-flies in, 238.
- WELLS, MR. HENRY P.
"Fly Rods and Fly-tackle," 66, 67, 72.
On choice of lines, 111.
On choice of silkworm gut, 114.
- WET-FLY METHOD OF FLY-FISHING
Camp, Samuel G., on fishing the fly, 57.

INDEX

- Comparison of dry and wet-fly methods, 60, 61, 62, 67, 68, 71.
- Criticisms of opponents, 41, 42.
- Dewar, G. A. B., on the two methods, 71, 72.
- Few restrictions in, 65.
- Fishing the flies, 49, 56, 57, 58, 62, 63.
- Gill, Emlyn M., on skill required in, 59.
- La Branche, Mr., on accuracy of casting, 50.
- Playing fly at side of current, 181.
- Playing the fly, 180.
- Requirements, 48, 56, 176.
- Skill needed in, 59, 176.
- Taut line, 57.
- WISCONSIN
 - Favorite wet-flies in, 235.
- WYOMING
 - Favorite wet-flies in, 241.

Y

- YELLOW-FIN TROUT, The
 - Characteristics, 33.
 - Classification, 7, 12.
 - Habitat, 32.
- YELLOWSTONE TROUT, The
 - Classification, 7, 12.
 - Habitat, 33.

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