

The American Fly Fisher

Journal of the American Museum of Fly Fishing



FALL 2010

VOLUME 36 NUMBER 4

Troutful



The Battenkill, photographed by John Atherton in 1948, from our latest exhibition, Memories on the Water: A Photographic Journey through Fly Fishing's Past. For more information, see the inside back cover.

FROM BROWN in the Falklands to brook in Massachusetts to cutthroat in Montana—this issue of the *American Fly Fisher* is proof of our ongoing attempts to be genus inclusive when it comes to trout. *Salmo*, *Oncorhynchus*, *Salvelinus* . . . they're all here.

The Falkland Islands, a thousand miles north of Antarctica, boast excellent sea-trout (sea-run brown trout) fishing. In "Brown Trout, Sea Trout, and Zebras" (page 2), Peter Lapsley tells the story of the rather recent introduction of brown trout to the islands. The story, he says, "raises almost as many questions as it answers but is intriguing for the insight it provides into the brown trout's readiness to establish itself in suitable surroundings, into the delicacy of the boundary between brown trout and sea trout, and into the fragility of native species when confronted with comparable—but more successful—interlopers." Lapsley asks: Are all brown trout actually sea trout? And can zebra trout—now protected—survive where brown trout have become established?

Willard P. Greenwood, on the other hand, has questions about a *particular* trout. When Henry David Thoreau briefly noted in both *Walden* and his journal that Concord resident Gardiner Heywood had speared a 5-pound trout in Walden Pond, he left out the detail as to what *kind* of trout. By process of elimination, Greenwood believes this to be "one whopper of a brook trout." Whether the trout could have been a native is another question. For more about Thoreau, how his life and works have inspired anglers and fishing writers, and "Walden Pond's Mystery Trout," turn to page 10.

Captain Frederick Benteen, says Richard Lessner, may be the only American soldier ever to go into combat armed with a fly rod. But a year before that particular incident, Benteen was under the command of General George Custer on the trail of Sitting Bull. Custer dispatched both Benteen and Gen. George Crook with troops to search out and converge on the Indian confederation, and (spoiler alert!) things ended badly for Custer. In "How Meriwether Lewis's Cutthroat Trout Sealed Custer's Fate at the Little Bighorn" (page 16), Lessner discusses the importance and allure of trout during the exploration and settlement of the American West.

About a year and a half ago, John Mundt brought to my attention that 2010 marks the one hundredth anniversary of the publication of G. E. M. Skues's first book, *Minor Tactics of the Chalk Stream*, a milestone that should not slip by unnoticed. In honor of the centennial, Mundt reflects on what this defining volume in the letters of angling has meant to him as an angler today (page 20).

In Notes from the Library (page 22), Jerry Karaska reviews R. A. Lawrence's *Silver Streams*. Museum News (page 26), as usual, is a roundup of what we've been up to of late.

And August, once more, brought with it our annual Fly-Fishing Festival, filled with fishy vendors, fishy equipment, fishy friends, and overall fishiness. Take a look at our coverage on page 24.

KATHLEEN ACHOR
EDITOR



THE AMERICAN MUSEUM
OF FLY FISHING
Preserving the Heritage of Fly Fishing

FRIENDS OF THE MUSEUM

Peter Bakwin
Robert Brucker
C. Austin Buck
Donald C. Christ
John Croddick
Jon Gibson
Tom Gravina
Terry Hall
Tim Hixon
James Houghton
Pitch Johnson
Fred Kambeitz
Peter Kellogg
Randy Labbe
Steve Lampe
Steve Myers
Grant E. Nelson
Walter Noonan
John Oliver
Joseph R. Perella
E. Lee Perry
Seth Pierrepont
Joseph and Usha Robillard
Richard Scarlett III
Pat Welsh
Greg Wheeler

denotes additional levels of giving

STAFF

Catherine E. Comar
Executive Director
Yoshi Akiyama
Deputy Director
Sarah Moore
Project & Administrative Coordinator
Kim Murphy
Events Coordinator
Patricia Russell
Account Manager
Sara Wilcox
Director of Visual Communication

THE AMERICAN FLY FISHER

Kathleen Achor
Editor
Sara Wilcox
Design & Production
Sarah May Clarkson
Copy Editor

T R U S T E E S
 Michael Bakwin
 Foster Bam
 Pamela Bates
 Duke Buchan III
 Peter Corbin
 E. Bruce DiDonato, MD
 Christopher Garcia
 Ronald Gard
 George R. Gibson III
 Gardner L. Grant
 James Hardman
 James Heckman, MD
 Arthur Kaemmer, MD
 Woods King III
 William P. Leary III
 Douglas F. MacKenzie
 Walter T. Matia
 John R. McMahon
 William C. McMaster, MD
 Bradford Mills
 John Mundt Jr.
 David Nichols
 Wayne Nordberg
 Erik R. Oken
 Raymond C. Pecor
 Stephen M. Peet
 Leigh H. Perkins
 Frederick S. Polhemus
 John Rano
 Roger Riccardi
 Kristoph J. Rollenhagen
 Philip Sawyer
 Franklin D. Schurz Jr.
 Robert G. Scott
 Gary J. Sherman, DPM
 Ronald B. Stuckey
 Richard G. Tisch
 David H. Walsh
 James C. Woods

T R U S T E E S E M E R I T I

Charles R. Eichel
 W. Michael Fitzgerald
 William Herrick
 David B. Ledlie
 Leon L. Martuch
 Paul Schullery

O F F I C E R S

Chairman of the Board David H. Walsh
President James Heckman, MD
Vice Presidents Stephen M. Peet
 Richard G. Tisch
Secretary James C. Woods
Clerk Charles R. Eichel
Treasurer Robert G. Scott

The American Fly Fisher

Journal of the American Museum of Fly Fishing

FALL 2010

VOLUME 36

NUMBER 4

Brown Trout, Sea Trout, and Zebras	2
<i>Peter Lapsley</i>	
Walden Pond's Mystery Trout	10
<i>Willard P. Greenwood</i>	
How Meriwether Lewis's Cutthroat Trout Sealed Custer's Fate at the Little Bighorn	16
<i>Richard Lessner</i>	
The Hundred-Year Ripple	20
<i>John Mundt Jr.</i>	
Notes from the Library	22
<i>Gerald Karaska</i>	
Fly-Fishing Festival	24
Museum News	26
Contributors	28

ON THE COVER: *The Malo River, from which Mr. N. K. Cameron caught the first recorded sea trout in the Falkland Islands in 1956. Photo by Peter Lapsley.*

We welcome contributions to the *American Fly Fisher*. Before making a submission, please review our Contributor's Guidelines on our website (www.amff.com), or write to request a copy. The museum cannot accept responsibility for statements and interpretations that are wholly the author's.

The American Fly Fisher (ISSN 0884-3562) is published

four times a year by the museum at P.O. Box 42, Manchester, Vermont 05254.

Publication dates are winter, spring, summer, and fall. Membership dues include the cost of the journal (\$50) and are tax deductible as provided for by law. Membership rates are listed in the back of each issue. All letters, manuscripts, photographs, and materials intended for publication in the journal should be sent to the museum. The museum and journal are not responsible for unsolicited manuscripts, drawings, photographic material, or memorabilia. The museum cannot accept responsibility for statements and interpretations that are wholly the author's. Unsolicited manuscripts cannot be returned unless postage is provided. Contributions to *The American Fly Fisher* are to be considered gratuitous and the property of the museum unless otherwise requested by the contributor. Copyright © 2010, the American Museum of Fly Fishing, Manchester, Vermont 05254. Original material appearing may not be reprinted without prior permission. Periodical postage paid at Manchester, Vermont 05254; Manchester, Vermont 05255; and additional offices (USPS 057410). *The American Fly Fisher* (ISSN 0884-3562)

EMAIL: amff@amff.com WEBSITE: www.amff.com

POSTMASTER: Send address changes to *The American Fly Fisher*, P.O. Box 42, Manchester, Vermont 05254.



Brown Trout, Sea Trout, and Zebras

by Peter Lapsley

Robert M. McDowall



Aplochiton zebra—the zebra trout—is one of only two freshwater fish indigenous to the Falkland Islands.

On 25 March 1992, in driving sleet and rain, Alison Faulkner caught nineteen sea trout (sea-run brown trout) for a total weight of 126 pounds, 4 ounces. When weighed two days later, the biggest fish tipped the scales at 22 pounds, 12½ ounces—2½ ounces heavier than the then-United Kingdom record. Fish lose weight quite quickly when removed from the water, so it probably weighed about 25 pounds when caught.

As a day's fishing, this one was extraordinary by any standard. It was all the more so because, quite simply, it would have been impossible fifty years earlier. Ms. Faulkner's fish were taken in the Falkland Islands (known to Argentines as Los Malvinos), where neither brown trout nor sea trout existed until 1940.

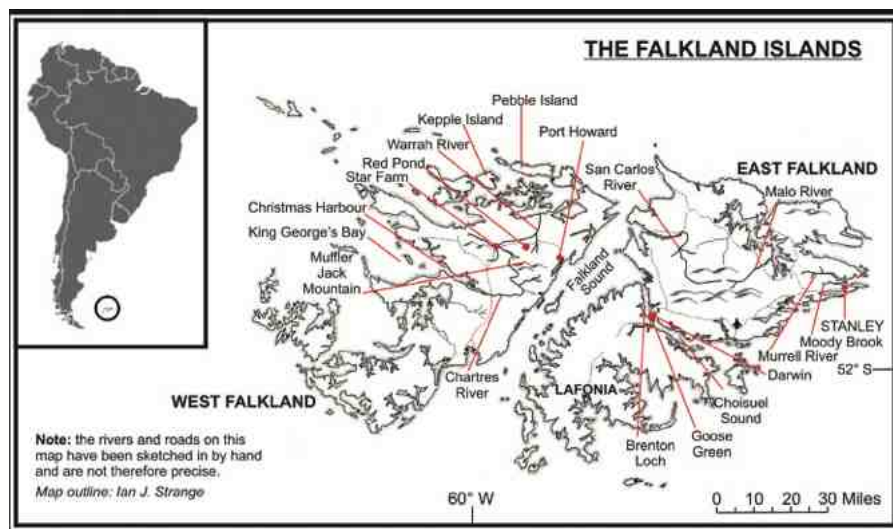
The excellence of the Falkland Islands' sea-trout fishing has become well known to British anglers but is perhaps less so to Americans and others. What is generally less well known, too, is the story of the introduction of brown trout into the islands, the way in which the runs of sea trout developed, and the effect the introduction of brown trout has had on the islands' indigenous freshwater fish species. The story raises almost as many questions as it answers but is intriguing for the insight it provides into the brown trout's readiness to establish itself in suitable surroundings, into the delicacy of the boundary between brown trout and sea trout, and into the fragility of native species when confronted with

comparable—but more successful—interlopers.

A thousand miles north of Antarctica, 400 miles northeast of Cape Horn, with a land-surface area only slightly smaller than that of Connecticut (4,700 square miles as against Connecticut's 5,543) and a population of just more than 2,500 (1,800 of whom live in the capital, Stanley), the Falkland Islands are among the few remaining reasonably hospitable wilderness areas in the world.

The two main islands—East and West Falkland, separated by Falkland Sound and with countless bays and inlets—are surrounded by some 700 smaller islands and islets. The countryside is bleakly beautiful: wild, peat-based moorland with jagged rocky outcrops rising to more than 2,000 feet.

The Falklands have several significant river systems, the most important among them being the Murrell, Malo, and San Carlos rivers on East Falkland and the



Map of the Falkland Islands.

Warrah and Chartres rivers on West Falkland. The rivers are rain fed, sometimes peat stained, and generally pH neutral. It was from the San Carlos River that Alison Faulkner took her remarkable bag of sea trout.

The climate of the Falkland Islands is less extreme than many people imagine. The air is crisp and clear. Although the weather often changes very quickly and the wind is sometimes irritating, the temperature can climb into the low 70s Fahrenheit in summer (November to March) and rarely falls below 24 degrees even in winter (June to August). Once based on sheep farming, and with sheep farming continuing to this day, the islands' income is now derived chiefly from the sale of squid fishing licences to Korean, Japanese, and Taiwanese fishing boats; from locally registered fishing companies; and from tourism. Hopes of offshore oil production have yet to materialize.

FALKLAND ISLANDS FISH, FISHERIES

When Charles Darwin visited the islands in 1833 and 1834, he recorded only two indigenous species of freshwater fish: *Aplocheilichthys zebra* (which, for the purposes of this article, I shall refer to by its colloquial name, "zebra trout") and *Galaxias maculatus*, a so-called minnow. Zebra trout were apparently widespread, living both in the rivers and in at least some of the many freshwater lakes with which the islands are studded. Two of the three specimens caught by Darwin in East Falkland from a freshwater lake connected to the sea by a short brook are preserved in the Natural History Museum in London.

Other fish found in brackish creeks in the Falkland Islands include the codlike species *Eleginops maclovinus*, known locally as "mullet," and smelt (*Odontesthes* spp.). But both are marine fish that simply migrate into river mouths to feed.

Although a member of the salmoniform order, and superficially troutlike in both appearance and behavior, the zebra trout is only distantly related to the salmonidae (the trout, salmon, chars, whitefish, and grayling of the northern hemisphere). It is found exclusively along the Chilean side of the Andes, from Valdivia in the north to Tierra del Fuego in the south, and in the Falkland Islands.

Its nearest relative, *Lovettia sealii*, also a member of the family Aplocheilichthidae, is limited to the rivers of Tasmania in Australia, which suggests that their distant ancestors were probably a single marine species that migrated into rivers rather than a freshwater species that went to sea and then crossed vast tracts of ocean. The same applies, of course, to the salmonid species in the northern hemisphere.

Relatively little is known about the life history of the zebra trout, but it seems that they spawn in the austral spring (September), that their ova are sticky and adhere to rocks or aquatic vegetation, and

and lakes. The islands abound with waterfowl, and it is easy to envisage them inadvertently transporting adherent ova from watercourse to watercourse. It has been speculated also that being relatively weak swimmers, juveniles washed out to sea may return to any source of fresh water rather than necessarily to the streams in which they were born. All this contrasts sharply with brown trout (*Salmo trutta*), the ova of which are not sticky, the young of which do not go to sea until they are between one and three years old, and which return eventually and almost unerringly to the rivers in which they were born. All of this accounts for the quite gradual spread of brown trout from watercourse to watercourse and for their apparently complete absence from the Falkland Islands' landlocked lakes.

In 1939—brown trout, brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations having become established in several rivers in Tierra del Fuego—the Falkland Islands government decided to see whether these same species could be introduced successfully into some of the rivers in East and West Falkland. In 1940, small quantities of eyed brown-, brook-, and rainbow-trout ova were imported from Chile and incubated in a makeshift hatchery just outside Stanley. The brook and rainbow trout died, but the brown trout thrived and were released, probably into Moody Brook, which runs into the western end of Stanley Harbour, and possibly into the nearby Murrell River. (Regrettably, rec-

ords of these earliest attempts to establish trout in the islands were lost in a fire.)

The Second World War interrupted the Falklands' fisheries program, but in 1947 the Chilean government presented the Stanley hatchery with 30,000 brown-trout ova as a gift, and more ova were imported from Britain: 10,000 in January 1948, 15,000 in January 1949, and 10,000 each in 1950, '51, and '52. It is understood that no sea trout had access to the rivers, lakes, and lochs from which the brood stock came. The alevins that hatched from the ova were exclusively the progeny of nonmigratory brown trout.

It is a pity that there are no clear records to show how many of the ova

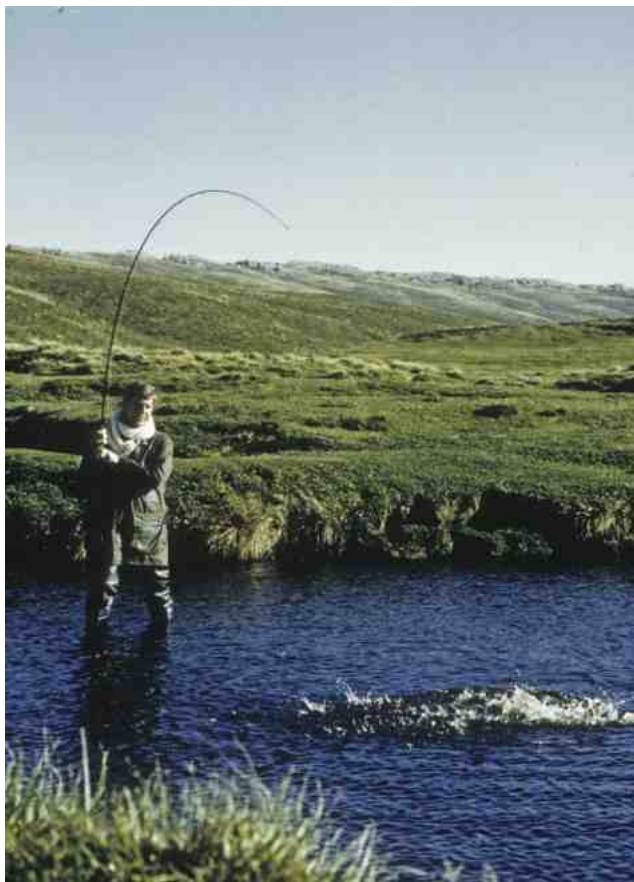
Photos by Peter Lapsley unless otherwise indicated.



Stone runs are widespread in the Falklands and make for difficult cross-country driving to fishable stretches of the rivers.

that many river-bred fry are washed out to sea soon after hatching, returning to rivers when they are still small—an interesting selection-of-the-fittest process. Thereafter, they remain in fresh water for the rest of their lives, feeding on freshwater and wind-born terrestrial invertebrates and preying on minnows. They grow to an apparent maximum length of about 12 inches. Some zebra-trout populations live in ponds and lakes unconnected to the sea and therefore complete their entire life cycles in fresh water. Zebra trout are long lived, with life spans of between ten and twenty years.

The stickiness of zebra trout ova may account in part for the way in which they have spread throughout Falklands rivers



Above: The Murrell was probably one of the first rivers in the Falklands into which brown trout fingerlings were introduced in the early 1940s.



Right: Two images of Falkland Islander Don Bonner playing a 4½-pound "slob trout" in the Murrell River estuary.

hatched, how many of the alevins grew to releasable size, or precisely where the fingerlings or fry were released. Generally, they were transported around the islands in galvanized iron tanks on the deck of the island steamer or carried in milk churns slung as panniers on mules or horses, and they were released into waters wherever they and their offspring might be expected to provide sport and food for the inhabitants of the rural settlements. Substantial numbers of the small trout thus released survived and thrived, not least, presumably, because there was nothing to prey on them, apart from the relatively timid zebra trout.

In 1954, anglers fishing for zebra trout began to catch brown trout. Examination of the fishes' stomach contents showed that they had been feeding largely on freshwater shrimps, supplementing their diets with occasional caddis larvae, midge pupae, ostracods, and water snails, and with a few terrestrial insects, including beetles. Scale readings showed growth rates similar to those for brown

trout in rain-fed rivers in Britain. One-year-old trout were 5 to 6½ inches long, two-year-olds 6 to 8½ inches, three-year-olds 10 to 12½ inches, and four-year-olds 9 to 14½ inches. Some fish older than three years had spawned.

On 25 February 1956, Mr. N. K. Cameron caught a 3½-pound trout in the Malo River on East Falkland on a wet fly. He went on to catch nine more fish of between 1½ and 2 pounds—all significantly larger than would be expected from a river with so relatively sparse a food supply. During the 1957/1958 and 1958/1959 seasons, anglers fishing the Murrell River caught between 300 and 400 trout ranging in weight from 1½ to 12 pounds. Most of these were sea trout—proof, if ever proof was needed, that a brown trout is a sea trout is a brown trout. The interpretation of the Freshwater Fisheries Laboratory at Pitlochry in Scotland was that it would be extremely difficult to differentiate between Falkland Islands and Scottish sea-trout scales.

It is clear, therefore, that the importa-

tion of brown-trout fry into Falkland Islands rivers between 1940 and 1952 resulted in the establishment of substantial, self-sustaining populations of both brown trout and sea trout. The subsequent introduction of 28,000 "sea-trout" ova in 1961 and 1962, of which 22,000 survived and were planted out as fry in the Malo and San Carlos rivers on East Falkland and the Warrah River in West Falkland, was superfluous. Sea-trout stocks were already well established when they arrived.

As an aside, an attempt between 1960 and 1964 to introduce Atlantic salmon (*Salmo salar*) suffered the same fate as all other similar attempts in the southern hemisphere. Unlike sea trout, which rarely stray far from the rivers in which they were born, Atlantic salmon travel great distances when they go to sea. The Atlantic salmon introduced into a couple of Falkland Islands rivers vanished without a trace, presumably because their built-in navigation systems were unable to cope in the southern ocean.



The Malo River, from which Mr. N. K. Cameron caught the first recorded sea trout in the Falkland Islands in 1956.

So, why do some brown trout develop a migratory habit, becoming “sea trout,” whereas some do not?

A simple soul, I used to suppose that downstream migration by trout was a straightforward response to a shortage of food and that this accounted for the fact that the biggest runs of sea trout tend to be found in the least fertile rivers. That is to say, sea trout are sensible: “There’s not much food here; let’s go down to the sea and find some there.” Conor Nolan, PhD, then the chief scientist with the Falkland Islands Fisheries Department, a keen fly fisher himself, provided me with a very much more detailed and coherent explanation.

Brown trout (and many other salmonids) are aggressively territorial. Their objective is to establish and then to defend areas large enough to provide them with the food they need to reach maturity. Where the number of trout exceeds a river’s capacity to provide sufficient food, some trout will be unable to take and hold such areas. It is easier to drift down with the current than to swim against it. Therefore, these *unsuccessful* fish will tend to move downstream, eventually reaching estuaries and coastal waters in which they will find an abundance of food. The least adventurous of them will remain in the estuaries as “slob trout.” The more adventurous will roam further afield as “sea trout.” Both

strains will return to the rivers of their births to spawn. Imagine the chagrin of the brown trout that have remained in the rivers, eking out meager livings from their hard-won territories, when their “less successful” siblings come home, fit, fat, and happy, fresh from the sea.

It has often been noted that the great majority of sea trout are female—typically, both in Europe and in the Falkland

Islands, at a ratio of almost 3:1—and it has been suggested this is accounted for by a migratory strand in the fishes’ mitochondrial DNA. However, in all the rivers in which sea trout are found, sea trout and resident trout invariably coexist, and such research as has been done shows little if any genetic divergence between them. A more likely explanation may be that male trout are more aggressive than females and better able to take and hold the feeding areas they need, leaving the females to wander off to sea.

In the northern hemisphere, brown-trout and sea-trout appearance and behavior vary widely, but certain behavioral characteristics are common to all strains. Females lay their ova in shallow redds in loose gravel in clean, reasonably fast-flowing, well-oxygenated streams and rivers, usually in November or December (early midwinter) but occasionally as late as February or even March. When a sea trout has cut one redd with her tail and laid a proportion of her ova in it, the ova being fertilized by an accompanying male as they are shed, she moves a short distance upstream and cuts another, the gravel displaced from it covering the ova in the first one, and so on. She may cut as many as four or five redds, depositing up to 200 fertilized ova in each one.

Sea-trout ova can be fertilized by cock sea trout, slob trout, or non-migratory brown trout. This is a further persuasive argument in the debate as to whether the migratory habit is inbred in sea trout or whether migration is a response chiefly or exclusively to environmental pressure. Because such indiscriminate mating can serve only to generalize the genes of successive generations of fish, it seems reasonable to suppose that all brown trout must be potential sea trout—or vice versa.

BROWN TROUT = SEA TROUT?

This poses an intriguing question. Could it be that all brown trout are actually sea trout, with a built-in migratory instinct that they set aside, remaining in their home rivers throughout their lives, but only if they find themselves in a sufficiently comfortable environment with plenty of food? It would seem so.

Further circumstantial evidence to support the theory that *Salmo trutta* is a natural-



Another look at the Malo River.

ly migratory species is to be found in the habits of brown trout living in all sorts of waters. Vivid examples are to be seen in large Irish and Scottish lakes—waters like Loughs Melvin and Neagh in Ireland and Lochs Awe, Ericht, and Rannoch in Scotland. Many of the trout born in such lakes' feeder streams migrate into the lakes themselves to grow and mature, running back up the streams to spawn. Their urge is not to migrate to salt water but simply to better feeding grounds. Whether their migration takes them to sea or not is entirely a matter of geography—and of their ability, unusual in the piscine world, to move from fresh water to salt and back again. (All of this applies, of course, to almost all salmonid species, the great majority of which have migratory and nonmigratory strains.)

Falkland Islands brown trout show a remarkable variety of characteristics, depending upon the lifestyle they adopt.

Moody Brook, just to the west of Stanley, is full of fierce little nonmigratory brown trout, as are all the rivers in the Falklands that also have runs of sea trout. Fishing just upstream of the old Royal Marine barracks, I have caught as many as a dozen of these diminutive brown trout in a couple of hours. Fit, lean little creatures, dark bronze with dull red spots, snapping at little wet flies, indifferent to pattern, and weighing in, I guess, at three or four to the pound. I have caught very similar fish in numerous Falklands rivers.

Fishing on the dividing line between fresh water and salt near Port Howard on West Falkland, I have taken trout of between 1 and 1½ pounds apiece. These were young fish, maybe three years old, enjoying for the first time the rich feeding to be had beyond the streams in which they were born. They looked like perfect



At 5 pounds, a modest sea trout by Falklands standards.

chalk-stream brown trout, with clean, white bellies brightening to glittering gold on top, flecked with bright vermillion spots within sharp, dark haloes.

Some of these trout are easily satisfied, never leaving the estuaries at all. Having grown into very handsome fish, rather unkindly named slob trout, they may come to the net at between six and eight years old weighing between 3 and 5 pounds, contrasting sharply with true sea trout of the same age.

It seems likely that, in the Falkland Islands, even true sea trout do not wander far in salt water, either remaining in huge, food-rich "inland seas" like Salvador Water, or browsing among the kelp in inshore areas along the coast. When they return to fresh water to spawn for the first time, weighing between 2 and 6 pounds, they are clean, deep, and fiercely

fit, glittering silver, freckled with sharp black spots. In subsequent years, they may weigh twice, thrice, or four times as much, an eight-year-old being among the coveted double-figure fish.

AN IDEAL LABORATORY

From all this, it is evident that brown trout having been introduced into their virtually fishless waters (*pace* the zebra trout and minnows), the Falkland Islands are an ideal laboratory in which to study the fishes' responses to environmental variation. For example, it is widely known among those who fish in the Falklands that numbers and sizes of sea trout from the Warrah and Chartres rivers on West Falkland differ greatly.

The two rivers are very similar in size and character. Both rise within a couple of miles of each other on Muffler Jack Mountain, and each flows about 30 miles through the same sort of countryside: the Chartres westward, eventually running into Christmas Harbour; the Warrah northward, entering the sea in River Harbour.

The Warrah produces rather fewer fish than the Chartres but, at average weights between 4 and 6 pounds apiece, they are relatively big. In contrast, the Chartres produces large numbers of relatively small sea trout, typically of between 3 and 4 pounds apiece. For a long time, those of us interested in this supposed that there must be a relationship between "more but smaller" and "fewer but bigger." There was not.

What we discovered was that at Star Farm, at the head of the Warrah, there is a pit into which the farm owner tips up to 1,000 sheep carcasses a year. This enriches the nascent river, increasing the



A fine Falklands sea trout, tipping the scales at 12½ pounds.



Airborne! An angler (Jonathan Straw) playing a good sea trout on the Warrah estuary.

biomass it can sustain and thus the available food for trout. As a consequence, relatively few of the trout go out to sea. As evidence of this, one can catch good numbers of Warrah brown trout to 14 inches (about 1 pound)—handsome, well-fed fish that show no signs of smelting. The Chartres River has no such enrichment and offers poor feeding. Most of its brown trout therefore go to sea, and its nonmigratory trout are small, lean, and hungry. It is these factors that probably account for the “more and fewer” side of the equation.

What we realized also was that fish migrating to sea from the Warrah immediately found themselves feeding in the warm, shallow waters of the archipelago that extends from the northern shore of West Falkland to Pebble and Kepple islands—a veritable soup of smelt and krill. On the other hand, those leaving the Chartres were literally being thrown in at the deep end. Christmas Harbour opens directly into King George’s Bay—a cold, deep, exposed, fjordlike expanse of water with a narrow littoral zone in which the sea trout would have to work hard for their food—which is why they tend to be smaller than fish from the Warrah.

This is also, of course, why the Rio Grande in Argentine Tierra del Fuego produces such large numbers of very large sea trout,

averaging 9 pounds apiece and with specimens quite frequently caught weighing between 25 and 30 pounds. The Rio Grande itself is unusual. Brown trout breed prolifically in its fertile tributaries, but the main channel into which many of them migrate has a paucity of food, so most of the fish that move into it then move downstream. As they approach the

sea, they find themselves in a large, shallow, sheltered estuary, 6 miles long, half a mile wide, with an abundance of krill and smelt and with an almost complete absence of predators. Those that turn north along the coast continue to enjoy rich feeding, and some may continue on to the Straits of Magellan, sheltered and with a wealth of food. By the time they return to the Rio Grande to spawn, they have put on more weight than comparable sea trout anywhere else in the world.

LESS WARY

In Europe, sea trout are notoriously wary, being difficult to catch in daylight unless there is a peat stain in the water and a ripple on it to conceal the angler’s wiles from the fish. The great majority of European sea trout are therefore taken at night. Falklands sea trout seem markedly less wary than their European counterparts, but it would be wrong to suppose that they are not shy. They can easily be frightened by people skylining themselves on the bank and by careless wading. Interestingly, though, they will take a fly readily in daylight, provided they are approached with reasonable stealth, and people who have fished for them at night have had remarkably little success.

When one has caught as many as ten sea trout from one short stretch of water in the course of a morning, as can happen in the Falklands, it is tempting to suppose that the fish stocks in the islands’ rivers are inexhaustible. They are not.

In April 1998, when large numbers of sea trout might have been expected to be present in the rivers, Pete King (a keen conservationist, angler, and student of trout) and Stuart Wallace (also a keen trout conservationist), walked the Murrell River from its source to the sea. There are few hiding places in the river, which is generally narrow, and the water was clear. They counted a total of 180 fish. Rough extrapolation suggests that no more than 1,000 sea trout run the Murrell during the course of an entire season. Other rivers—like the Malo, San Carlos, Warrah, and Chartres—are larger and may be expected to support proportionately larger fish stocks, but those stocks are still finite and fragile, and they must be protected if the



Game on. An angler (Nick Gooderham) plays a fine sea trout on the Warrah estuary. The Warrah produces rather fewer but larger sea trout than its sister river, the Chartres.



The introduction of fry from sea-trout ova into rivers like the Warrah in 1961 and 1962 was superfluous. Sea-trout stocks were already well established when they arrived.

quality of the Falkland Islands sea-trout fishing is to be maintained.

For reasons that could form the basis of a separate and lengthy article, non-U.S. anglers tend to be more pragmatic and less evangelical about catch-and-release than their North American counterparts. One of the original reasons for the introduction of brown trout into the Falkland Islands was to provide the inhabitants of rural settlements with relief from the monotony of a mutton-based diet; not for nothing is mutton known to Falkland Islanders as “365”! And that the sea-trout populations can sustain the taking of quite modest numbers of fish for the table is evidenced by the way in which they have survived and thrived. For that reason, no restrictions are placed on local residents in respect to fishing methods used (many spin for sea trout), and they are limited only to killing no more than six fish a day. Visiting anglers are different, and a very reasonable responsibility is placed on them for helping conserve stocks. They are required to fish with barbless single hooks, with tackle strong enough to enable them to bring fish to hand quickly, and to release fish with as little trauma as possible—ideally, without removing them from the water or touching them. The only fish they may kill are the very occasional ones that are bleeding and would therefore die if returned, and fish requested by the lodge.

EFFECTIVELY DISAPPEARED

But with so many brown and sea trout in Falklands rivers, what of the zebra trout?

The sad fact is that zebra trout have effectively disappeared from virtually all the waters in which brown trout have become established. Brown trout dominate the northeastern half of East Falkland, and there are very few remaining zebra-trout populations there, all of them in lakes.

Lafonia, the southern half of East Falkland, is almost completely cut off from the northern half by Choisuel Sound and Brenton Loch, the two “islands” being connected only by a narrow strip of land on which stand the settlements of Darwin and Goose Green. Lafonia is low lying, with slow-flowing streams and ditches, and is largely uninhabited. It seems unlikely that any

attempt has ever been made to introduce brown trout to the area.

The 1999 survey showed zebra trout to be present and brown trout to be absent throughout much of Lafonia, including the north-coast streams running into Choisuel Sound and the west-coast ones running into Falkland Sound.

Nine years later, the 2008 survey showed brown trout to have taken over the Choisuel Sound and west-coast streams. Zebra trout were still present and reasonably abundant along a line running from northeast to southwest through central Lafonia. Interestingly, though, brown trout and zebra trout were found coexisting in three locations 5 or 10 miles inland from Choisuel Sound, suggesting that brown trout had recently moved into the area but were not yet dominant there.

Zebra trout were found to be more widespread in West Falkland, the south of the island being a particular stronghold with populations in most streams and rivers. They were also found around Port Howard and in Red Pond, a large, shallow, landlocked lake just above the head of Green Hill Stream, a tributary of the River Warrah.

The Port Howard population demonstrates graphically how brown trout can oust zebra trout when they colonize a river, and how zebra-trout populations can survive when there are no brown trout present. Above the settlement, House Stream has been dammed to form a small reservoir. The dam is impassable to brown trout, which are present below it in substantial numbers, whereas zebra trout are the only fish to be found above it. Similarly, North Lake Sullivan and South Lake Sullivan, in the middle of



The River Chartres produces more sea trout than its sister river, the Warrah, but their average weight is lower.

West Falkland, are separated by a strip of land less than a quarter of a mile wide. Although there are healthy zebra-trout populations in North Lake Sullivan and the rivers flowing into Port Philomel, South Lake Sullivan and the West Malo River contain only brown trout.

So, where to from here?

By the early 1990s, little if anything had been written about the fate of Falkland Islands zebra trout. I took some satisfaction from being told that it was a paper of mine, published in the *Falkland Islands Journal* in 1994, that led directly to their being accorded specific protection under the Falkland Islands Conservation of Wildlife and Nature Ordinance, 1999, and to the inclusion of the zebra trout as the subject of one of a set four World Wildlife Fund endangered-species stamps issued by the Falkland Islands Philatelic Bureau.

It may be that zebra trout would survive in the Falklands without formal protection. Unlike the imported brown trout that prey on them and compete with them for food, they are able to breed and to live out their lives in many of the islands' landlocked still waters. Some may see them as little more than a curiosity. After all, they do not make up significant proportions of the diets of birds or other fish, or occupy any key position in the Falkland Islands' ecosystem. And unlike brown trout, which provide food and sport for Falkland Islanders and income from angling tourism, they have no real social or economic value. All that seems to me to miss the point, though: that it is we who introduced into the islands the species that threatens them, and it is for



The settlement at Port Howard. The fishing on the rivers Warrah and Chartres is managed from the lodge, seen in the center of the picture.

us, therefore, to do what we can to minimize the harm we have done.

ACKNOWLEDGMENTS

I am indebted to Robert M. McDowall, PhD, for permitting me to use his excellent photograph of a zebra trout in this article; and to the late Jon Clark; Pete King; the late Robin Lee; Conor Nolan, PhD; Terry Spruce; and Ken Whelan, PhD, for sharing their knowledge of brown trout, sea trout, and zebra trout with me in numerous conversations.

BIBLIOGRAPHY

- Lapsley, Peter M. "Alas, Poor Zebra," *The Falkland Islands Journal* (1994, vol. 6, no. 3), 26–34.
- . *Fishing for Falklands Sea Trout* (London: Falkland Islands Tourist Board, 2000).
- McDowall, Robert M. "Conserving and Managing Falkland Island Freshwater Fishes," *The Falkland Islands Journal* (2001, vol. 7, no. 5), 68–78.
- . "Fishes of the Family Aplochitonidae," *Journal of the Royal Society of New Zealand* (1971, vol. 1, no. 1), 31–52.
- O'Neal, S. and J. A. Stanford. *Population Status and Ecology of Brown Trout: Rio Grande, Tierra del Fuego, Argentina*. Flathead Lake Biological Station Report No. 193-06, 2006.
- Pauly, Daniel. *Darwin's Fishes: An Encyclopedia of Ichthyology, Ecology, and Evolution* (Cambridge, U.K.: Cambridge University Press, 2004).
- Ross, Katherine. *Freshwater Fish in the Falklands: Conservation of Native Zebra Trout* (an unpublished report to the Falkland Islands government and Falklands Conservation, 2009).
- Stewart, L. *The Fisheries in the Falkland Islands* (a paper for the Falkland Islands government, 1973).
- Thorpe, J. E. *Migration of Salmonids*. Paper presented to the Salmon and Trout Migratory Symposium at the University of Washington, Seattle, June 1981.



The zebra trout was made the subject of one of a set four World Wildlife Fund endangered-species stamps issued by the Falkland Islands Philatelic Bureau.

Walden Pond's Mystery Trout

by Willard P. Greenwood

PERHAPS THE PREDATORY nature of fishing has caused the majority of past and present scholars to overlook its importance in *Walden*, which has become such a seminal work of proto-environmentalism. For example, Lawrence Buell's *Environmental Imagination* uses *Walden* as a touchstone for his historical analysis of American environmentalism; yet, he does not mention fishing.¹ Henry David Thoreau himself may be to blame for Buell's critical omission because he personally refutes fishing in the "Higher Laws" chapter of *Walden*. Nonetheless, in chapter after chapter of *Walden*, Thoreau goes fishing even after his refutation.² There is much more to *Walden* than fishing, of course, but scholarship on this subject is rather sparse compared with its ubiquity. Robert Sattelmeyer's article is a compelling and thorough analysis of fishing in *Walden*.³

What current scholarship also does not account for is the variety of ways in which Thoreau's life and works have inspired fishermen and fishing writers. The transcendental attachment to nature and reverence for the outdoors is partially due to the ethos expressed in *Walden*. Even though Thoreau mentions several kinds of fish in *Walden*, it is the brief appearance of a large trout that is particularly interesting. The presence of this trout, described both in *Walden* and in Thoreau's journals, gives rise to an ecological, literary, and historical mystery.

THOREAU'S SENSIBILITIES AND THEIR CONNECTION TO MODERN FLY FISHING

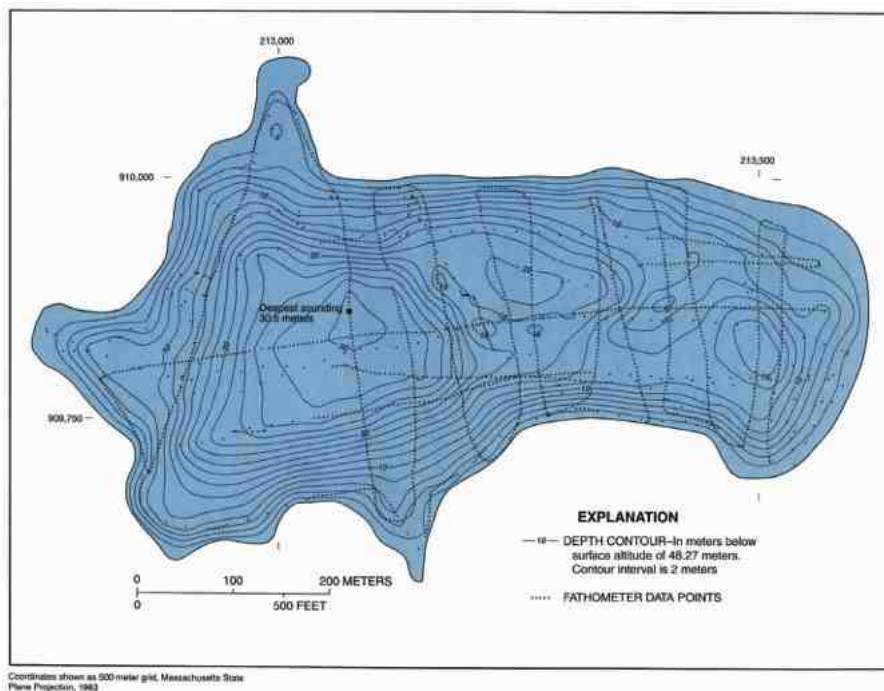
Thoreau refutes the act of fishing, but he does so inconsistently; he states years later in *The Maine Woods* that "I could spend a year in the woods, fishing and hunting, just enough to sustain myself, with satisfaction."⁴ In his trip to Maine, we see a growing reverence for living things and an increasing ambivalence

toward killing them; in that regard, *The Maine Woods* resembles *Walden*. John Gierach and David James Duncan express the same kind of ambivalence about killing and eating trout. Thoreau understands that to live in proximity with Nature, some bloodshed is inevitable. Fishing, which is predatory, is inextricably linked to Thoreau's desire to free himself and others from the uncivilizing aspects of civilization, which is evident in two accounts of night fishing in *Walden*.

The first episode, in "Solitude," identifies night fishing as a practice of the locals that Thoreau invokes in order to intensify his own solitude. Gierach and Ian Frazier have both written about night fishing and how fishing in the dark amplifies solitude. Thoreau notes that some people come to *Walden* to fish and that they "baited their hooks with darkness."⁵ Thus we see fishing, especially night fishing, as a rarefied

and mysterious undertaking that remains unexplored by Thoreau until "The Ponds." Thoreau himself explicates the metaphysical importance of "catching two fish with one hook,"⁶ which is his way of describing the pleasure of the meditative state that fishing produces. To further illuminate Thoreau's sensibility here, we recall Ralph Waldo Emerson's claim that Nature "arms and equips an animal to find its place and living in the earth, and, at the same time, she arms and equips another animal to destroy it."⁷ Thoreau sees a connection between fishing's predatory reality and its transcendental appeal. To this day, we see this transcendental appeal alive and well in fly-fishing literature.

In the enumeration of species, Thoreau establishes a place in the mainstream of fishing literature, which will always and rightfully be an odd offshoot of

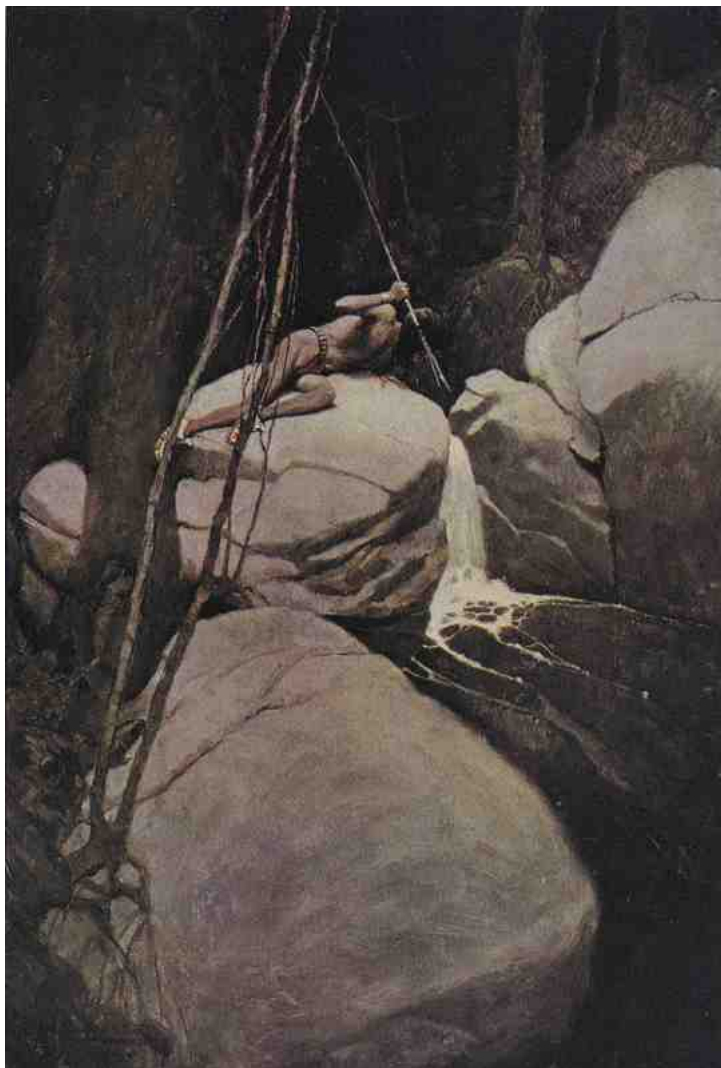


Walden Pond topographical map. Courtesy of Massachusetts U.S. Geological Survey.

American letters. *Walden* is a place-specific fishing text, which to some degree is the mode of many contemporary how-to fishing books. The specificity of such books is their main allure; the particularity of knowing a specific place adds a kind of vicariousness to the reading experience. That place-specific element aligns Thoreau with mainstream fishing literature, but the fact that women have virtually no presence in *Walden* shows his worldview to be deficient. (In his actual life, Thoreau was close with his mother and sisters.) Although this lack of female presence may be a deficiency, it emphasizes, accurately, the split that exists between the sexes in the practice of fishing and, consequently, in fishing literature.

One of *Walden*'s early reviewers aptly asks: "Did he never people that bare hovel, in imagination, with a loving and beloved wife and blooming children, or did he imagine that to know what life is he must ignore its origin?"⁸ One could describe this avoidance of romantic domesticity as a certain kind of asceticism, yet the criticism must be acknowledged because Thoreau is clearly trying to espouse a worldview that establishes a new relationship between the individual and the natural world. As a work of fishing literature, his solitude becomes quite understandable, for fishing is almost always done alone or with other men, which makes *Walden* seem quite normal genderwise in relation to fishing.

Gierach acknowledges "that it's entirely permissible to miss the girlfriend while on a fishing trip, especially between hatches . . ."⁹ An examination of the sexes will always show fishing literature to exhibit a mildly eccentric version of masculinity. It is worth noting that many women do like *Walden*—not because of Thoreau's cosmopolitan understanding of men and women, but for his ecological ethics. Thoreau inspired Anne LaBastille to undertake a *Walden*-like project in the 1960s in a remote area of the Adirondacks, where she worked as a commissioner of the Adirondack Park Agency. She claims, however, that "As a woman, I am not touched at all by *Walden*."¹⁰ The way in which Thoreau draws on the common interest of the sexes is in his desire to perfect "the art of life."¹¹ This perfection of the art of life achieves full bloom in modern fishing literature, which refutes Buell's observation that "Thoreau is not deemed to have engendered any canonical progeny, at least within the field of literature."¹² Buell's statement is a little misleading, because there is a small but significant branch of American literature that *has* been directly influenced by Thoreau.



N. C. Wyeth, *A Primitive Spearman* (1913).

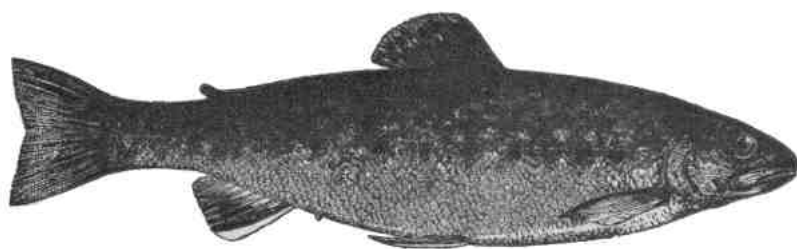
As we can see from many current fishing writers, there is a transcendental desire attached to fishing, especially in Duncan's work. Thoreau, living at *Walden*, anticipates the contemporary ideal of the modern angler insofar as the pursuit of fish and the fishing trip is a means of organizing the interior and exterior life—fishing provides conviviality and sustenance. The interest and disinterest in natural history is a part of Thoreau's canonical legacy—Duncan's protagonist takes up residence at a particular place, a small coastal river in the Pacific Northwest, which is notable for its solitude, abundance of trout, and a previously abandoned cabin—a one-room place that is strikingly similar to Thoreau's cabin.

Because of its history and its connection to entomology, fly fishing is a nuanced branch of fishing. The writings of Thomas McGuane, Duncan, Ted Leeson, Gierach, Ernest Hemingway, and many others add to the rich lore of fly fishing for trout. It is in this historical and contemporary literary context that

we now revisit Thoreau as he provides us with an ecological and historical mystery in the form of a 5-pound trout that Concord resident Gardiner Heywood speared in *Walden* Pond.¹³ The spearing of this trout reveals a fascinating nexus between the natural history of *Walden* and its past and present fish populations.

THE MYSTERY OF THE TROUT'S ORIGINS

Modern American trout anglers are fascinated with native strains of trout, which are deemed "superior" to stocked fish.¹⁴ It is worth noting that today *Walden* is stocked with rainbow trout, brown trout and a few brook trout.¹⁵ In fact, the *spearing* of the fish represents a connection to an even more ancient mode of fishing. I am interested in the trout's origins, but Heywood and the man shown in N. C. Wyeth's *A Primitive Spearman* (above) were interested in *Walden*'s trout as food, as survival itself, which can be artistic.



NAIAD QUEEN.

Theodatus Garlick held the brook trout in such high esteem that he titled this illustration "Naiad Queen" (none of the other fish in the book receive such a label). Thoreau would have seen this picture and therefore would have known how to identify a brook trout. From Theodatus Garlick, A Treatise on the Artificial Propagation of Certain Kinds of Fish with the Description and Habits of Such Kinds as Are the Most Suitable for Pisciculture (Cleveland: Tho. Brown, Publisher, Ohio Farmer Office, 1857), 81.

We know that fish stocking did not start in America until 1850s when Theodatus Garlick, a Cleveland doctor, published *Artificial Propagation of Fish*.¹⁶ Garlick was the first person in the United States to breed brook trout and other fish under artificial conditions. What is even more interesting is that we know that Thoreau owned a copy of Garlick's book.¹⁷ Given the date of the spearing of the trout (1857), however, it is quite unlikely that this brook trout was artificially created and then stocked in Walden.

As for this trout being one of another species, we can take a cursory look at the timeline of stocking in this country. Rainbow trout are native to the West Coast and were not stocked in the East until the 1880s, which is also the case with the brown trout. Yet, the presence of a 5-pound trout is of current interest because to any modern-day angler, a 5-pound brook trout would constitute a trophy. The current record for a brook trout in Massachusetts is 6 pounds, 4 ounces, which was caught by Thomas Laptew from Otis Reservoir in 1968.¹⁸ A pond that would support a native population of brook trout would be highly desirable. According to John Sheedy, a fisheries manager in the Acton (Massachusetts) office, a few brook trout are stocked in Walden. In fact, one weighing 3 pounds, 6 ounces was caught through the ice last winter.¹⁹ Even though water conditions in Walden are not the same as they were in 1857, Heywood's trout would suggest otherwise.

It is possible that this mystery trout could have been a salmon, but Thoreau was very familiar with them from his experiences in Maine—he ate salmon and trout during his travels in the Maine

woods. He makes a clear distinction between these two species in *A Week on the Concord and Merrimack Rivers*. He mentions that salmon were abundant in the Concord, and that if he and his brother "had leisure this afternoon we might turn our prow up the brooks in quest of the classical trout . . ."²⁰ I would suggest, therefore, by process of elimina-

tion, that this fish can only be one whopper of a brook trout, which at this point in history would have been the only kind of trout in New England.

Walden Pond is well within the natural eastern range of *Salvelinus fontinalis*, which extends to northern Virginia and as far east as the headwaters of the Chagrin River in northeast Ohio. The brook trout did not receive the aforementioned Latin classification until 1814, so it is possible (though unlikely) that Thoreau might not have heard of it yet. Garlick refers to the fish as *Salmo fontinalis*, so Thoreau would have been aware of the term. I wonder, though, about Thoreau not ascribing a Latin classification to this fish, because in the same paragraph that Thoreau mentions this trout, he also mentions *Leuciscus pulchellus*, which he calls a "chivin or roach," and *Pomotis obesus*, which is a type of bream.²¹ The absence of Latin nomenclature in relation to the brook trout is a little curious; New Englanders had been fishing for and eating brook trout since the 1700s.

Thoreau states, in a journal entry dated 14 November 1857, that this trout was put in Walden by Henry and John Bigelow "some ten years ago," which would also predate artificial propagation technology.²² In addition to the one that was speared, there was another one in the pond about the same size. He wonders if this fish is one of those same ones. This brings us back to the issue of the trout being native or transplanted. At this time, we know that the fish could not have been stocked, simply because artificial propagation was only invented a few years earlier and was not carried out in large operations for another twenty-five years or so.

It is possible that this fish may have been "stocked"—that is, transferred from another body of water—by an enterprising Concordian trying to establish brook trout in Walden Pond, but we are not ruling out the possibility that this fish might be a native. It is ecologically significant that Walden has the physical conditions necessary to sustain a brook-trout population. The pond has cool waters and a partially gravelly bottom, making the existence of this large trout even more complicated. A brook trout's longevity in the wild is usually four to five years—in some instances, brook trout have lived from ten to twenty years, but these are modern occurrences in the more temperate American West and in ideal eastern habitat found in Québec and Labrador.²³ Therefore, it is possible that the speared



Henry David Thoreau, c. 1879. Photo by Geo. F. Parlow. From the Library of Congress Prints and Photographs Division, LC-USZ61-361.



*A cairn marks the location of Thoreau's cabin at Walden, c. 1908.
Published by the Detroit Publishing Co. From the Library of
Congress Prints and Photographs Division, LC-USZ62-39828.*

fish was an offspring of the original fish put in ten years ago. The fish would have been “wild” insofar as it was the result of natural propagation. Regardless of its origins, whatever they may be, Thoreau is utterly silent on the natural history of this large brook trout. In the rest of *Walden*, we see a variety of other fish caught, but no other trout.

THOREAU'S CONNECTION TO MODERN FISHING LITERATURE

Thoreau's antipredatory stance, which is deemed to be a more perfect and thus complete version of transcendentalism, may be why Buell puts him at the center of the ecocentric American canon; in so doing, Buell describes literary criticism as “metropolitan-based.”²⁴ The reason I mention this is twofold: not only is Buell silent about the structural and thematic centrality of fishing to *Walden*, but he also claims that Thoreau has not left any canonical progeny. By not writing about fish or fishing, Buell exhibits a kind of “metropolitan bias” toward the relationship between fishing literature and Thoreau's predatory stance in relation to transcendence. Fishing, as Thoreau practiced it, was a blood sport. Such an overt predatory stance does not fit into the vision of American environmental literature that Buell is creating. Thoreau knew exactly what he was doing when he tem-

porarily quit fishing. Buell and others do not analyze what Thoreau himself rejected, a fact that does short shrift to Thoreau's transcendental ethics concerning fish and fishing.

This lack of critical concern for fishing makes it possible to claim that Thoreau has not left behind any canonical progeny. Here is where the matter of fishing and literature collide. The canonical influence of Thoreau is that he has created the ideological archetype for the modern fly fisher.²⁵ His simultaneous rejection and embrace of society while pursuing the “leisure” activity of fishing is seen in Duncan, Hemingway, Gierach, Leeson, Nick Lyons, and many others. For all of these writers, fishing is a deeply participatory act that can but usually does not result in the death of the fish.

As far as I can tell, Thoreau never let fish go, but he understands fishing as a kind of correspondence between the individual and the natural world (and between person and fish) that is quite remarkable. In *Walden*, as in his other works, he is fascinated with natural history, giving us the Latin names for all sorts of flora and fauna, which brings us to the habitat of the giant brook trout. Had Thoreau known the natural history of glaciers, he would have been fascinated by the fact that *Walden* is a kettle-hole pond; it was formed when a piece of a glacier broke off and sunk into the ground, creating a large depression. *Walden* as a kettle-hole pond is unique in

that it has no tributaries. If the trout were native, Thoreau therefore would have been agog at the fact that those brook trout in *Walden* were the descendants of an unbroken line of indigenous trout dating back 10,000 years.

At this point, it is crucial to remember that Thoreau was not a fly fisherman. He was like Hemingway's protagonist, Nick Adams, in the *Big Two-Hearted River* stories: a bait fisherman. Nick used live grasshoppers on a fly rod, though; from what we can tell, Thoreau used reels and hand lines for perch, pouts, and pickerel in open water and through the ice.

Ice fishing, although very popular in many areas, is still considered obscure and arcane by many mainstream anglers and fly fishers. In fact, winter is the time of year when one repairs reels and ties flies. In *Walden*, Thoreau writes about the mechanics of ice fishing and describes the color of the pickerel as “dazzling and transcendent.”²⁶ Pickerel seem to be the most prized and popular fish from *Walden* during Thoreau's time. This ice-fishing episode, like the aforementioned river-fishing episode, takes place after Thoreau has refuted fishing. Even so, what draws him to ice fishing is nature and the conviviality of those partaking in the sport. I would add that Thoreau does not feel a need to socialize with them, yet he clearly admires their friendship. Thoreau describes looking at the pickerel on the ice, but he does not recount specific conversations with these men.

Thoreau has written about fishing with one of his neighbors, the Irishman John Fields, but there is something about the brotherhood of fishermen that keeps him distant. However, he stands back in awe of the anonymous ice fisherman whose “life itself passes deeper in Nature than the studies of the naturalist penetrate . . .”²⁷ Thoreau's interest in humanity and nature reveals an appreciation of all kinds of fishing and fish. This is very unlike fishing today, when one mostly likely falls into a certain category of angler (e.g., bait, fly, bass). A cursory survey of fishing literature will readily show that divisions in method are quite observable. Despite these distinctions, the modern American fly fisher is quite likely to fish for a wide variety of species.

Thoreau's criticism of Fields—that he decides not to fish with Thoreau even though his wife wants him to—demonstrates that fishing could reduce the economic pressure on Field's family. This is an excellent point, and Thoreau is right to make it; but this plea to sustain oneself by fishing is probably why there were no or very few brook trout in *Walden* Pond at this time. Fishing, which arouses

Thoreau's predatory instincts, can be seen as one aspect of his environmentalism that is now quite flawed. He does advocate temperance in relation to coffee, personal belongings, and even clothes, yet he does not think that others should restrain themselves from catching and eating everything that they catch. We can see that his repudiation of fishing is personal; he does not recommend that others quit fishing.

It is possible that brook trout were living and spawning in Walden without him knowing it. First, we know that the springs kept the water cool enough for brook trout to survive the hottest part of the summer; brook trout experience substantial mortality in water above 65 degrees Fahrenheit. Thoreau claims that a bucket of pond water that sat in his room from five o'clock to noon the next day did not get warmer than 41 degrees, despite the fact temperatures had been as high as 70. From a piscatorial perspective, this is quite interesting for several reasons. First, it means that Walden has cold water. Cold water contains more dissolved oxygen than warm water, and such water would probably stay at a roughly uniform temperature all year long. Brook trout can survive in water between 32 and 72 degrees. Second, optimal brook-trout growth conditions are between 55 and 65 degrees. Third, Walden definitely had enough cold water and reasonable spawning habitat for brook-trout survival and natural reproduction. Thoreau writes: "You may see from a boat, in calm weather, near the sandy eastern shore, where the water is eight or ten feet deep, and also in some other parts of the pond, some circular heaps half a dozen feet in diameter by a foot in height, consisting of small stones less than a *hen's egg* in size, where all round is bare sand" (italics mine).²⁸

Because "there are no suckers or lampreys here, I know not by what fish they [the circular heaps] could be made," he writes.²⁹ Thoreau likes their "mystery" and inquires no further. It is possible that these are brook-trout redds. A brook-trout redd "is usually over gravel that ranges from *pea to walnut* in size" (italics mine).³⁰ Brook trout prefer to spawn in

or near moving water, but they will spawn "where there are large springs welling out of the bottom in shoal (2 to 6 feet) water."³¹ Remember that Thoreau sees these stone nests are in water that is 8 or 10 feet deep. Interestingly enough, a recent geological study shows that Walden Pond "gains water from the aquifer along the eastern perimeter,"³² where, coincidentally, Thoreau noticed the mysterious rock piles.

Curiously, Thoreau does not investigate the rock piles any further; in fact, as is the case in several places in *Walden*, we

It might be very significant to those interested in the history of native trout populations, though. Such a fish means that there would be the possibility of restoring Walden to its natural state, in which brook trout could reproduce naturally.

Now that the mystery of this giant brook trout has been mostly accounted for, we need to take final stock of Thoreau's (and ours) environmental sensibility. We have a lot in common with Thoreau in that we want the Department of Natural Resources to take

care of fish for us in many states. In fact, this is a modern necessity so that trout fishing can be enjoyed by everyone. In Thoreau's willful avoidance of the brook trout and their nests, we can see a nascent stage of an environmental sensibility that does not have humans at the center of its vision. We can see that the current stocking policy of Walden pond has humans as central, because the fish are put there for human entertainment rather than for reproductive compatibility with their environment.

With the mystery of Thoreau's trout partially solved, a new mystery has emerged: Are Walden's current brook trout reproducing? Todd Richards, a wildlife fisheries biologist for the state of Massachusetts, claims that wild spawning is highly unlikely, but, he added, "never say never."³³ Whatever the case, it occurs to me that people have deliberately and sporadically been putting trout in Walden Pond since the 1840s. The fact that there was a 3.6-pound brook trout caught through the ice last winter indicates that Walden

Pond provides good habitat. Even though they share the pond with bass and rainbow trout, brook trout are capable of surviving alongside other species. In his journal entry for 4 May 1858, Thoreau relates a secondhand story about a one-and-a-half-pound brook trout biting the pectoral fins off a 5-pound pickerel. For as much as we have altered Walden Pond, it's fascinating to consider that brook trout not only thrive there but might be able to become "wild" and reproduce.



A statue of Henry David Thoreau stands next to a reproduction of his cabin at Walden Pond.

see a conscious effort to avoid natural history. This avoidance for Thoreau is quite significant in that investigating the physical properties of Walden (some locals thought it was bottomless) provides an understanding that gives access to transcendence. By determining the depth of Walden, Thoreau destroys the local mystery about the pond. However, the transcendent link between physicality and natural history is not explored in relation to the nests nor in relation to the brook trout. An obvious response to this is that the trout was simply not that interesting to Thoreau.

ENDNOTES

1. Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, Mass.: Belknap-Harvard University Press, 1996). I mention this fact about Buell's book simply because the absence of any mention of fishing in a book that addresses such fundamental issues about American literature and *Walden* is a compelling omission.

2. Henry David Thoreau, *Walden and Resistance to Civil Government*, 2nd ed. (New York: W. W. Norton & Co., 1992). There are passages that relate to fish or fishing episodes in the chapters "Sounds," "Solitude," "Visitors," "The Ponds" (which is the chapter that has the giant trout), "Baker Farm," "Higher Laws," "Brute Neighbors," "The Pond in Winter," and "Spring."

3. Robert Sattelmeyer, "'The True Industry for Poets': Fishing with Thoreau," *ESQ* (1987, vol. 33, no. 4): 189–201. Sattelmeyer's article demonstrates how important the symbolic and literal activity fishing was for Thoreau. It supplied him with a critical means of material independence, and it also provided specific moments of transcendence. However, Sattelmeyer does not address the issue of the brook trout.

4. Henry David Thoreau, *The Maine Woods* (New York: Thomas Y. Crowell Co., 1961), 155.

5. Thoreau, *Walden and Resistance to Civil Government*, 88.

6. *Ibid.*, 118.

7. Ralph Waldo Emerson, *The Essays of Ralph Waldo Emerson* (Cambridge, Mass.: Belknap Press, 1987), 323.

8. D'A, "Review of *Walden*," in ed. Joel Myerson, *Critical Essays on Henry David Thoreau's Walden* (Boston: G. K. Hall & Co., 1988), 32–36, 35.

9. John Gierach, *Death, Taxes, and Leaky Waders: A John Gierach Fly-Fishing Treasury* (New York: A Fireside Book, Simon & Schuster, 2001), 246.

10. Anne LaBastille, "Fishing in the Sky," in ed. Robert F. Sayre, *New Essays on Walden* (New York: Cambridge University Press, 1992), 53–72, 67.

11. Thoreau, *Walden*, 35.

12. Buell, *The Environmental Imagination*, 9.

13. Henry David Thoreau, *Thoreau's Writings: Journal X, August 8, 1857–June 29, 1858*, Bradford Torrey and Francis H. Allen, eds. (Boston: Riverside Press-Houghton Mifflin Company, 1949), 180.

14. Although many fishing writers address the subject of native fish and stocked fish, the collection of essays *In Praise of Wild Trout* (The Lyons Press, 1998, edited by Nick Lyons) exemplifies the modern sensibility of favoring the wild fish over the native fish. Simultaneously, the collection also acknowledges the reality that fish stocking is here to stay, and I would add that stocked fish probably ease the pressure on some wild populations. Stocking fish in waters in which they cannot reproduce causes us to rely too much on man-made nature. We are less likely to be

conservation minded if we can just make more trout.

15. Telephone interview with John Sheedy, fisheries manager, Massachusetts Division of Fisheries and Wildlife, 15 March 2010.

16. Theodatus Garlick, *A Treatise on the Artificial Propagation of Certain Kinds of Fish with the Description and Habits of Such Kinds as Are the Most Suitable for Pisciculture* (Cleveland: Tho. Brown, Publisher, Ohio Farmer Office, 1857).

17. Robert Sattelmeyer, *Thoreau's Reading: A Study in Intellectual History* (Princeton: Princeton University Press, 1988), 184. Thoreau also mentions having read Garlick's book in *Journal X* (p. 379 in the 21 April 1858 entry). Garlick's book is a fascinating read, especially the chapter on brook trout. Garlick has very interesting illustrations of early fish-stocking methods as well as a great picture of a brook trout, which I have included in the article (p. 12) with Garlick's caption to show his preference and reverence of this particular species. Thoreau differs from Garlick in that he does not seem to favor one fish species over another.

18. Fresh Water Fishing Hall of Fame, *Official World and USA State Fresh Water Records* (Hayward, Wisc.: Fresh Water Fishing Hall of Fame, 2007), 71.

19. Telephone interview with John Sheedy, 15 March 2010.

20. Henry David Thoreau, *A Week on the Concord and Merrimack Rivers*, new and rev. ed. (Boston: Houghton, Mifflin and Company, 1881), 40.

21. *Ibid.*

22. Thoreau, *Journal X*, 180.

23. Nick Karas, *Brook Trout: A Thorough Look at North America's Great Native Trout—Its History, Biology, and Angling Possibilities* (New York: Lyons Press, 1997), 67.

24. Buell, *The Environmental Imagination*, 36.

25. Mark Browning, *Haunted by Waters: Fly Fishing in North American Literature* (Athens: Ohio University Press, 1998). Browning's book, which surveys the subject of fly fishing in American literature, downplays Thoreau's influence on fishing literature. Yet he does acknowledge the manner in which Thoreau links fishing with the "primacy of direct experience" (p. 53). I would say that Thoreau is the most powerful source of this ethos for modern fishing writers. Fly fishing is seen by many as the ultimate way to interact with nature in the modern world.

26. Thoreau, *Walden*, 189.

27. *Ibid.*

28. Thoreau, *Walden*, 125.

29. *Ibid.*

30. Karas, *Brook Trout*, 63.

31. *Ibid.*, 62.

32. John A. Colman and Paul J. Friesz, "Geohydrology and Limnology of Walden Pond, Concord, Massachusetts," *Water-Resources Investigations Report 01-4137* (Northborough, Mass.: U.S. Department of the Interior and U.S. Geological Survey, 2001), 1.

33. Telephone interview with Todd Richards, fisheries biologist, Massachusetts Division of Fisheries and Wildlife, 15 March 2010.

Paul Sumner Downey



Walden Pond in 2006.

How Meriwether Lewis's Cutthroat Trout Sealed Custer's Fate at the Little Bighorn

by Richard Lessner

TROUT FISHING WAS an important part of European settlement in the American West from the very beginning. Explorers, trappers, pioneers, soldiers, and homesteaders all brought along fishing tackle as they pushed westward across the Great Plains and into the Rocky Mountains, where they found rivers and streams flowing with clear, cold water and fairly bursting with new and exotic members of the family Salmonidae. Angling for trout (and salmon) had a significant place in the Lewis and Clark expedition and also played an improbable role in the outcome of the one of the most famous Indian battles on the nineteenth-century frontier.

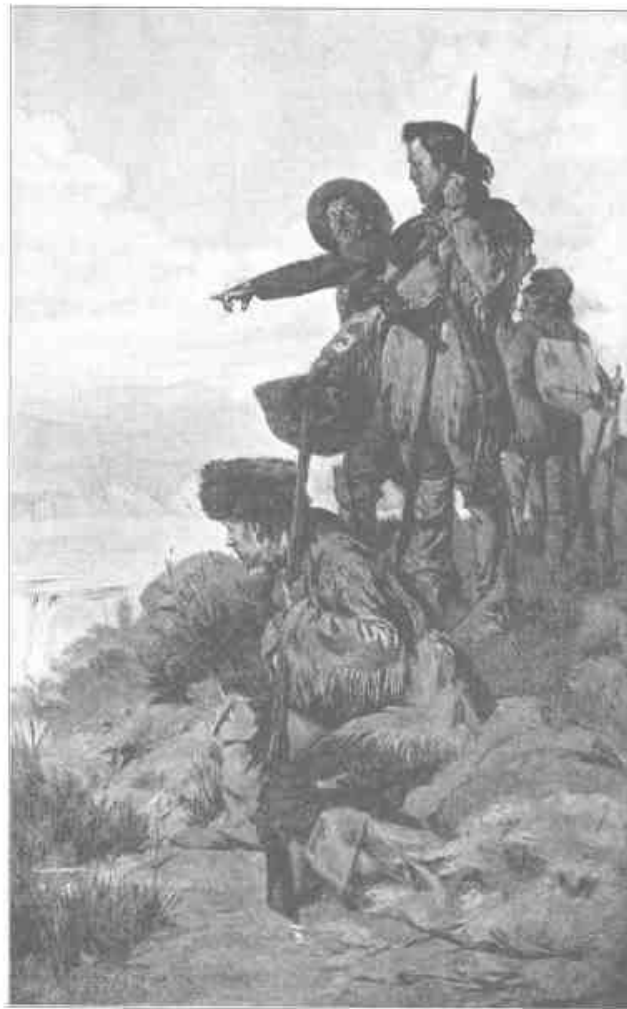
The Corps of Discovery (1803–1806) led by Captains Meriwether Lewis and William Clark was the first to scientifically describe several new species of fish, including the Yellowstone and Westslope cutthroat trout. The captains and their men mostly went fishing for food to supplement their diet of buffalo, elk, deer, pronghorn, and bear meat, but they also pursued what today we would call sport or recreational fishing. The Corps's designated fisherman, Silas Goodrich, was an avid angler, and according to the expedition's journals, he was a man of extraordinary ability. Paul Russell Cutright, in his authoritative book *Lewis & Clark: Pioneering Naturalists*, describes Goodrich as "the Izaak Walton of the expedition."¹ There were places along the trail where game became scarce and meat was difficult to come by. During

these lean times, the Corps often came to rely on Goodrich's notable angling skills to hold hunger at bay and provide needed sustenance so the men could push on toward the Pacific.

Silas Goodrich's prowess with rod and line is mentioned throughout the journals of the various expedition members.

On the day that Meriwether Lewis reached the Great Falls of the Missouri, 13 June 1805, Goodrich is reported in the captain's journal to have caught "several large trout," which the advance scouting party cooked for dinner.²

The trout the men dined on that night next to the majestic Great Falls (today much reduced in splendor by hydroelectric dams) were undoubtedly cutthroat. In his journal entry, Lewis described the trout Goodrich caught for supper as resembling "our mountain or speckled [brook] trout in form and in the position of their fins, but the specks on these are of a deep black instead of the red or gold colour [*sic*] of those common to the U. States. these [*sic*] are furnished long sharp teeth on the pallet and tongue and have generally a small dash of red on each side of behind the front ventral fins."³ Almost anyone who has fished in the Rocky Mountains would instantly recognize Lewis's description as a cutthroat. The record in Lewis's journal of Goodrich's catch is the first scientific description of the cutthroat trout by an Anglo-American. Of course, the trout was already well known to the Native American inhabitants of the Rockies.



The Discovery of the Great Falls.

From A. C. Laut, *Pathfinders of the West* (New York: The Macmillan Company, 1904). Retrieved from Project Gutenberg: <http://www.gutenberg.org/files/18216/18216-h/18216-h.htm#img-317>.

The discovery and description of the cutthroat by Silas Goodrich and Meriwether Lewis at the Great Falls of the Missouri is justly celebrated in the natural history of the West. But perhaps no episode in the long and colorful history of western trout fishing is more bizarre than the one



Captain Frederick William Benteen, Troop H, 7th U.S. Cavalry, no date. Photo by D. F. Barry. From the Montana Historical Society Research Center Photograph Archives, Helena, Montana. Catalog #940-855. Used with permission.



General George A. Custer (holding a buffalo tail in his right hand), circa 1872. Photo by D. F. Barry. From the Montana Historical Society Research Center Photograph Archives, Helena, Montana. Catalog #941-834. Used with permission.

that occurred in Montana seven decades later and not too far from the very place where Silas Goodrich pulled his first cut-throat trout from the pristine waters of the Missouri River.

On 13 September 1877, Capt. Frederick Benteen led a company of the 7th Cavalry into the Battle of Canyon Creek armed . . . with a fly rod! An inveterate fisherman, Benteen led a wild cavalry charge against the Nez Percés Indian encampment near the Yellowstone River, madly waving a rod and urging his men forward as bullets whizzed about his head. All the troopers engaged later agreed that Benteen had demonstrated considerable coolness and courage under fire.

A few weeks later, at the surrender of the Nez Percés following the Battle of Bear's Paw, Chief Joseph, their legendary leader on the heroic but ill-fated flight to

Canada, asked to meet the man his warriors had tried so hard to kill at Canyon Creek. The Nez Percés warriors clearly were impressed by their opponent's bravery, if not his eccentricity. Chief Joseph identified this courageous soldier as an officer wearing a buckskin jacket, chewing on a pipe, and madly waving a fishing rod.⁴ The two men were duly introduced and had an amiable chat. No record of the conversation is known to exist, but one cannot help speculate that perhaps the erstwhile enemies swapped stories about their respective fishing exploits. It's probably unlikely given the circumstances, but it's pleasant to think that maybe they traded tall tales, as fishermen almost universally are so inclined to do.

A native Virginian who remained loyal to the Union, Benteen fought with notable courage both during the Civil

War and in the wars with the Plains Indians. He was a popular commander among his troops who appreciated his unpretentious informality and obvious concern for his men's well-being. One of his troopers later recalled fondly, "I saw him wade over his boot tops many times into cold water to get mountain trout."⁵ By all reports, Benteen took full advantage of his military service in the West to explore the virgin streams of the Rocky Mountains and to pursue trout whenever his duties permitted.

Despite his dashing charge at Canyon Creek and well-deserved reputation for courage, however, Benteen had made more than his share of enemies in the army because of his loathing for—and very vocal criticism of—his commanding officer, George Armstrong Custer. Benteen regarded Custer a braggart, a



Horse Shoe Falls (part of Rainbow Falls in the distance), height 20 feet (no date). From the Montana Historical Society Research Center Photograph Archives, Helena, Montana. Catalog #949-579. Used with permission.

blowhard, and a vainglorious incompetent. Worse, Benteen made little effort to conceal his opinion. In fact, he once boasted that he was proud to say he thoroughly despised the flamboyant Custer. Benteen believed Custer was reckless with the lives of his troops in pursuit of personal glory.

In June 1876, a year before his flyrod-waving heroics at Canyon Creek, Benteen was with Custer on the trail of Sitting Bull. As is now well known, at the Little Bighorn Custer twice divided forces before an enemy of unknown strength, a major military blunder. Without making any effort to determine the number of the Indians in the huge encampment on his front, Custer dispatched Benteen and three companies of troopers on what turned out to be a wild goose chase. Some historians suspect Custer did not want his bitter enemy, Benteen, to share in the glory of defeating Sitting Bull and Crazy Horse. Everyone knows the inevitable result of Custer's dubious command decisions.

Returning from his long and pointless excursion around the right flank of the Lakota–Cheyenne encampment, Benteen arrived back near the scene of the celebrated Last Stand just in time to witness the disaster unfolding. He coolly rallied the panic-stricken and retreating compa-

ny of Maj. Marcus Reno, who had lost both his composure and control of his men. Although Reno outranked him, Benteen effectively took command and restored order. He mounted an effective fighting retreat and perimeter defense against the Indian onslaught. Having finished off Custer, the combined Indian force fought for a day and a half in an effort to wipe out the battered remnants of the 7th Cavalry. Benteen's coolheaded leadership is generally credited with having saved the balance of Custer's command from annihilation.

After the ignominious debacle at Little Bighorn, Custer's widow mounted a public relations campaign to exonerate her martyred husband of responsibility and transform him into a tragic hero—and equally to blame Benteen for not leading his troops into the maelstrom at Last Stand Hill to rescue the reckless boy general. Had Benteen done so, almost without doubt, both he and his men would have also been lost.

Incredibly, Custer's fate actually may have been sealed as much by the allure of Montana's trout fishing as his own foolhardy, glory-seeking bungling. As Ken Owens details in his excellent article, "While Custer Was Making His Last Stand,"⁶ while Custer was blundering into Sitting Bull's camp and getting him-

self and his men massacred, a column of reinforcements under Gen. George Crook that might have saved the day was comfortably camped close by on Goose Creek near the Tongue River—fishing!⁷ It seems that Capt. Benteen was not the only soldier to be awestruck by the remarkable trout fishing available in Montana that fateful summer of 1876.

Crook's column was one of three that commanding Gen. Alfred Terry had dispatched to search out and converge on the Indian confederation: one under Terry himself (including Custer), and two others under Gen. Crook and Col. John Gibbon. On 17 June 1876, a week before the nation-rattling events at the Little Bighorn, the column commanded by Gen. Crook stumbled into the Battle of the Rosebud near the Yellowstone River. Crook was manhandled by Crazy Horse, and he withdrew to an earlier encampment on Goose Creek, where his troopers previously had enjoyed some spectacular trout fishing while on the march to join up with Custer.

As Custer rushed headlong toward his destiny at the Little Bighorn, Gen. Crook and his beleaguered men were only too happy to take a break from the messy, dangerous, and unpredictable business of Indian fighting. The command settled down on Goose Creek for more than a

week of R & R. And what better way to rest and relax than indulge in a little fishing? Occupying themselves thusly, the company produced some truly prodigious catches. Using a combination of artificial flies and natural bait—live grasshoppers impaled on a bare hook were found to be especially effective—the greedy troopers caught huge numbers of eager Yellowstone cutthroat. They might not have been able to defeat the Sioux on the Rosebud, but by God, they could put a whipping on the trout in Goose Creek! Three days after Custer's Last Stand, for example, Crook's men bagged no fewer than 500 trout! According to Capt. John Bourke, who authored a book on his western adventures with Crook, the general was every bit as caught up in the fishing frenzy as his troopers. Most anglers took fifteen to thirty trout daily. Capt. Bourke recorded that one fellow officer, aided by two troopers, bagged 146 trout in a single day, so willingly did the cutthroat rise to the bait. Bourke's *On the Border with Crook*, published in 1891, is an invaluable primary source and firsthand account of the general's controversial fishing expedition during the Sioux–Cheyenne campaign of 1876.⁸

Although Crook's column was supposed to advance to unite with Custer and Gibbon near the Little Bighorn to corner the elusive Indians—and thereby reinforce the 7th Cavalry before it engaged the Lakota–Cheyenne warriors—instead, the general and his command spent a leisurely week not in pursuit of

Sitting Bull, but chasing trout. All thought of pursuing Indians was put aside as Crook and his men idled away the days on the banks of Goose Creek, which was at that time brimming with trout.

Historians ever since have speculated how events might have turned out differently that summer had the cutthroat been a little less eager and had Crook not dallied for a week of splendid trout fishing while Custer hurried to his doom. On the other hand, had Custer been a little more interested, like Gen. Crook, in exploring the angling opportunities frontier Montana afforded and a little less bent on seeking personal glory, he might not have blundered into his dubious place in history.

As with all “what if” history, we will never know if Crook could have reached Custer in time to prevent the disaster at the Little Bighorn. Most fly fishers, however, will understand and perhaps forgive Gen. Crook's reluctance to saddle up and take premature leave of such extraordinary fishing. Few fly fishers would willingly abandon the stream when the fish are on the bite, as they were that fateful June week in 1876.

And what of Custer's nemesis, the heroic but impolitic fly fisherman Capt. Frederick Benteen? Well, his enemies finally caught up with him. He was charged with drunkenness on duty and convicted by a court marshal. Reduced in rank and pay, Benteen maintained his innocence—both of the alleged drunkenness and his failure to ride to Custer's

rescue—until his death in 1898. He is buried in Arlington National Cemetery. Frederick Benteen remains, so far as is known, the only American soldier ever to go into combat armed with a fly rod.



ENDNOTES

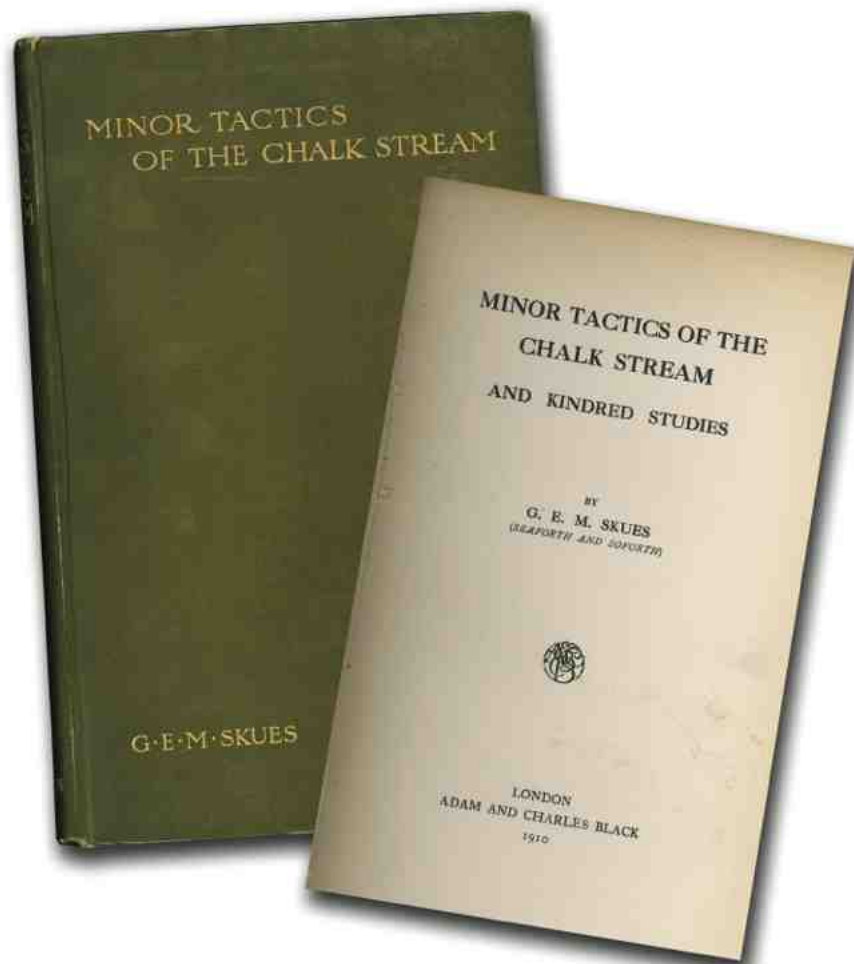
1. Paul Russell Cutright, *Lewis & Clark: Pioneering Naturalists* (Lincoln: University of Nebraska Press, 2003), 66.
2. Bernard DeVoto, ed., *The Journals of Lewis and Clark* (New York: Houghton Mifflin, 1953), 138.
3. Ibid.
4. Jerome A. Greene, *Nez Perce Summer 1877: The U.S. Army and the Nee-Me-Poo Crisis* (Helena: Montana Historical Society Press, 2000), 227.
5. Charles K. Mills, *Harvest of Barren Regrets: The Army Career of Frederick William Benteen, 1834–1898* (Glendale, Calif.: The Arthur H. Clark Co., 1985), 299.
6. Ken Owens, “While Custer Was Making His Last Stand: George Crook's 1876 War on Trout in the Bighorn Country,” *Montana: The Magazine of Western History* (vol. 52, no. 2, Summer 2002), 58–61.
7. John H. Monnett wrote about this for the *American Fly Fisher* in “Mystery of the Bighorns: Did a Fishing Trip Seal Custer's Fate?” (Fall 1993, vol. 19, no. 4), 2–5.
8. John G. Bourke, *On the Border with Crook* (New York: Charles Scribner's Sons, 1891), 329–32.



Crook Battlefield at the big bend of Rosebud Creek in 1901, twenty-five years after the fight (Battle of the Rosebud, 1876). Left to right: Two Moons (Cheyenne Indian), interpreter William Roland, and Olin D. Wheeler. Photo by L. A. Huffman. From the Montana Historical Society Research Center Photograph Archives, Helena, Montana. Catalog #981-800. Used with permission.

The Hundred-Year Ripple

by John Mundt Jr.



Dedicated

TO MY FRIEND THE DRY-
FLY PURIST, AND TO MY
ENEMIES, IF I HAVE ANY

—G. E. M. Skues, dedication, *Minor Tactics of the Chalk Stream and Kindred Studies* (London: Adam and Charles Black, 1910)

One hundred years ago, a revolutionary title splashed into what had been the placid waters of British chalk-stream fly fishing. The ripples broaden to this day.

George Edward MacKenzie (G. E. M.) Skues's *Minor Tactics of the Chalk Stream* was a compilation of his evolving thoughts and previously published letters and articles concerning the presentation of a submerged insect imitation to a fish feeding below the surface when all

was quiet on top. This innovative book and the growing acceptance of its precepts eventually led to formal lines being drawn in what would become a bitter battle of ideas concerning what constituted proper angling on a British chalk stream. The dedication above suggests that tensions had been building for some time and that Skues was prepared to follow his convictions wherever they led him.

What was the ruckus about? It came down to whether nymph fishing was “proper form” and should be permitted on a “dry-fly” stream. Opinions grew divisive enough that twenty-eight years later, the famous nymph debate was held at the Flyfishers’ Club of London.

Much has been chronicled about the relationship and philosophies of G. E. M. Skues and Frederic M. Halford, one of the dry-fly purists to whom Skues deferentially dedicates his first book (if not *the* dry-fly purist). The intent of my few

words here is to honor the centennial of a defining volume in the letters of angling and reflect on what it has meant to me as an angler today.

My personal journey to understand more about how all this transpired was a fascinating one thanks to the efforts of historians such as Robert Berls, Tony Hayter, John Waller Hills, Ken Robson, and Paul Schullery. Their research and analysis delve deeply into matters of personality, sociology, science, and tradition, and how these played out on British chalk streams and continue to influence the practice of fly fishing worldwide. Late-nineteenth-century industrialization—with its newly created wealth, changing class structures, and sensitivities toward status and behavior—introduced complexities to the streamside that Izaak Walton could not have envisioned during his tranquil days on cowslip banks two and a half centuries earlier.

It was somewhat startling for me to consider that the exhilaration of tightening into a large brown trout that darted up to slurp down my floating Mayfly was seen by some as representing dogmatic oppression, just as dropping a water-logged nymph in front of a bulging rise form was viewed by others as a symbol of liberation or a descent toward angling bedlam. Such was the case during Skues's lifetime, and variations of these sentiments still linger.

Based on my own experiences, I would prefer to take a trout with a dry fly: for an instant the subject fish is enticed to break out of its subaqueous world to seize something residing in mine. It's disappointing when a hatch is on and a river's surface remains calm. Conversely, it's been inspiring to watch a veteran angler wade methodically up a freestone stream, cast a delicately placed nymph into swirling pocket water, and strike a decent trout you were convinced wasn't there. Skues's inventive spirit helped make such skills attainable.

The octogenarian Skues and his supporters were apparently outmanned by the late Halford's adherents during the Flyfishers' Club debate in 1938, but history has proved him right in asserting that the nymph was equal to or often more effective than the dry and had its rightful place in the angler's arsenal. And although Skues inspired generations of inquisitive anglers to pursue fish under challenging circumstances, Halford's ghost looms large as his ideal of casting a dry fly upstream to a rising fish remains the rule of the day on many British chalk streams. Dogmatic or not, it's a thrilling experience when the weather, water levels,

hatches, and one's tackle are aligned for an intended purpose and *Salmo trutta* devours your drifting fly. It's also nice to have a few Hare's Ear and Pheasant Tail nymphs on hand when things aren't so certain.

Minor Tactics is a major milestone in the angling record, and it was produced by one of the greatest minds that ever stalked a trout.

SOURCES

For those readers wishing to sound the depths of the Skues and Halford legacies, the following titles will get you into the fray:

Tony Hayter, *F. M. Halford and the Dry-Fly Revolution* (London: Robert Hale, 2002).

John Waller Hills, *A History of Fly Fishing for Trout* (London: Phillip Allan & Co., 1921).

Kenneth Robson, *The Essential G. E. M. Skues* (London: A & C Black [afterword by Robert Berls], 1998).

G. E. M. Skues, *The Way of a Man with a Nymph: The Nymph Dressings of G. E. M. Skues* (England: Moretonhampstead, Devon, U.K.: Flyfisher's Classic Library [introduction by Tony Hayter and includes reprint of "The Debate on Fishing the Nymph in Chalk Streams" from the Spring 1939 issue of the *Flyfishers' Journal*], 2007).

G. E. M. Skues (ed. Paul Schullery), *Skues on Trout: Observations from an Angler Naturalist* (Mechanicsburg, Pa.: Stackpole Books, 2008).



BACK ISSUES!

Volume 5:	Number 4
Volume 6:	Numbers 1, 2, 3, 4
Volume 7:	Numbers 2, 3
Volume 8:	Numbers 3, 4
Volume 9:	Numbers 1, 2, 3
Volume 10:	Number 2
Volume 11:	Numbers 1, 2, 3, 4
Volume 12:	Number 3
Volume 13:	Number 3
Volume 14:	Number 1
Volume 15:	Number 2
Volume 16:	Numbers 1, 2, 3
Volume 17:	Numbers 1, 2, 3
Volume 18:	Numbers 1, 2, 4
Volume 19:	Numbers 1, 2, 3, 4
Volume 20:	Numbers 1, 2, 3, 4
Volume 21:	Numbers 1, 2, 3, 4
Volume 22:	Numbers 1, 2, 3, 4
Volume 23:	Numbers 1, 2, 3, 4
Volume 24:	Numbers 1, 2, 3
Volume 25:	Numbers 1, 2, 3, 4
Volume 26:	Numbers 1, 2, 4
Volume 27:	Numbers 1, 2, 3, 4
Volume 28:	Numbers 1, 3
Volume 29:	Numbers 1, 2, 3, 4
Volume 30:	Numbers 1, 2, 3
Volume 31:	Numbers 1, 2
Volume 32:	Numbers 1, 2, 3
Volume 33:	Numbers 1, 2, 3, 4
Volume 34:	Numbers 1, 2, 3, 4
Volume 35:	Numbers 1, 2, 3, 4
Volume 36:	Numbers 1, 2, 3

Back issues are \$10 a copy for nonmembers, \$5 for members. To order, please contact Sarah Moore at (802) 362-3300 or via e-mail at smoore@amff.com.



From G. E. M. Skues, *Itchen Memories* (London: Herbert Jenkins, 1951), 57.



IFIRST MET Richard Lawrence some twenty-five years ago when I discovered his sporting art, especially his use of egg tempera. Then I lost track of him until very recently when he sent the museum a copy of his new book, which included many of his paintings. I have always presumed that talented artists who were sensitive to the wilderness and especially rivers and streams would also be equally talented in their prose, but this has not always been the case. However, Lawrence's book, *Silver Streams*, matches his brilliant art. The book has seventy-one images, which are small pencil or ink drawings.

The book is a series of vignettes of his experiences fly fishing for salmon on the streams and rivers of Down East Maine. These are brief glimpses of the region's streams, focusing on the legends and common folk who have cherished fishing for wild salmon. Individually, each chapter is extremely insightful not only because of Lawrence's artistic skill but also because of his extensive research and his detailed diaries.

However, the chapters are more than fishing tales; they are, in fact, an artist's story describing the saga of the death of Maine's salmon streams. Starting in his early teens, Lawrence spent almost forty years fishing the Down East streams. His diaries noted not only his fishing but especially the people he met—the "river keepers"—who schooled him and shared their devotion to fly fishing. Here is a rich firsthand chronicle of a wild salmon fishery, its dedicated fly fishers, and its ignominious demise.

Lawrence, obviously, got to know these legends, and he is masterful in capturing their personalities and quirks and honoring their contributions to preserving the vibrancy of the streams. Lawrence writes: "Just as the running water inscribed the stones of the stream, the minds and souls of the river keepers revealed the life and spirit of the stream and its inhabitants" (p. 37). The legends, the folklore, and the traditions set the stage for a sincere love and appreciation of the region, leading up to the disaster that was soon to follow.

Another cast of characters in Lawrence's saga are the brotherhood of the angle. They were fishermen and -women, from all walks of life, who gathered regularly on the home streams, especially for the opening day when, after days of careful and diligent watching for the first signs of the salmon entering the lower pools, they eagerly and joyfully cast their flies.

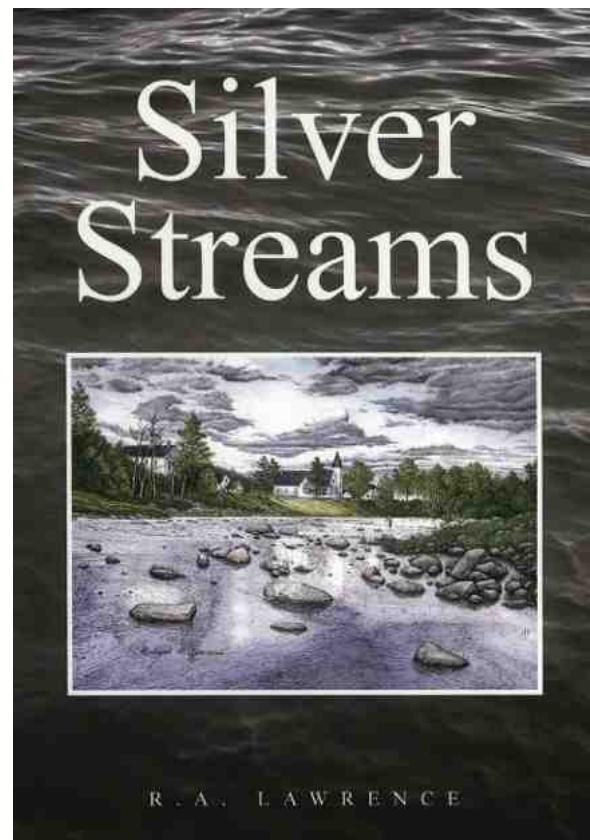
One of the most interesting aspects of this brother- and sisterhood was the rotation shuffle, as a position was secured in a line to take a turn through the pool. There was often to be heard the yell "Rotate!" as the law of the stream was forcefully obeyed—or not obeyed, as Lawrence reveals.

He beautifully describes the entry of salmon into the home pool:

With the midday mist falling to the surface of the pool, the stream is singing a song that I've heard on streams before—a song often accompanied by the sights and sounds of salmon. There is something magical that occurs when a pod of salmon that have traveled the expanses of the ocean without boundaries enter a stream and encounter the drastic changes of the environment and then come to the first pool. Once settled in, it is a joyful sight to see bright salmon frolicking in the new surroundings, playing with and testing the currents as they leap and roll. There is also a feeling of dominance that Atlantic salmon have over a pool, as if it cannot contain them. Every time I visit a pool, there is the imagination of such a moment—when active salmon occupy the lies. (p. 115)

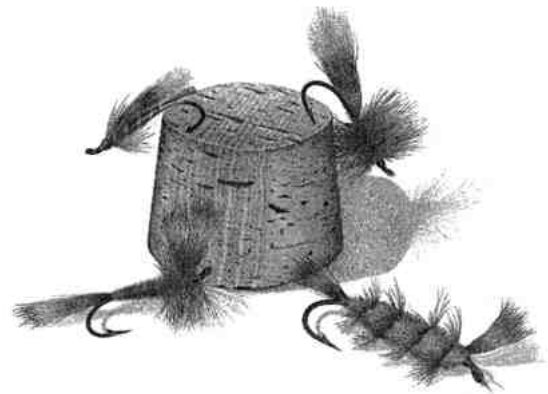
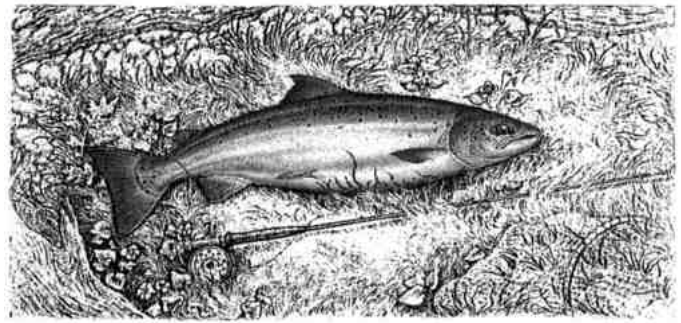
Lawrence's contribution to our literature is his ability—in prose, poetry, and art—to tell a meaningful yet tragic story of the death of salmon streams in one region of the North Atlantic and to subtly warn us that this can happen elsewhere.

There is a river keepers' code among the fly fishers of Down East Maine that goes beyond not revealing to outsiders where the productive salmon pools are located; it also includes the lament of what happened. Lawrence's extensive research has not allowed him to assign blame for the death of the streams. Nonetheless, he mentions the devastating effects of the abundant seals in the estuaries; the proliferation of cormorants and their prey on parr; pollution from acid rain and spills from industry; unwise construction of dams and ineffective spillways; the poor policy decision on stocking; the proliferation of fish farming; and, especially, poaching. Although never developed in any detail in the book, it is apparent that catch and release was not widely accepted.





A variety of illustrations from Silver Streams, all drawn by author R. A. Lawrence.



The new millennium brought an enactment by the federal government that announced that the wild Atlantic salmon on Down East streams was an endangered species to be protected. The brotherhood of river keepers was prohibited from fishing for salmon on their home streams.

Lawrence comments that in retrospect, many of the river keepers had not seen the beginning of a sequence that led to the endangerment act because they had often heard stories of an earlier winter and then seen the blossoming and renewal that spring brings forth. He continues that their time on the streams of Maine had begun during what may have been considered the bounty of midsummer, with year after year of excellent runs of salmon matching and surpassing the best ever recorded. They came to expect endless summers of salmon. It took several years to even notice that those days were waning and then another few years to realize that those days had vanished (p. 277).

Of the seasons of a salmon stream, the days of fall were like the weather itself, with highs and lows, highlights and struggles. All hoped that the cycle would be reversed and the salmon would bounce back, but days of Indian summer were like a deceitful trick, and as expected, fall returned and, as the season progressed, took hold with a vengeance. As is typical of autumn, signs of life dwindled to a point where an adequate run of salmon was a thing of the past. There was a remnant of salmon, and the fishers of the past had also dwindled to a handful. The Down East streams became a shadow of their former glory, and the season became like a stark and barren winter landscape. It was like the seaman's description of that first abandoned settlement of Down East Maine. (pp. 277–78)

Lawrence's poem "Doc Remembered" reveals the dreams of Down East fishers:

*In the beginning on a May-Day,
at the time when the morning mist rises—
and the rays of the sun meet the flowing waters,
Doc quoted his verses of "Silver Streams."
"There is also a time just before the sun sets,"
Doc said, "when the sun's last rays
meet the riffles and runs of the stream."
It is also a "magical time" as Doc described it.
"A chance to meet one last salmon,
before the 'Silver Stream' fades
into the twilight of eternity." (pp. 190–91)*

—GERALD KARASKA

R. A. Lawrence
Silver Streams
Illustrations by the author
Bloomington, Ind.: Xlibris Corporation, 2010
328 pages
Available from the publisher: Orders@www.xlibris.com or (888) 795-4274
\$29.99 (hardcover), \$19.99 (paperback)

Fly-Fishing Festival 2010

OUR THIRD ANNUAL Fly-Fishing Festival was a grand success. More than forty vendors and craftspeople shared their wares with and demonstrated their talents to more than 275 visitors on August 14. Many of the visitors were able to take the opportunity to have their equipment appraised by Carmine Lisella and Bob Selb, who donated their appraisal services for the day. Visitors enjoyed the addition of live music as Wayne Canney and Friends entertained with classic folk tunes. This year's festival also played host to the museum's first casting competition. Several joined in the fun to test their casting accuracy, using a classic Leonard bamboo rod from our vintage collection, in what proved to be a tough course. The entrance fee collected for the competition was donated to Casting for Recovery.

We wish to thank the following community businesses who sponsored this event: Orvis, Finn & Stone, Vermont Country Store, r.k. Miles, Berkshire Bank, Mulligan's of Manchester, Mrs. Murphy's Donuts, and Discount Beverages. Media sponsorship was provided by WBTN of Bennington. We are also grateful to all the volunteers who helped move tables, chairs, and tents; worked in the food concession; scored the casting contest; and warmly welcomed our visitors at the main entrance: Bill and Judy Cosgrove, Cheryl and Ron Wilcox, Jim Heckman, Steve Murphy, Wanda Robinson, Rose Napolitano, Tish Russell, and Mike and Robert England.



Photos by Kim Murphy except where noted



Carmine Lisella (far right) of Jordan Mills Rod Company speaks with visitors at his booth.



The Newfound Woodworks of Bristol, New Hampshire, has attended the festival each year since 2008.



Rodmaker Jim Becker (left) talks with author Mike Valla.



Fly tier Peggy Brenner demonstrates her art.

Photo by Quinnlynn Murphy



These clown flies are a great way to begin to teach kids about fly-tying techniques.



Photo by Quinnlynn Murphy

The stunning artwork of sporting artist Dan Daly.



A variety of vendors were on hand offering antiques, books, rods, flies, artwork, and reels.



The museum's vintage demonstration rod collection was available for everyone (of any age) to enjoy!



The day ended with a casting contest by our casting pond, and the competition was fierce!

Museum News



Kim Murphy



Above: Attendees of the Cleveland dinner auction chat as they examine the various items up for bid.

Right: Students from the Maple Street School recreate their class river mural on the sidewalk between the museum and Orvis.

Sara Wilcox



Cleveland Dinner Auction

Thank you, Cleveland supporters, for your warm hospitality and generosity at the Chagrin Valley Hunt Club on May 20. More than seventy people came and enjoyed the fine meal provided by the club, as well as a presentation outlining the important community contributions by the museum. The highlight of the evening was, by far, the “Fund-a-Need” auction. The goal for this special fund-raiser was to complete the refurbishing of our casting pond. We raised more than \$3,000, which will be used to add wheelchair-accessible ramps to the pond bridge.

This year’s dinner saw a record seven table sponsors! Thanks to Brent Buckley, Elisabeth Holmes, Woods King III, Leigh Perkins Sr., Molly Perkins, Jim Sanfilippo, and Hewett Shaw for their sponsorship support. Thanks also go to Dinner Chairman Woods King III for his help organizing the dinner, and to all of the auction donors and contributors.

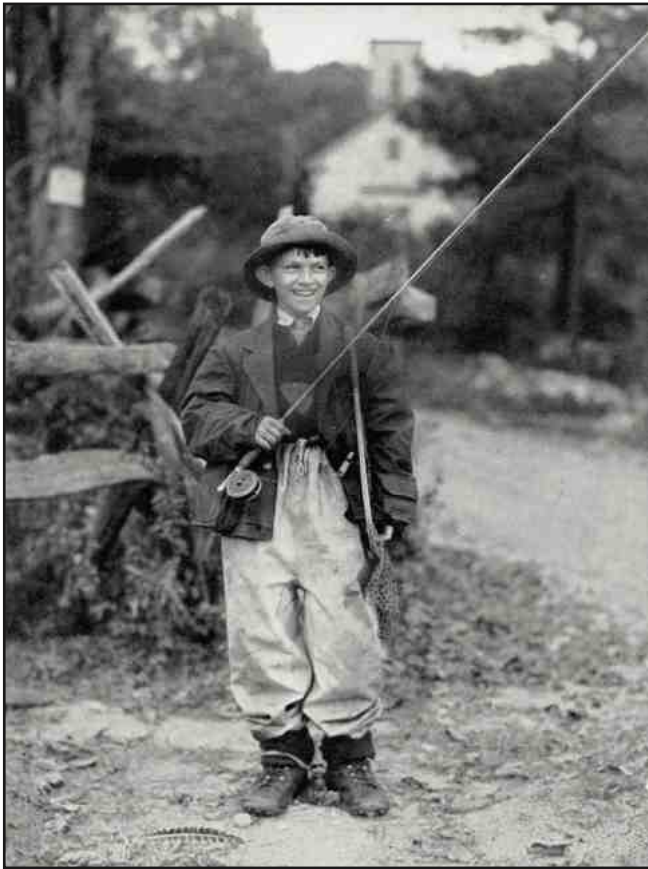
River Mural

The American Museum of Fly Fishing welcomed Maureen Chaffee’s third grade class from Maple Street School of

Manchester, Vermont, on June 7. After a tour of the museum’s exhibitions, the students enjoyed a sunny morning recreating portions of their class river mural along the sidewalks between the museum and Orvis. The mural, based on the class’s studies and observations of the life in and around the Batten Kill, was the culmination of the rivers and streams curriculum required by the State of Vermont. Some of the colorful images included in the final work were rainbow trout, brown trout, nymphs, and fawns. The project was coordinated by the American Museum of Fly Fishing with assistance from the Orvis Company.

Gallery Program

The American Museum of Fly Fishing celebrated our new exhibit on June 19 with a special gallery program: Photography of Nature. Visitors were not only able to browse through some of the best rods and reels in our collection, but also explore the ways travelers documented their trips and vacations—from the early days of journals, sketching, and painting to modern times when photography is the norm. Guest photographer George Bouret from Hebron, New York, offered photographic tips and displayed some of his landscape works. For those feel-



Kim Murphy

Above: The American Museum of Fly Fishing celebrated National Ice Cream Day on July 19 with our third annual Ice Cream Social. Each year we invite local residents and visitors to share a cone or cup with us as we offer family-friendly activities and introduce them to all the museum has to offer. Thanks to Mike Wilcox of Silver Springs Creamery for dishing up the ice cream. Sprinkles, anyone?

Left: This early-to-mid-twentieth-century image of a young man in fly-fishing gear, featured in the new exhibition *Memories on the Water: A Photographic Journey through Fly Fishing's Past*, embodies the thrill of the first parent-and-child fishing excursion. The fashion has changed, the equipment has changed, but the priceless smile remains the same. From the collection of the American Museum of Fly Fishing.

ing more old-fashioned, artist Traci Hubbell showed how to capture a vacation memory through painting and sketching.

Memories on the Water: A Photographic Journey through Fly Fishing's Past will be on display through May 2011.

In the Library

Thanks to the following for their donations of 2010 titles that have become part of our collection: Skyhorse Publishing sent us William G. Tapply's *Every Day Was Special: A Fly Fisher's Lifelong Passion*, and Amato Publications, Inc., sent us Ray Rychnovsky's *Fishing Guide to Central America's Prolific Pacific* and Boots Allen's *Snake River Fly Fishing: Through the Eyes of an Angler*.

Recent Donations

Allan Poole of West Haven, Connecticut, donated a collection of Edwards "Quadrant" bamboo fly rods: #65, a three-piece, 9-foot; #40, a two-piece, 7-foot; #40, a two-piece, 8-foot; and #41, a two-piece, 7-foot. He also donated a four-piece, 9-foot, 8-weight Redington graphite fly rod, a Hardy "The Featherweight" 3-weight fly reel, a Hardy "The Husky" 9-weight fly reel, an Orvis "Turbine II" 5-weight fly reel, a Wheatley Silmalloy metal fly box containing twelve salmon flies, a Wallace W. Dork & Son Ltd. Fishing Tackle catalog, and collection of twenty copies of the *Atlantic Salmon Journal*.

Upcoming Events

October 28–29

Friends of Corbin Shoot
Andover, New Jersey

November 6

Annual Membership Meeting
Manchester, Vermont

December 4

Gallery Program: Hooked on the Holidays
American Museum of Fly Fishing
Manchester, Vermont

Always check our website (www.amff.com) for additions, updates, and more information or contact Kim Murphy at (802) 362-3300 or kmurphy@amff.com. "Casting About," the museum's new e-mail newsletter, offers up-to-date news and event information. To subscribe, look for the link on our website or contact the museum.

CONTRIBUTORS

Dana Valleau



Willard Greenwood teaches American literature and creative writing at Hiram College, as well as a course called “The Ethos and Practice of Fly Fishing.” He is chair of the English department and editor of the *Hiram Poetry Review*. When waiting for spring steelhead season, he ties flies and plays Go Fish with his wife, Beth, and sons Robert and Michael.

Liza Lapsley



Peter Lapsley is semiretired but still works part-time as editor of the *Flyfishers’ Journal*, the house magazine of the Flyfishers’ Club in London; as a freelance angling journalist; and as an editor with the *BMJ* (British Medical Journal). He lives in London and fishes for trout, sea trout, and grayling, chiefly on the English chalk streams. He has visited the Falkland Islands on numerous occasions since the opening of the airport at Mount Pleasant in the 1980s made them accessible. Among his ten books on fly fishing is *Fishing for Falklands Sea Trout*, written for the Falkland Islands Tourist Board.

Pamela Lessner



Richard Lessner, PhD, is executive director of the Madison River Foundation in Ennis, Montana. He and his wife Pamela and their two cats live a short walk from the Madison in Cameron, Montana. Lessner earned a doctorate in religious studies and American history from Baylor University.

Carolyn Chadwick



John Mundt Jr. has been a regular contributor the pages of the *American Fly Fisher* since 1991 and serves on the museum’s board of trustees. A keen interest in the history of the sport and its traditions has led him to some great places and into the company of many remarkable people. He is presently serving a two-year term as president of the Anglers’ Club of New York and chairs the museum’s New York Dinner/Auction committee. John and his family reside in Simsbury, Connecticut, and he’s occasionally been spotted on the Farmington River during working hours.

Ah, Sweet Memories



*Above: Fishing on the Trancura River, Chile, 1952.
Photographed by Lee Richardson. From the collection
of the American Museum of Fly Fishing.*

*Right: Etching of a fishing trip from the fly wallet of Robert
LaRhett and Robert Forsyth Livingston, c. late nineteenth century.
From the collection of the American Museum of Fly Fishing.*

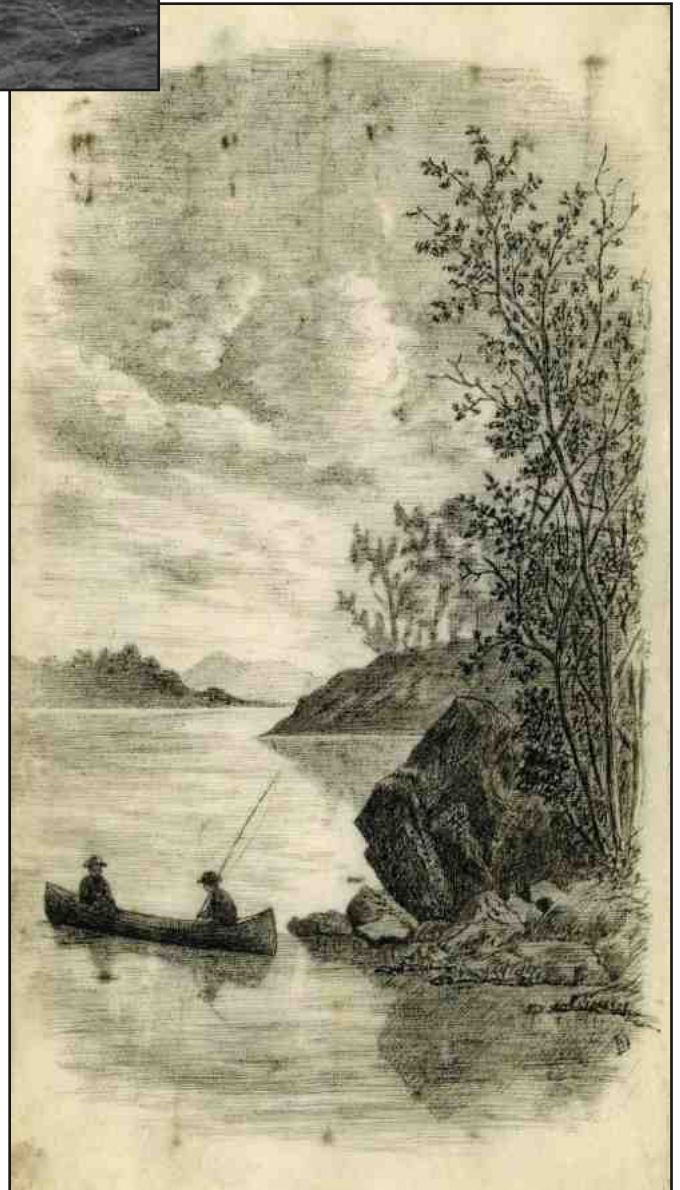
EXHIBITION PLANNING, PREPARATION, and installation time is always fun around here. Once an exhibition subject is selected and researched, it takes a lot of teamwork by the entire staff to execute all of the details. From start to finish, even a small exhibition will take four months to complete. Now, after many months of work, we are pleased to announce the opening of our latest exhibition, *Memories on the Water: A Photographic Journey through Fly Fishing's Past*.

The focus of this exhibition is the way people have documented and recorded their fly-fishing trips through photographs. The black-and-white images are all from the twentieth century (1907–1960) and include fly-fishing locations in the United States, Canada, and Europe. You will also see other examples of how memories were recorded through diaries, sketches, prints, and full manuscripts. Each image is accompanied by a contemporary color photograph and general historical background.

For all you rod and reel buffs (and we know there are a lot of you!), we have brought out the best of the best from these collections, too. What memories would there be without the equipment? Some featured rod and reel makers are Garrison, Mitchell, Chubb, Orvis, Farlow, and Leonard.

We pored through our archives to identify, select, and reproduce images that have not been published since we acquired them, and we hope you take this opportunity to visit the gallery and marvel over the depth of our important collections.

CATHI COMAR
EXECUTIVE DIRECTOR





The American Museum of Fly Fishing

4070 Main Street • PO Box 42
Manchester, Vermont 05254
Tel: (802) 362-3300 • Fax: (802) 362-3308
E-MAIL: amff@amff.com
WEBSITE: www.amff.com

THE AMERICAN MUSEUM OF FLY FISHING, a nationally accredited, nonprofit, educational institution dedicated to preserving the rich heritage of fly fishing, was founded in Manchester, Vermont, in 1968. The museum serves as a repository for and conservator to the world's largest collection of angling and angling-related objects. The museum's collections, exhibitions, and public programs provide documentation of the evolution of fly fishing as a sport, art form, craft, and industry in the United States and abroad from its origins to the present. Rods, reels, flies, tackle, art, books, manuscripts, and photographs form the basis of the museum's collections.

The museum provides public programs to fulfill its educational mission, including exhibitions, publications, gallery programs, and special events. Research services are available for members, visiting scholars, students, educational organizations, and writers. Contact Yoshi Akiyama at yakiyama@amff.com to schedule a visit.

VOLUNTEER!

Throughout the year, the museum needs volunteers to help with programs, special projects, events, and administrative tasks. You do not have to be an angler to enjoy working with us! Contact Sarah Moore at smoore@amff.com to tell us how we would benefit from your skills and talents.

JOIN!

Membership Dues (per annum)

Associate	\$50
Benefactor	\$100
Business	\$250
Sponsor	\$500
Friend	\$1,000
	\$5,000
	\$10,000

The museum is an active, member-oriented nonprofit institution. Membership dues include four issues of the *American Fly Fisher*; unlimited visits for your entire family to museum exhibitions, gallery programs, and special events; access to our 7,000-volume angling reference library; and a discount on all items sold by the museum on its website and inside the museum store, the Brookside Angler. To join, please contact Sarah Moore at smoore@amff.com.

SUPPORT!

The American Museum of Fly Fishing relies on the generosity of public-spirited individuals for substantial support. Please contact us if you wish to contribute funding to a specific program, donate an item for fund-raising purposes, or place an advertisement in this journal. We encourage you to give the museum consideration when planning for gifts, bequests, and memorials.