TROUT

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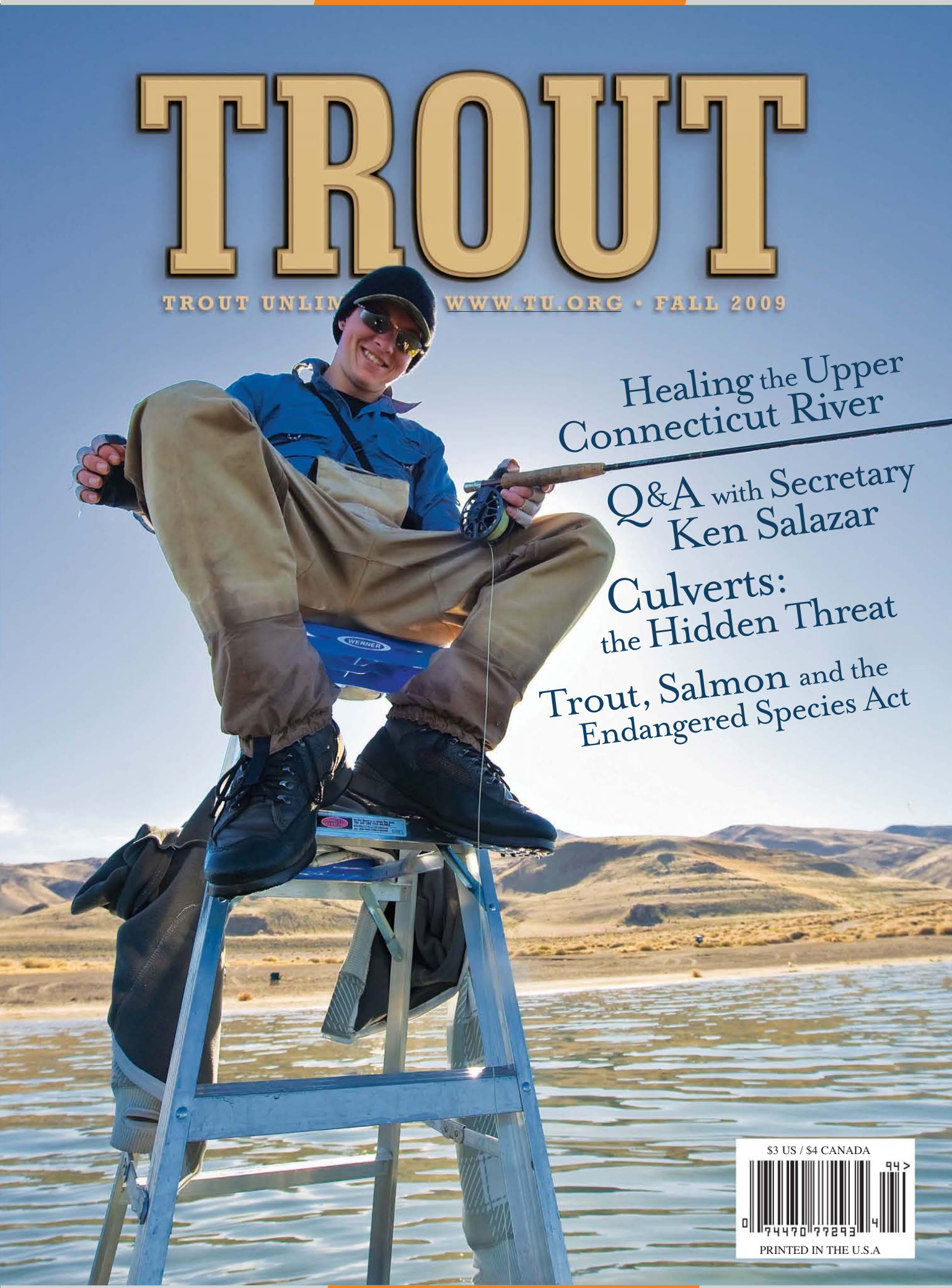

Healing the Upper Connecticut River

Q&A with Secretary Ken Salazar

Culverts: the Hidden Threat

Trout, Salmon and the Endangered Species Act

$3 US / $4 CANADA

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AARON OTTO

TROUT
The Journal of Coldwater Fisheries Conservation
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FALL 2009

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From the President

[Charles F. Gauvin]

"Every river has its own story, and if you don't stop to listen you might miss something important."

My Best Day of Fishing in a Long Time

With TU's 50th anniversary now in full swing, I'm thinking more than ever about what our organization has accomplished and how we can measure our success. If you've read this magazine at all in the past several years, you probably know that we have the best science in the business, and we're using it both to determine our priorities and to measure the effectiveness of our work. I'm very proud of our scientific prowess, but as an angler, I still want to see science translated into a better angling experience.

So, during a recent visit to Idaho, I got the chance to test the results of our work. I spent a morning doing my own, albeit unscientific, aquatic resource inventory on the Big Lost River above Mackey Reservoir. This section of the river once had a fabled rainbow fishery, but over the past 20 years it's fallen victim to low flows, fish passage obstructions, habitat destruction and whirling disease. But with the financial support of Sun Valley philanthropist Ed Dumke and others, TU has mounted a comprehensive effort to recover a fishery that once captured the imagination of Ted Trueblood and scores of other anglers.

The program for the Big Lost resembles many other TU projects. We've sought to protect headwater habitat that remains intact and to reconnect it to mainstem river reaches that we are working to restore. At the same time, we've strived to create the human infrastructure needed to sustain our work over time. The pieces are beginning to fit nicely together.

Every river has its own story, and if you don't stop to listen you might miss something important. In the case of the Big Lost, the most important part of the story, which we gleaned from conversations with anglers who fished the river during its glory years, was the presence of big rainbow trout, of fish whose size and abundance were disproportionate to available stream habitat. We discovered, in addition to the introduction of whirling disease, a host of other habitat limitations, including an irrigation diversion in the river just above Mackey Reservoir that, in most recent years, had blocked upstream passage from the reservoir. Because we suspected that the lack of fish passage might explain the absence of the big rainbows, we decided to work with the diversion's owner to install a fish ladder. Before long, rainbows from the reservoir were once again moving upstream.

So how was the fishing on the Big Lost? My personal experience may not be statistically accurate, and there remains much to be done on the Big Lost, but I had the best day of fishing that I've had in a very long time. What better way to celebrate TU's 50th anniversary than to go out and fish one or more of the scores of rivers that have benefited from its great work?

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From the Editor

[Steven R. Kinsella]

Changes

This issue of *Trout* features some of the changes that are underway at the magazine. We are unveiling Voices from the River—a venue for quality writing on a wide range of issues pertaining to rivers and trout and salmon. The debut piece considers the artists Christo and Jeanne-Claude and their plans to place fabric over a portion of the Arkansas River as a form of artistic expression. In Actionline, we will begin spotlighting one chapter project per issue, providing greater detail on the chapter's work and the significance of the project. In this issue it is the Jackson Hole Chapter's Flat Creek project in western Wyoming. If you believe one of your projects deserves to be in the Grassroots Spotlight let us know. And of course a change that took place with the summer issue continues—Dr. Robert Behnke will keep on contributing to our Native Fish column. In the past, contributors to that section—including this writer—often parroted the entries in Behnke's books. It makes more sense to have Behnke himself detail the issues and challenges facing the native trout and salmon species Trout Unlimited is dedicated to protecting. In total, the changes are designed to continue to bring to you, the reader, informative and enjoyable writings on the work of TU and its chapters, and on the issues facing trout and salmon.

Our Contributors

Angus Boezeman has been fly fishing for 33 years and is an active member of his local TU chapter. He is a licensed guide on the Connecticut River in Pittsburg, N.H., where he also operates a fly fishing school through his company, Broadside International. When not on the water, Angus owns and operates PIP Printing in Concord, N.H., with his wife, Chris.

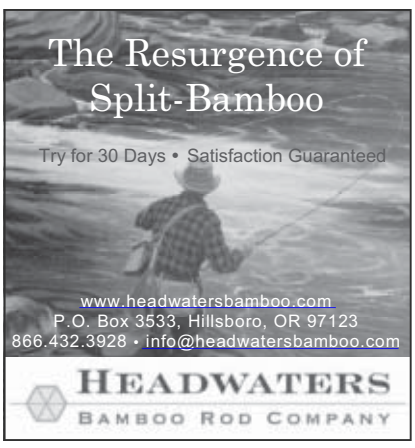
Murray Carpenter has been reporting on New England's environment for a dozen years for newspapers, magazines and radio, but had never visited New Hampshire's Indian Stream watershed before reporting the story in this issue. He lives in Belfast, Maine, at the head of Penobscot Bay, with his wife and two daughters.

Tom Kenworthy is a senior fellow at the Center for American Progress. He spent most of his career as a newspaper reporter, including 15 years covering public lands and natural resource issues for *The Washington Post* and *USA Today*. He lives in Golden, Colo.

Dying one day at a time in corporate America, cover photographer **Aaron Otto** is taking back life with every moment on the water. Otto is a freelance writer and photographer residing in the southwest, but living ankle-deep in a flow near you. He says his life has been architected for one purpose, to chase fish.

David Stalling recently returned home to Missoula, Mont. after living in Washington, D.C. for a year. An avid angler, hunter and wildlands advocate, he has worked on a variety of conservation issues for various organizations, including Trout Unlimited, where he helped organize and lead efforts to protect Montana's Rocky Mountain Front and New Mexico's Valle Vidal from irresponsible gas development as part of TU's Public Lands Initiative (now the Sportsmen's Conservation Project).

Susan Q. Stranahan has written about the environment for more than three decades as a former reporter with the *Philadelphia Inquirer* and now for national publications. She is the author of *Susquehanna, River of Dreams*, a natural history. She lives on Chebeague Island in Maine.



Our Readers Write

For decades, Trout Unlimited (subsequently others) has identified four major issues impacting the protection and restoration of America's wild trout, steelhead and salmon. They are habitat, harvest, hatcheries and hydropower. This set of challenges is referred to as "All-H." Recently, it became clear that there is another "h" factor to be addressed. It actually may be thought of as the umbrella "h." The fifth "h" is humanity.

We humans are the cause of the decline in salmon, steelhead, trout and other natural resources. We're the ones demanding "cheap" energy, "cheap" transportation, good-paying jobs and increased production of inferior fish to supply increased harvest to supply the world with "cheap" protein. As has been demonstrated for hundreds of years, we have the capacity through greed, ego and politics to destroy our magnificent natural resources. Similarly, we have the capacity to protect what has not yet been destroyed and to restore much of what has.

Now is the time for us to work together on the many challenges facing the protection and restoration of wild trout, steelhead and salmon. These efforts will help define our legacy. What legacy do you want to leave? One that includes robust populations of natural spawning trout, steelhead and salmon or one that does not? So, let's take responsibility for our past actions and commit to a no-nonsense look at the fifth "h" to determine our individual and collective roles in the protection and restoration of these Northwest icons.

James E. Wilcox
Olympia, Wash.

TU Legends

(Left to right) George Sutherland, Stan Griffin and Don Duff got together at the Annual Salmonid Restoration Conference this spring in Santa Cruz, Calif. to offer their expertise in water rights and native fish restoration—Sutherland and Griffin in California, and Duff in Utah and California. The three are TU legends (see profiles of Griffin and Duff in the summer 2009 issue of *Trout*), and altogether their service to TU totals 81 years.

On Art Neumann: prophet, fisherman par excellence, patient and most important friend.

I lived in Saginaw, Mich., and got to know Art early in my fly-fishing career and it quickly became a father-son relationship. Fishing together in many of Michigan's streams, covering a good deal of the western streams and even the George River for salmon. This man had a tremendous impact on my life second only to my real father. Art's integrity, devotion to the rivers and streams, and most of all to the trout *is and was his legacy*. Having had the pleasure of knowing Art all these years and having learned of all the effort and volunteer work he performed in the early stages of TU, it gave me great satisfaction to read all the well deserved accolades to Art Neumann in the summer 2009 issue of *Trout*. Frankly I do not believe there would be a TU today were it not for Art's thankless efforts.

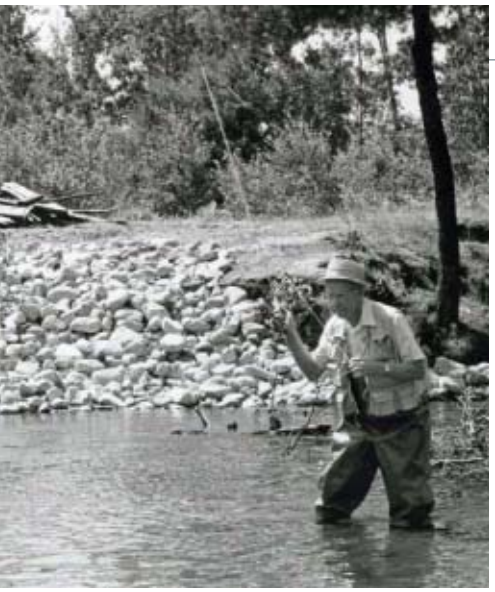
Walter C. Averill, M.D.
Homosassa Fl.

I've heard several people out here in Washington say that the 50th anniversary edition of *Trout* is the best one yet! Great job to all at the magazine!

Andy Batcho
Seattle, Wash.

Regarding "It's Elementary" in your summer issue: Too often we teach a child he or she can indeed cast a fly but then with a pat on the head we leave them to go back to their computer game. We fail to follow up on that one brief contact.

Clement H. Fullerton
Hankins, N.Y.



I offer this in reference to the proposal regarding the Delaware River. The present request is to use up to one million gallons of water per day for hydraulic fracturing, the process by which natural gas is extracted from the Marcellus Shale formation, deep underground. That constitutes a very great risk to the present ecosystem in the Delaware River Valley. What are the guarantees that this will not create a permanent destruction? The fact that we *can* do something does not equal the mandate that we *should* do something. In my opinion hydraulic fracturing is too great an unknown to proceed on such a large scale with the potential of serious detrimental effect on such an important waterway.

Do we just take the leap and hope it will turn out all right? Surely there are risks to be measured in nearly any endeavor to capture energy, but I ask, "Is the 'cost' of this particular project worth it?" I am not just raising the question in terms of profit of dollars and cents, but in terms of profit value and sense of what this means for a livable environment for the future. What does it profit a people to gain energy at the expense of producing a toxic environment? That to me does not make sense.

R. Daniel Knox
Ambridge, Pa.

Edward M. Moersfelder, of Amery, Wisc., very forthrightly spelled out in no uncertain terms why we (TU as well as other outdoor organizations) cannot coexist with the off-road vehicle crowd (see "Our Readers Write," summer 2009 *Trout*.) His thoughts and observations very closely parallel my own experiences with these dreadful contraptions in my personal and professional life.

Our friend, Mr. Moersfelder, has issued a clarion call to all who love the great outdoors: "simply put, motorized and non-motorized uses cannot just get along because motorized uses diminish the resource for non-motorized users. Pride, backbone, and a willingness to face this threat head-on is the challenge of the day. I hope Trout Unlimited answers the call." Amen!

James F. Smith
Preston, Conn.

Your Letters:

Readers are invited to submit letters on anything that appears in *Trout*. We may edit submissions for clarity or length.

Send letters to:

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Correction: The image of the Grand Teton National Park by photographer Dusan Smetana that appears in the 2010 TU calendar for the month of March is mistakenly labeled as Yellowstone National Park.

TU.ORG/BLOG

Blog Rollup

A sample of what our tech-savvy readers are saying about the issues. Visit tu.org/blog to voice your opinions.

Teton Dam

Dams are one of, if not the most, damaging structures impacting the populations of migratory fish. I know they can produce electricity and control flooding, but I feel we do not effectively weigh out the costs (both monetary and environmental) of dams against their benefits. —Dave

ORVs

Unfortunately I have to agree with Mr. Moersfelder (see Our Readers Write, summer 2009) as I have friends who are "quad" advocates/riders. In the very rare instances of an elderly or infirmed companion using his "wheeler" to get to his hunting site and also to aid in packing out game there isn't any real reason for these machines to be in the woods! Anywhere they can go a human can walk; and a human can surely walk places that the machine cannot go. —Joe

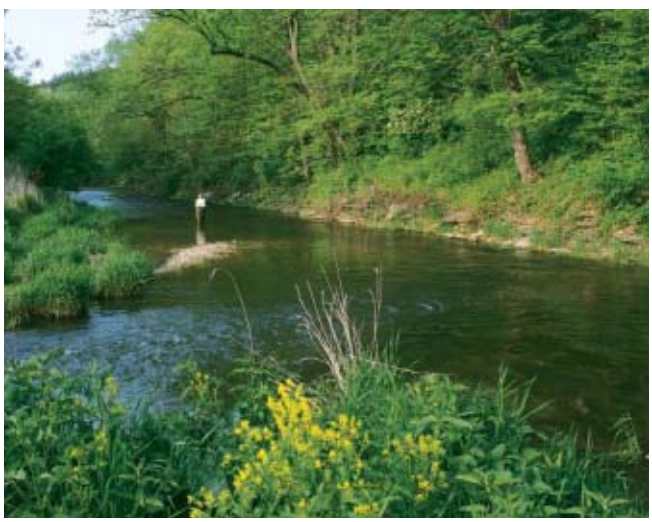
Pocket Water

NEWS BITS AND BYTES

Funding Boosts Driftless Restoration

Trout stream restoration projects throughout the Midwest's Driftless Area received a funding boost from two important sources this year—the Minnesota Legacy Fund and the Natural Resources Conservation Service.

The Minnesota legislature provided $2 million to fund TU stream restoration projects in that state. Half the money will be dedicated to projects in the Driftless Area in Minnesota, which will result in an estimated five miles of stream improvement.



The funding comes via the Clean Water, Land and Legacy Amendment, which voters established in the November 2008 election. The amendment to the state's constitution provides funding over the next 25 years to protect clean water and wildlife habitat in Minnesota. It is expected to raise approximately $300 million per year with roughly 80 percent of the money going toward clean water, wildlife habitat, parks and trails in the state and just under 20 percent going for arts programs and cultural resources.

"TU's Minnesota State Council put together a group of projects that will provide an economic stimulus, improve water quality, increase fish numbers and enhance angling opportunities," says Jeff Hastings, project manager for TU's Driftless Area Restoration Effort.

In addition to the funding from the Minnesota Legislature, the NRCS announced in June that it will provide a five year $1.75 million grant ($350,000 per year) for stream restoration work throughout the multi-state Driftless region. The Farm Bill dollars will help to cover over 50 percent of the costs of stream restoration projects, which will help state natural resource agencies and TU chapters stretch out their dollars.

The Driftless Area is located in a region in the states of Minnesota, Wisconsin, Iowa and Illinois. It is referred to as "driftless" because it was missed by the last glaciers that moved through the area and thus is lacking in "drift" or glacial fill. Known for its craggy valleys and spring-fed streams, land-use practices of the 1800s and early 1900s led to wide-scale erosion, flooding and altering of the region's streams and valleys. TU has been a regional leader of efforts to restore the coldwater streams and rivers of the unique area.

Trout Story Wins Award

A panel of judges from the Outdoor Writers Association of America awarded Kirk Deeter first place Excellence in Craft honor for magazine writing in the Outdoor Ethics/Take Pride in America category for a piece he wrote for *Trout*. The story, "The Road Not Traveled," appeared in the fall 2008 issue and focused on ORV use on public lands near and around threatened trout habitat. Read the story on *Trout*'s digital archives at tu.org.

ABOVE CENTER: JEFF ERICKSON

Yale Farm Golf Course Proposal Dropped

A fierce multi-year battle between TU and allies and a New York developer planning to build an exclusive golf course in the Connecticut Berkshires ended last April when the development group announced that they can no longer afford to proceed.

The so-called Yale Farm was a proposed $25 million, 18-hole private golf course, clubhouse, recreational facility and eventual residential subdivision located in a small, fragile watershed at the headwaters of two Class A coldwater streams containing native brook trout. According to its opponents, the development "would have caused irreparable damage to 780 acres of pristine farmland, fields, woods, streams and wetlands in order to create a closed, exclusive resort for wealthy members––virtually none of them local—to visit, play golf and leave."

The local environment would have been adversely affected in large part due to the golf course's proposed use of 150,000 gallons of water per day to keep it lush throughout the season.

But the promoters of Yale Farm claimed in a statement that it was the economy, not environmental issues, that sank the project.

"The collapse of America's economy doomed Yale Farm. In short, our economic model, which was dependent on membership sales, is no longer viable," the statement read.

"One of the few silver linings of the recession is that ecologically destructive projects like Yale Farm are getting weeded out," says Elizabeth Maclin, TU's vice president for eastern conservation. "We just hope that the developer now does the responsible thing and sells the property to someone who will conserve this environmental treasure in western Connecticut."

REEL SCIENCE

NEWS FROM THE WORLD OF FISHERIES SCIENCE.

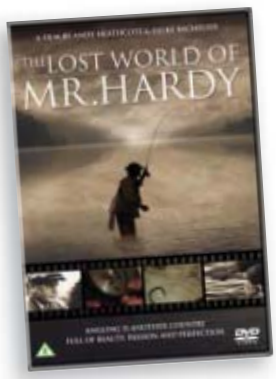
No Gold From These Rainbows

Hybridization with introduced non-native rainbow trout has long been recognized as one of the primary reasons for the decline of native cutthroat populations. A recent study by a U.S. Geological Survey scientist and his colleagues demonstrates this fact. The authors found that a mix of 20 percent rainbow genes causes a 50 percent reduction in spawning output in westslope cutthroat trout. They also found that this level of rainbow genes leads to significant loss of fitness in the wild. The 20 percent genetic mix is crucial because some government agencies use this percentage as a threshold when counting populations to determine if special protections are needed. Hybridized fish also tend to stray farther than non-hybridized fish, which can rapidly spread the problem through spawning.

—Jack Williams, TU senior scientist

Biology Letters "Hybridization Rapidly Reduces Fitness of a Native Trout in the Wild" March 18, 2009.

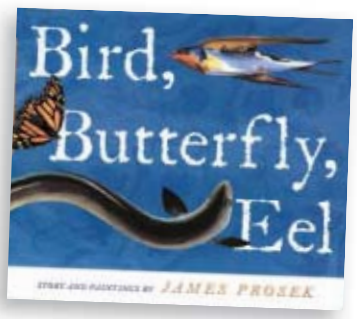
For Your Library



The Lost World of Mr. Hardy

Andy Heathcote and Heike Bachelier (Trufflepig Films, $29.99, trufflepigfilms.com).

This documentary tells the story of the founding of Hardy's tackle shop in England in the 1800s. Former and current employees mostly tell the story of the company, which innovated the fishing tackle that was popular with anglers of the day, including royalty and celebrities. The vintage footage, simple score and pacing will appeal to angling historians, vintage Hardy collectors and old souls.



Bird, Butterfly, Eel

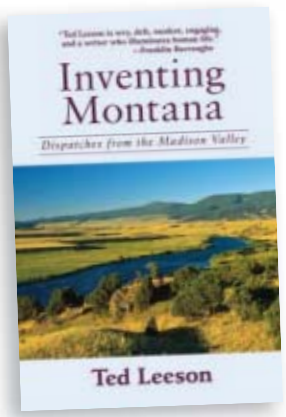
By James Prosek (Simon & Schuster, $16.99, books.simonandschuster.com).

Prosek impresses as the illustrator and writer of this children's book describing the life cycles and journeys of three New England species. Through striking, lovely artwork and prose, young readers will gain an appreciation for the ecosystems that are crucial to these three creatures, including the migration eels make to the ocean to spawn—one that mirrors the journeys some salmonids make within the same fragile ecosystem.

Raising the Ghost

Josh Brandner & Paul Tarantino (Fly Boys, $29.95, flyboysfishing.com)

In late 2007, a team of anglers traveled to remote British Columbia in search of an elusive species of steelhead that will rise to dead drift dry flies. Packed with a good ratio of angling and conservation content, this film will satisfy both the trout bum and conservationist, especially because 5 percent of the proceeds go to wild steelhead conservation. See a clip at TU.ORG/BLOG.



Inventing Montana: Dispatches from the Madison Valley

Ted Leeson (Skyhorse Publishing, Inc. $24.95, skyhorsepublishing.com)

Leeson takes the reader along on a fascinating trip to Montana's Madison Valley where he provides an angler's tour of the Madison, its fly fishing lore, the surrounding landscape and the people, including both the natives and visitors who come in droves to fish its fabled waters. Being a keen observer of human behavior and having spent two decades fishing the river with a group of companions, Leeson is well suited to narrate the tour.

Greenbacks Discovered in Utah

A group of biologists recently discovered a small population of rare greenback cutthroat trout in Beaver Creek in the LaSal Mountains east of Moab, Utah—the first confirmed sighting of the fish in the state. Greenback cutthroats are listed under the federal Endangered Species Act. Utah officials quickly placed special regulations on the creek, restricting anglers to the use of artificial flies and lures and requiring catch-and-release.

The greenback is derived from the Colorado River cutthroat, whose native range extended into Utah. The original range of the greenback was thought to be almost entirely within the state of Colorado.

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Court Reinstates Clinton-Era Roadless Rule

In early August, the Ninth U.S. Circuit Court of Appeals affirmed the ruling of a lower court to reinstate the Clinton administration's 2001 roadless rule and negate an alternative policy that was implemented by the Bush administration. The 2001 roadless rule protected approximately 58 million acres of national forests nationwide but was overturned by the Bush administration, which allowed states to implement their own plans. The circuit court's ruling does not affect forests in Idaho, because that state finalized its own roadless plan, or the Tongass National Forest in Alaska, which had been exempted from the 2001 roadless rule. Further appeals are expected. Roadless areas are viewed as critical to protecting habitat for trout and salmon throughout the nation.

Congress Moves on Major Environmental Measures

Earlier this year, the U.S. House and Senate passed major policy measures related to clean water and climate change. The full House passed the American Clean Energy and Security Act, which in addition to curbing pollution that causes global warming, provides funding to help safeguard America's lands, waters and wildlife from the impacts of climate change.

The measure will help reduce emissions of greenhouse gases, enhance sequestration of carbon and provide funding for fish and wildlife projects to mitigate the impacts of climate change. Coldwater fish throughout the country have been affected by the impacts of climate change including warming waters, droughts, fire and floods.

Hunting, fishing and conservation groups lauded passage of the bill. "Trout and salmon, waterfowl and upland game birds are at ground zero for adverse impacts of climate change," says Steve Moyer, TU's vice president for government affairs, who represented TU in supporting the bill. "One of the best things about this bill is that it gives our state, federal and tribal agencies the guidance and resources they need to protect and restore the forests, lakes, wetlands, rivers and other habitats that fish and wildlife need to survive in the face of a changing climate."

Earlier in the summer, the Senate Environment and Public Works Committee approved the Clean Water Restoration Act, a move also hailed by conservation and sporting groups.

CWRA would restore the original intent of the Clean Water Act, which in recent years has been weakened by Supreme Court rulings that distorted the language of the law and drastically reduced its scope. The resulting legal confusion has stripped Clean Water Act protections for some 20 million acres of wetlands and millions of miles of streams.

"This is a great step forward in restoring common sense protection to our nation's waterways and wildlife habitat," says Chris Wood, TU's chief operating officer.

Stimulus Dollars for Penobscot Dam Removal

On July 1, the National Oceanic and Atmospheric Administration Fisheries Service announced that it will award the Penobscot River Restoration Trust more than $6 million in stimulus dollars to help finance the removal of the Great Works dam on the Penobscot River, long a barrier to fish passage for salmon, shad and other sea-run fish.

TU is part of the Trust, which was formed to implement a settlement agreement to purchase and remove the Great Works and Veazie dams and to decommission and bypass the Howland dam on Maine's Penobscot River. Other parties to the settlement include the State of Maine, the U.S. Department of the Interior, the Penobscot Indian Nation and several other conservation groups.

"It's fitting that this announcement comes on the 10th anniversary of the Edwards dam removal," says Jeff Reardon, TU's New England conservation director.

Reardon says that the removal of the Edwards dam on the Kennebec River a decade ago, which opened up almost 17 miles of river, resulted in an almost instantaneous increase of sea-run fish above the dam, including striped bass, shad, sturgeon and alewives. This spring more than 2 million alewives returned to spawn upstream of the Edwards dam site.

Removing or bypassing the three dams on the Penobscot will give salmon and other sea-run fish access to nearly 1,000 miles of watershed.

"We've seen what dam removal has done for sea-run fish on the Kennebec River. Now we have funding to help implement a more ambitious project on the Penobscot," says Reardon.

The Penobscot River supports more than 90 percent of all Atlantic salmon returns to U.S. rivers, and Penobscot salmon were recently added to the Gulf of Maine Distinct Population Segment, which is listed as endangered. Dam removal on the Penobscot was identified as a priority for salmon restoration by the National Research Council in 2002.

Donate Your Tax Expertise to TU

TU is looking for tax gurus willing to donate their time and expertise to help chapters and councils with tax issues. If you or someone you know has experience with not-for-profit tax law—Form 990 filings, unrelated business income, sales tax exemption and other fun non-profit tax topics—get in touch with TU's Chief Financial Officer Hillary Coley at hcoley@tu.org.

HANNAH MOULTON BELEC

Question & Answer

With Secretary of the Interior Ken Salazar

U.S. Secretary of the Interior Ken Salazar is a fifth generation Coloradan whose legal and political career has crossed paths with Trout Unlimited's work on many occasions. In his new position as secretary of the Interior, Salazar talks to *Trout* about some of TU's priorities.

Does the Department support enactment of Good Samaritan legislation, which protects groups like TU from liability when cleaning up abandoned mine sites?

If we are going to clean up the tens of thousands of abandoned mine sites across the country, we need common-sense solutions, like Good Samaritan legislation, that allows groups like Trout Unlimited to help clean up the sites. As a U.S. senator, I was a sponsor of legislation to implement a Good Samaritan program that would create incentives for local governments, as well as non-profits and companies, to clean up these abandoned sites without risk of being held liable for the environmental damage caused by those who were behind the environmental damage in the first place. The Good Samaritan concept is a win-win for the taxpayer and the environment.

How do you see this administration helping water users and other interests balance irrigation, municipal and environmental water needs in the West's over-appropriated rivers?

I grew up on a ranch in southern Colorado where water has been essential to our way of life, generation after generation. In the West, wise management of water is growing even more critical in light of the historic drought affecting much of the region and the prospect that climate change could reduce water supplies even more in the future. To tackle water challenges in the West, we are going to have to work closely with states, municipalities, agricultural interests and other stakeholders to better conserve and allocate this increasingly scarce resource.

We are moving quickly. This spring, I announced that we are spending $381 million in recovery funding to address California's drought and to meet the state's long-term water supply infrastructure needs. In July, I announced that the Bureau of Reclamation will invest $134 million in 27 water reclamation and reuse projects. Non-federal partners will contribute nearly $550 million to these projects, which will provide western communities new sources of clean water while promoting water and energy efficiency and environmental stewardship. In the coming months and years, we will work closely with all stakeholders in the West to rebuild infrastructure, tackle the difficult challenges, and bring people together to forge a secure water future for our communities.

Reforming the General Mining Act of 1872 has long been a TU priority because it often leads to the development of environmentally damaging mines on public lands. Does the Department support the creation and enactment of mining law reform legislation or administrative rules containing such provisions?

I firmly believe we need comprehensive legislation to reform the 1872 Mining Law. It has not been significantly updated, after all, since it was first passed. Specifically, the legislation must provide clear and specific statutory authority to ensure enforcement of environmental and public protection laws, and to provide taxpayers a fair return on those resources. As Congress considers this legislation, we will do everything we can under the existing statutes to ensure the protection of our land, water and wildlife.

Secretary of the Interior Ken Salazar is a former U.S. senator and attorney general for the State of Colorado.

We will work closely with all stakeholders... to forge a secure water future for our communities.

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[BY CHRISTOPHER CAMUTO]

Rivers and Roots: Going Home to Basilicata

I FOLLOWED A DIRT TRACK WEST out of Terranova di Pollino, a small town of well-built stone houses with red-tiled roofs perched above the Sarmento River. There had been a thunderstorm the previous evening, a purple-sky downpour that cleared the air and cooled off a week of blistering heat at the end of May. As I passed small farms and land holdings beyond the edge of the town, I could hear the river below me, a good sound in a foreign place.

Below Terranova the Sarmento flows north through a rugged gorge toward San Costantino Albanese and San Paolo Albanese, two Arbëreshë towns also perched on stony hilltops in the fashion of southern Italy. They retain the Byzantine culture of the Albanians who, fleeing the Turks, settled this country in the late-15th century. My paternal grandmother, an Albanian-Italian, had been born in San Costantin, as it is called locally, in 1905. A strong-willed young girl who begged to join relatives in America, she left its stone streets and sun-washed buildings, as well as the serene forests and stunning mountains of southern Basilicata province in 1920.

As a child, I knew Delores Scutari as an affectionate, bustling woman who lived in a succession of tidy apartments in Brooklyn and, later, a small house in Bensonhurst, near the Verrazano Bridge. Her homes were redolent with the finest cooking I have ever enjoyed. She somehow grew an abundance of fat tomatoes and glossy peppers in clay pots on fire escapes along with the fresh herbs that were part of the secret of her sauces. She was a seamstress by trade and—except for some strange, musical patois she would speak with one of my aunts a thoroughly urban, American woman who loved big, Sophia Loren-style sunglasses, bright clothes and Hollywood movies. I thought of her as the quintessential New Yorker. She would have laughed at the idea of going fishing. Now I was walking in her mountains, listening to her river.

I had no map with me that first day I wandered out of Terranova intent on exploring the headwaters of the Sarmento. I had driven down the coast of Campania from Salerno and then up into these mountains of southern Basilicata. As soon as I saw this rugged but inviting landscape, I knew where my love of mountains and rivers had come from and I felt instantly at home.

As soon as I saw this rugged but inviting landscape, I knew where my love of mountains and rivers had come from and I felt instantly at home.

The dirt track west out of Terranova seemed to know where it was going. It dipped to cross chalky tributaries and switch backed down toward the river below. It led me through a succession of tilled land, woodlots, maquis and forests of oak, beech and pine. Land that had been farmed for thousands of years was somehow still setting aside room for wild things. Above the feared *mezzogiorno* of southern Italy, big buteos and sleek falcons, as well as a golden eagle traversed the jagged spaces between the limestone ridges. I moved from the shade of one oak grove to another, nursing my water, taking it all in.

When a glance seemed to invite it, I greeted the old ones working with careful determination in vegetable gardens and small olive groves and vineyards that were tucked into this landscape everywhere. There were no young working in the fields; like my grandmother, the young keep leaving Basilicata. Occasionally I would stop and talk a bit, using the smatter-

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CHRIS CAMUTO

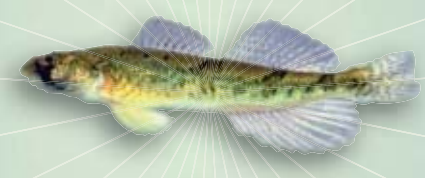
ing of Italian I knew. I was happy to discover that any sentence beginning "Buongiorno, sono Americano…" would elicit broad grins and strong handshakes, from the men especially. And when I explained that I was a grandson of a Scutari from San Costantin—tilting my head downstream—there was more solemn hand shaking and grave looks of approval that I had come home and was walking with interest and respect in my grandmother's mountains.

The talk quickly got beyond my vocabulary and grammar. I would make some excuse to move on, though no excuse was necessary—my clothes and gear betrayed me as some kind of *naturalista*. No one I crossed paths with seemed to know of *trota* or to have any interest in fishing. Farmers rarely do. Downstream at San Costantin, the Sarmento was an exposed and biologically impoverished river, subject to annual extremes of spate and drought. But up above 3,000 feet the wooded tributaries looked promising for brown trout.

If you think of the boot of Italy, I was just above the instep where the southern Apennines reach their highest altitudes in the Pollino Massif, an impressive rise of dolomitic limestone that reaches a little over 6,000 feet in its high, bare peaks. The Sarmento is one of many rivers that drain the slopes of Mount Pollino, which rises on the border of Basilicata and Calabria and lends its name to Parco Nazionale del Pollino, the largest natural preserve in Italy. The dramatic rise of these mountains, and their deeply dissected valleys and isolated villages reminded me somewhat of the Great Smoky Mountains. My interest in my grandmother's town led me to this larger world of Pollino National Park, nearly half a million acres of biological diversity ranging from the Apennine wolf to the Orsomarso roe and the long-lived loricato pine. And there were *trota*, too, in the headwaters though I would have to work to find them.

Whoever we are, whatever our family's story—its long journey from one place to another—our roots reach back eventually to mountains and rivers. Search them out.

For Francesca Scarpino



The Protected and the Protector

TU's Use of the Endangered Species Act to Preserve and Protect Trout and Salmon

By Tom Kenworthy

Do a Google query on the phrase "snail darter tiny fish" and the popular internet search engine returns more than 21,000 entries. That wouldn't surprise Cecil Andrus. Three decades ago when he was serving as secretary of the Department of the Interior, Andrus made a wry observation about the tale of the two and a half inch long perch that nearly stopped a federal dam project on the Little Tennessee River. It was, he said, "the only fish story I know of where the fish keeps getting smaller." The snail darter shrank in the telling because depicting it as a very small and insignificant fish standing in the way of the large Tellico Dam and reservoir project fit the prevailing story line of the first big battle under the 1973 Endangered Species Act. Dam opponents—led by TU—used the new species law and discovery of the darter as a cudgel in their ultimately heartbreaking drive to save

a premier trout fishery and a verdant valley that supported 300 family farms and contained important Cherokee archaeological sites.

Veterans of that fight say the real story was about an arrogant abuse of power by the Tennessee Valley Authority and its insistence on completing its final big dam, even if the project could not withstand independent cost-benefit analyses. Unlike many other TVA projects, the Tellico Dam wasn't about providing electricity for the rural southeast but rather about building a real estate development for the affluent.

But that story was seldom told at the time, says Zygmunt J.B. Plater, who helped lead the legal battle against the dam as a young University of Tennessee law professor, and who was fired from the faculty for his trouble-making. In its place arose a caricature, a cartoon: A tiny fish, largely unknown and without merit, was standing in the way of human progress, blocking construction of a vitally needed dam that would serve the people of eastern Tennessee. It was environmentalism run amok, putting the needs of insignificant critters ahead of those of man, all thanks to the ESA, marginalizing environmentalists as, Plater wrote, "love-beaded hippies and silly grannies."

That simplistic and inaccurate meme has over the decades adhered to the ESA and other species disputes like a zebra mussel to a boat hull. Though it quickly became, and has remained, one of our most controversial environmental laws, the ESA began as a widely admired and popular law. At the urging of President Richard Nixon, Congress quickly adopted it with just four dissenting votes, and in signing it into law the president said the ESA would protect "a heritage which we hold in trust to countless future generations."

For all its detractors and imperfections, the ESA remains a pillar of American environmental law that protects not just fish, plants and wildlife, but empowers them to serve as canaries in the coal mine, warning us of unraveling ecosystems.

The Tellico Dam campaign also holds an important place in the history and evolution of TU, a harbinger of conservation campaigns to come in which the organization would become a major player and use the ESA as a powerful, if not always sufficient, tool to preserve imperiled fish and their habitat.

The ESA, says TU President Charles Gauvin, "doesn't seem to be politically sufficient to cure multi-symptom, extraordinarily complex issues such as Pacific salmon…Where it's worked best is in cases where you have a very discrete population, like Apache trout and greenback trout, in a well-defined habitat."

The Tellico Dam campaign also holds an important place in the history and evolution of TU, a harbinger of conservation campaigns to come in which the organization would become a major player and use the ESA as a powerful, if not always sufficient, tool to preserve imperiled fish and their habitat.

Critics often cite the small number of species—23, including populations of wolf, grizzly bear, bald eagle and peregrine falcon—recovered and taken off the list. But species recovery, though the goal of the ESA, is not the sole determinant of success under the act, argues Michael Bean, an expert on endangered species who last spring left his longtime association with the Environmental Defense Fund to become the Department of Interior's counselor on imperiled fish, wildlife and plants. Other measures of success include preventing extinction, and improving a species' chances of recovery by rebuilding populations.

"The ultimate measure is recovery," says Bean. "However, I think it is quite clear that accomplishing recovery is a long-term undertaking. Many of the species on the endangered list are endangered because of threats or other factors that have operated over many decades or longer. Reversing the effects of those threats will take a similar duration or longer. It's kind of like rebuilding your 401(k)."

Consider the long and complicated history of efforts to save Columbia River Basin salmon. Nearly 18 years have passed since the National Marine Fisheries Service listed the Snake River sockeye as endangered, triggering a contentious debate about how to save them—and the dozen other salmon populations added to the list since then—that rages on today. The central issue, the operation of federal dams and the question of whether four Snake River dams should be breached, has been in and out of court repeatedly, and TU's involvement as a plaintiff dates back to the mid 1990s.

That longstanding legal battle is now at a critical stage. In May, the federal judge overseeing litigation challenging the federal government's latest salmon plan adopted by the Bush administra-

LARRY ULRICH

Using the snail darter's ESA status as leverage, TU fought a battle to stop the Tellico Dam that was ultimately doomed.

MARK CONLIN/LARRY ULRICH STOCK

tion wrote a letter to all parties. With salmon populations "on the brink of extinction," Judge James A. Redden wrote, "We simply cannot afford to waste another decade." He directed the federal defendants to develop a contingency plan that includes "what it will take to breach the lower Snake River dams if all other measures fail…."

How the Obama administration will react was unclear as this issue of *Trout* went to press. But longtime salmon advocates like Rob Masonis, TU's vice president for western conservation, and Todd True, a managing attorney in the northwest office of Earthjustice, say that political support for dam breaching is building as the likely impacts of climate change come into clearer focus. Even Idaho Sen. Mike Crapo has said that breaching must be on the table if a regional, comprehensive effort to solve the salmon crisis is convened.

The ESA, says Masonis, has "been incredibly important and useful as an action-forming mechanism," but "not expansive enough" to deal with the full range of salmon issues. "You need political leadership, from the administration, from the northwest congressional delegation and from the governors. I think we're starting to see that."

At the other side of the country in Maine, litigation under the ESA brought by TU and other groups has also spurred progress, but no solution yet, in the case of Atlantic salmon. Pressured by the lawsuits, the federal government in 2000 listed the Gulf of Maine population of Atlantic salmon, then near extinction. Since then, a recovery plan has been approved, critical habitat designated, and last June, populations in the Penobscot, Kennebec and Androscoggin rivers added to the endangered species list.

Pressure by TU and other groups has helped reform practices in the aquaculture industry and led to dam removals and the likelihood of more. As a partner in the Penobscot River Restoration Trust along with five other environmental groups and the Penobscot Nation, TU has helped forge an agreement to remove two dams on the Penobscot and install fish passage at a third. Those measures will improve access for salmon and other anadromous fish including striped bass, shad, herring and sturgeon to about 1,000 miles of habitat.

With salmon populations "on the brink of extinction…we simply cannot afford to waste another decade."—Judge James A. Redden

The ESA, says Elizabeth Maclin, TU's vice president for eastern conservation, "has been the vehicle," and in coming decades will continue in that role as dam re-licensing decisions are reached on the Kennebec and Androscoggin rivers.

In other instances, just the threat of an ESA listing has been enough to spur recovery efforts. That is the case in the Great Basin, where the Bonneville cutthroat trout was once thought to be extinct but is now back to about 38 percent of its native range thanks to the efforts of a conservation team that includes TU, once-reluctant state agencies, ranchers, and the Goshute Tribe.

Don Duff, then a fish biologist with the Bureau of Land Management, discovered a remnant population of Bonneville cutthroats in 1974 in a remote part of the Deep Creek Range and is still involved in the conservation effort. The ESA, says Duff, "has played a major role in getting the attention of agencies and getting the public involved." Last year, the U.S. Fish and Wildlife Service denied a petition to list the trout, an effort Duff opposed.

Listed Trout and Salmon Species

THREATENED

Apache trout
Bull trout
Greenback cutthroat
Lahontan cutthroat
Little Kern golden trout
Paiute cutthroat
California coastal Chinook salmon
Central Valley spring-run Chinook salmon
Lower Columbia River Chinook salmon
Puget Sound Chinook salmon
Snake River fall-run and spring/summer-run Chinook salmon
Upper Willamette River Chinook salmon
Columbia River and Hood Canal summer-run chum salmon
Lower Columbia River coho salmon
Oregon Coast coho salmon
Southern Oregon coho salmon
Northern California Coast coho salmon
Ozette Lake sockeye salmon
South central California coast steelhead trout
Central California coast steelhead trout
Northern California steelhead trout
Middle Columbia River steelhead trout
Lower Columbia River steelhead trout
Upper Willamette River steelhead trout
Puget Sound steelhead trout
Snake River Basin steelhead trout
California Central Valley steelhead trout

ENDANGERED

Gila trout
Gulf of Maine Atlantic salmon
Upper Columbia River spring run Chinook salmon
Sacramento River winter-run Chinook salmon
Central California coast coho salmon
Snake River sockeye salmon
Upper Columbia River steelhead trout
Southern California steelhead trout

ILLUSTRATIONS BY SKETCHANDRELEASE.COM

"I said we've made good strides," says Duff of his decision. "I can't support a listing, but if anything happens, I'll be the first one to jump on" a new petition.

As important and powerful as the ESA has been in these and many other battles on behalf of fish and wildlife, the act hasn't repealed the laws of politics. So it was with the snail darter, so it has been ever since.

"TU was in its infancy in those days," remembers Joe Congleton, who at the time of the snail darter fight was the organization's national director and served as the liaison to other organizations aligned in the effort. The national office, he said, "didn't feel they could win" because they didn't have the resources and felt the dam project was so far along it could never be stopped.

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Breaching must be on the table if a regional, comprehensive effort to solve the salmon crisis is convened.

ERIC BELEC

But local TU chapters across the southeast who treasured the Little Tennessee didn't care about the odds. They cared about the river, its huge brown trout, and the scenery that Congleton says reminded people of Montana's Madison. So they fought and fought, until the small national office responded by mobilizing TU members across the country to lend support and contribute money.

Stymied in their challenge to the dam under the National Environmental Policy Act, dam opponents used the fortuitous discovery of the snail darter to push their case. They got the fish listed as endangered and won legal victories all the way through the U.S. Supreme Court.

Congress parried by creating a new process for overriding the ESA, a top-level committee dubbed the God Squad. But those deities also sided with the fish, so two Tennessee lawmakers, Senate minority leader Howard Baker and Rep. John Duncan, attached a one-sentence rider to an appropriations bill that prevented the ESA from blocking the dam. And President Jimmy Carter, despite his stated opposition to the dam, declined to veto the bill—because, many said, he needed congressional support for the treaty to cede control of the Panama Canal to Panama.

Carter called Plater, the attorney behind the snail darter case, from Air Force One to tell him of his decision. "He clearly wanted my forgiveness, my absolution," recalls Plater.

As bitter as the defeat was, and despite their failure to win broad public support, Plater says the case established the ESA as an immensely powerful law and as a forum for citizen litigation and public review of development projects with little merit.

"In no other country in the world could people so lacking in money and tenure have carried this to the highest levels of government."

And Gauvin says that until the Supreme Court decided the case, no one really knew if the ESA had any teeth.

"TU's fight over Tellico produced a major development in the law's interpretation," he says. "Unfortunately, as the action of the Tennessee politicians also showed, implementation of the law would be controversial, and the political meddling would continue for decades."

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Healing the

TU's Home Rivers Initiative Takes on the Upper Connecticut River

Scars

At first glance, Indian Stream looks like ideal habitat for native brook trout—a mid-sized, high-country creek near the headwaters of the Connecticut River, flowing freely over rocky riffles below wooded hills. But Joe Norton, who coordinates Trout Unlimited's Upper Connecticut Home Rivers Initiative, sees something amiss. "I'd expect to see more mature trees," he says, pointing upstream. "And I'd expect to see them closer to the river." He also notes that it's an unusually straight reach of river.

Norton is looking out upon the vestiges of intensive logging from more than a century ago. Loggers straightened the stream, cleared the banks, and dynamited instream boulders, all in order to better move lumber to saw mills downriver. They built splash dams on tributaries to store water and then released the water all at once. In a massive surge of water, downriver went the season's log harvest, scouring the banks and streambed as it went.

A hundred years later, the stream still bears the scars. There's a dearth of trout cover—instream logs and boulders—and few pools. And while Indian Stream is slowly recovering, the process will take centuries. "It will happen," Norton says. "But on its own, it would take 200 to 300 years." Due to that fact, the first focus of the Home Rivers Initiative project will be to improve the stream's brook trout habitat.

NEW HAMPSHIRE HISTORICAL SOCIETY

Like TU's other Home Rivers projects, the upper Connecticut initiative is huge in scale—700 square miles, including 18 Connecticut River tributaries in New Hampshire and Vermont. The range extends from the Lake Francis dam below New Hampshire's Connecticut Lakes, down to the Nulhegan River, a large tributary draining Vermont's Nulhegan Basin, to the mouth of the Upper Ammonoosuc River.

The region's rich and varied history is written on the land and waters. Roughly 11,000 years ago, as the glaciers that scoured the granite hilltops receded, American Indians chased caribou through these hills. In the centuries that followed, the Connecticut River dumped fertile, boulder-free soil in deep deposits along its floodplain, while the hills grew thick stands of timber.

Farmers settled the area in the early 1800s, building the scenic white churches and red barns that today dot the countryside. Tired of jurisdictional battles between the United States and Canada, settlers even briefly established their own country here—The Republic of Indian Stream. In the late-1800s, nearly every stick of timber came off the hills and was floated to downriver mills in Massachusetts. Later came a hydropower dam spanning the Connecticut River at Canaan, Vt., creating a barrier to fish passage. And later yet, as the forests came back, modern logging and its system of roads and culverts further altered the landscape, and in many cases ended up further blocking fish migration.

Today, the environmental problems associated with the development that occurred over the past two centuries in the upper Connecticut River watershed are widespread. So much so that the restoration efforts associated with the Home Rivers Initiative will be watershed-based, diverse and broad in range. They will include projects such as replacing culverts that block fish passage, stabilizing stream banks and planting trees with the assistance of local TU volunteers and other community organizations, recreating instream pools and riffles lost by many years of damage, and introducing woody habitat to help support both fish and the insects trout need to survive.

Norton's roots are in New Hampshire, which makes him well-suited for this monumental task. After growing up there, he studied fisheries at the University of Montana and later worked as a biologist for Idaho Fish and Game. Now he works out of a one-room office over a pizza parlor in Lancaster and spends many of his days rattling over dirt roads in his pickup, visiting farms and woodlands and looking for ways to improve the region's trout waters.

On one such day, on the road from Lancaster to Indian Stream, Norton stops by a farm with an over-grazed bank eroding into the Connecticut River. He points out a new fence, and some freshly planted saplings at water's edge. This is one of several sites where he has mustered volunteers from TU and a local youth group to stabilize river banks by planting riparian buffers, using native plants like red osier dogwood and silver maple. "You can't stop erosion," he says, "but you can slow it down."

While the big river and its big fish attract the majority of anglers, most of the native trout are in the small tributaries.

One of the areas the initiative encompasses is a reach of the Connecticut where the river morphs from a large but wadeable stream to a deep, pushy piece of water best fished from a canoe or drift boat. Its flows and temperatures moderated by dams, this stretch of river is cool enough to support trout. Lawton Weber, a Vermont fishing guide and a member of TU's MadDog Chapter, owns property on the river near the mouth of the Nulhegan

JEREMIE HOLLMAN

JIM YUSKAVITCH

River. Weber says he and his clients catch wild and stocked brook, brown and rainbow trout in the Connecticut River. The State of New Hampshire, which manages the waters of the border river, stocks the river.

Weber says seeing wild brookies in such a large river in the East is particularly rewarding. "You're going to find wild trout in that reach of the Connecticut anywhere there is a cold-water spawning tributary nearby," says Weber. He is amazed that you can still catch wild trout in a big New England river, and that it remains uncrowded. "It truly is an incredible fishery, especially in the 21st century in New England, six hours from New York, and four and a half hours from Boston," says Weber. "It's pretty remarkable."

While the big river and its big fish attract the majority of anglers, most of the native trout are in the small tributaries. Jud Kratzer, a biologist with the Vermont Fish & Wildlife Department, surveyed many small creeks on the Vermont side of the river last year. "Pretty much every little brook and trickle seems to have brook trout in it," he says. Kratzer notes that the upper Connecticut region stands out as a big green swath of intact habitat in the trout distribution maps created by the Eastern Brook Trout Joint Venture.

Steve Perry, chief of the Inland Fisheries Division of the New Hampshire Fish and Game Department, serves as chair of the Eastern Brook Trout Joint Venture steering committee. He says protecting and enhancing existing brook trout populations like those in the upper Connecticut region is cheaper and more efficient than restoring those already diminished or extirpated. "We are trying to build from strength," says Perry. "One of the higher priorities is protecting the best of the best."

The upper Connecticut is not just an important area to focus on because brook trout still thrive there, it is

Protecting and enhancing existing brook trout populations like those in the upper Connecticut region is cheaper and more efficient than restoring those already diminished or extirpated.

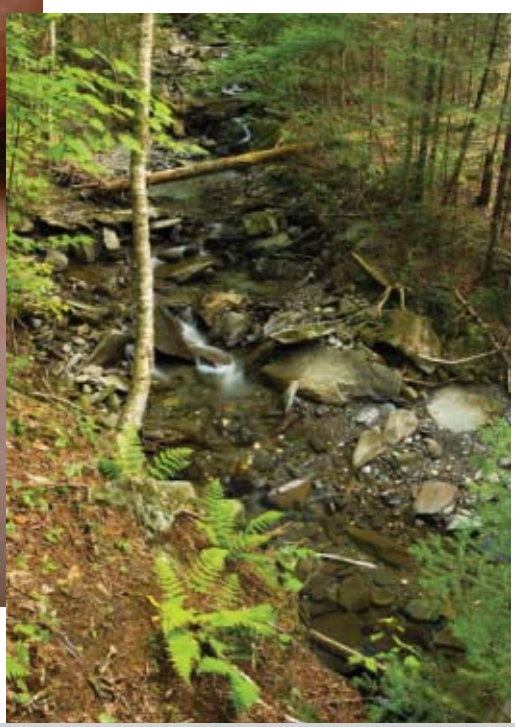
also an area that faces relatively few development pressures. Thousands of acres of timberland have been protected by a series of ambitious conservation deals. A public-private partnership has conserved 170,000 acres around Indian Stream; and several other agreements protected 130,000 acres in the Nulhegan Basin. And on the valley floor, the Forest Society of New Hampshire recently purchased 2,200 acres near Pittsburg, including five miles of Connecticut River frontage near its confluence with Indian Stream.

In Indian Stream, habitat restoration will likely involve placing logs or clusters of boulders in the water to provide trout cover and restore the stream's original riffle-and-pool character. But first TU is seeking a geomorphic assessment, to better understand the stream's natural flow patterns. They have also deployed a dozen digital data loggers, which tally water temperatures in the stream and its tributaries.

A few miles upstream on Indian Stream, Norton points out a series of "perched" culverts, their downstream drops insurmountable to fish. A recent habitat assessment of tributaries in the project area found that more than half of 77 culverts surveyed were definite or probable barriers to fish passage.

In order to fully restore the brook trout populations in the mainstem Connecticut and its tributaries, it is critical to reconnect the tributaries that were "amputated" by culverts. This would allow free passage for brook trout between the river and its tributaries, as they seek comfortable temperatures and spawning habitat. Throughout the watershed, culverts are the proverbial "low hanging fruit"—they present the greatest opportunity for habitat restoration.

The "to do" list for the Upper Connecticut Home Rivers Initiative is long, but the enthusiasm of Norton and local volunteers is unflagging due largely to the potential the project has for returning the region's streams and rivers back to their natural state. And while the rewards of that work will be years in the making, occasionally the rivers provide a glimpse of what will be at the end of that hard work. Standing above a pool on a small Indian Stream tributary, assessing an undersized culvert, a brook trout catches Norton's eye. He watches intently, and, again it rises. "There, did you see him take? It's a little brook trout," he says.



FAR LEFT: SEAN SMITH. LEFT: WASHBURN/ECOPHOTOGRAPHY. RIGHT: SEAN SMITH

Fishing TU's Home Waters:
Upper Connecticut River

BY ANGUS BOEZEMAN

The upper Connecticut River is one of the jewels of the Great North Woods. Starting at the Third Connecticut Lake in Pittsburg, N.H., near the Quebec-Canadian border, and emptying into the Long Island Sound in Old Saybrook, Conn., it is the longest river in New England. Trout and salmon fishing stretches from North Stratford, N.H., northward to Pittsburg, N.H.

Trout fishing on the Connecticut River begins in the area at the outlet of the Third Connecticut Lake where there are many native brook trout in the six to eight-inch range and little fishing pressure due to difficult access and wading. But most fly fishing occurs below the Second Connecticut Lake dam, which is mostly pocket water with a healthy population of brook trout and landlocked salmon. It is catch-and-release only from the dam to Magalloway Road Bridge. Downstream from Magalloway Road Bridge to the inlet of the First Connecticut Lake is a very popular spot for landlocked salmon, which are generally active from "ice-out" to the end of May, and again from September to the end of the season.

In the spring, the landlockeds follow the smelt up the river and the fly patterns of choice tend to be the traditional New England streamer patterns—Gray Ghost and Black Ghost, as well as other streamers. As the water temperature warms and the first insects appear, dry fly and nymph fishing will produce landlockeds in the 15 to 18-inch range. In the fall, salmon will return back to the river to spawn. Like the magnificent colors of the fall foliage in the Great North Woods, this time of year the salmon are attracted to streamers of more vibrant colors of red, orange and yellow.

The section between the First Connecticut Lake and Lake Francis is the most popular spot on the upper Connecticut River. Known as the Trophy Stretch, it features three miles of pocket, riffle and pool water. Here it is possible to catch several species of trout—brook, rainbow and brown—as well as landlocked salmon, in a day. This section has special size regulations in place, including a two-fish limit; although most anglers practice catch-and-release. Even though this section is stocked, fish do migrate from Lake Francis in the spring and fall. Being a bottom-release tailwater fishery, the water flows and temperature stay generally constant all season, and with prolific hatches throughout the summer months, many of the lake fish remain in the river for the season.

Common hatches on the river include blue-winged olives, hendricksons, light cahills, sulphurs and the occasional yellow drake. Caddis flies, along with large stoneflies and yellow and lime sallies, are also good hatches to imitate. Though New England does not get the well-known stonefly hatches of the West, if you drop a big black stonefly behind a boulder in pocket water you may be pleasantly surprised.

The upper Connecticut River also has some great fishing for anglers who do not fly fish. The stretch of water below Lake Francis to Washburn Family Forest has general regulation fishing rules in place that can be enjoyed by all. This section holds some very nice brown trout, including some that are record-size. Visit fishnh.com for more information.

From West Stewartstown to North Stratford, the Connecticut becomes more of a meandering river, with limited access because much of the surrounding land is private farmland. However, there are some access points for those who prefer to canoe or kayak. There are also some great guides who specialize in float trips along the lower stretches of the river. In the summer evenings these stretches make for excellent dry fly fishing.

The final fly-fishing and single hook artificial lure only section of the Connecticut River starts at Lyman Falls Dam—the river's first designated catch-and-release only section—and continues down to the bridge in the town of North Stratford. This section offers anglers the opportunity to catch brook, rainbow and brown trout, along with some very nice holdover fish.

From the pools of the Trophy Stretch to jumping landlocked salmon, the upper Connecticut River offers exciting and diverse fishing options for all anglers, and ongoing restoration projects will make it even better.

Angus Boezeman is a longtime TU member and upper Connecticut River guide.

ut of Sight but not Out of Mind:

Why Culverts Wreak Havoc on Trout Streams

BY SUSAN Q. STRANAHAN

JIM YUSKAVITCH

In the Nash Stream State Forest in northern New Hampshire, Jim MacCartney is standing alongside Pike Brook where, until a few days ago, fish headed upstream faced an insurmountable obstacle: a cast-off industrial boiler that had been converted into a culvert. Now, the 30-foot-long iron boiler, which had a metal plate across its upstream end, is gone. In its place flows a naturally contoured stretch of water, again accessible to brook trout, black-nosed dace, slimy sculpin and even juvenile Atlantic salmon.

Once, Nash Stream was a renowned, high-quality native trout stream. But more than a century of logging, construction of logging roads and impoundments, and a devastating dam breach in 1969 took their toll. Although tributaries like Pine Brook remained healthy, native species had only limited access because of man-made obstacles.

In 1988, New Hampshire acquired the Nash Stream Forest, part of a 44-square-mile watershed in the upper Connecticut River basin. Work began on a management plan which gave a high priority to sustaining wild populations of indigenous fish and enhancing and protecting stream habitat.

For MacCartney, a TU river restoration specialist based in Concord, N.H., the Nash Stream project has a lot of plusses. "This is state-owned land so the legacy of improvements will be here for generations to come," he explains, not undone by future development. The state's commitment to restoring and protecting the fishery, while also continuing to log was another, as was the stream's rich angling history. "TU was only too glad to say we'd help."

A key component of the restoration is removal of culverts that impede fish passage into tributaries like Pike Brook. In that regard, the Nash Stream watershed is no different than thousands of waterways around the United States. Poorly designed culverts—built to carry traffic but not fish—cut off native species from their habitat. Mark Hudy, an aquatic ecologist with the U.S. Forest Service, estimates there are hundreds of thousands of culverts blocking fish passage in the United States. (More than 50,000 exist within eastern national forest lands alone, according to one estimate.)

"Once, when everyone thought fish passage, they thought dams and salmon or shad," says Hudy, who also teaches at James Madison University in Virginia. But non-anadromous species also require unfettered movement. "You need connectivity 24/7, 365 days a year. Fish need to feed, to avoid oil spills, to find cooler water. There are all sorts of movement needs."

Culverts can act as barriers to that movement in a variety of ways. They can sit or "perch" above stream level, requiring fish to jump large heights; they can speed up water velocity making

RIGHT: JIM YUSKAVITCH TOP: HANNAH MOULTON BELEC

it impossible for fish to swim against the current; they can be too shallow for passage, or too turbulent, and they can provide no resting areas where fish can recover from exhaustion in their upstream passage. The most common type of culvert—a circular, corrugated metal pipe—tends to be the worst design, according to Seth Coffman, who has studied fish movement and now serves as TU's Shenandoah Headwaters Home River coordinator.

Even as knowledge is growing, a lot remains to be discovered. "Fish passage is as much of an art as it is a science," says Steve Moyer, TU's vice president for government affairs.

But the good news is that fisheries biologists, road engineers, geomorphologists, land-use planners and government funders are now talking to each other. Learning from each other is now becoming a priority. "This is one of these issues that has caught fire in the last five years, especially on the East Coast" says Moyer.

Earlier this year, a coalition of conservation organizations urged members of Congress to factor in wildlife and water quality needs when drafting the massive transportation reauthorization bill, a five-year funding package. Coalition members, including TU, asked that transportation planning from the outset include the best scientific information on fish, wildlife and native plant habitats. "Long-term, that's one of the most important considerations, instead of being factored in at the end," says Moyer.

From a dollar-and-cents standpoint, culvert removal makes sense. "It might take 15 or 20 years to restore habitat where there are no trout," says Moyer. "But, elsewhere, one well-designed culvert and boom, it's open."

But a lot of advance work goes into a project before the bulldozers arrive. Just ask MacCartney. At the Pike Brook site, planning took two years; actual stream restoration, two days. Fundamental questions first need to be answered: Should the culvert be replaced, or can the entire roadway be retired? How do you protect against incursions by non-native species? What culvert designs work and which ones don't?

To make his point, MacCartney heads downstream to nearby Johnson Brook. Spanning that stream is a new green iron bridge that replaced two iron rollers from a lumber mill that had served as culverts. A two-foot drop at the downstream end made the culverts impassable. Just how the fish will take to the new bridge, with its wide, natural streambed, is being tracked. Fish monitoring data was gathered before the installation and will continue now that the bridge in place.

"Now we'll be able to know how many of the smaller brook trout can make it up," says MacCartney.

His final stop was another new culvert replacement. (There are 15 total projects in the Nash Stream State Forest "that we have our eyes on," says MacCartney.) This one did not prove to be either an ideal design or an easy installation. It is a 22-foot wide aluminum arch culvert, in essence, a curved road culvert with a flat aluminum base buried under two and a half feet of cobble and natural stream bottom. "I'm not sure we'll use this design again," says MacCartney.

"If this washes out, we're left with an aluminum box as a streambed," he explains. "But at Johnson Brook, it can erode until kingdom come and you'll still have natural material [under the bridge]."

While MacCartney isn't necessarily pleased with the results here due to the fact that the culvert was difficult to install and the streambed has the potential to erode out, tracking devices up and downstream are sending back good information. "As soon as we got this in place, the fish moved through it immediately."

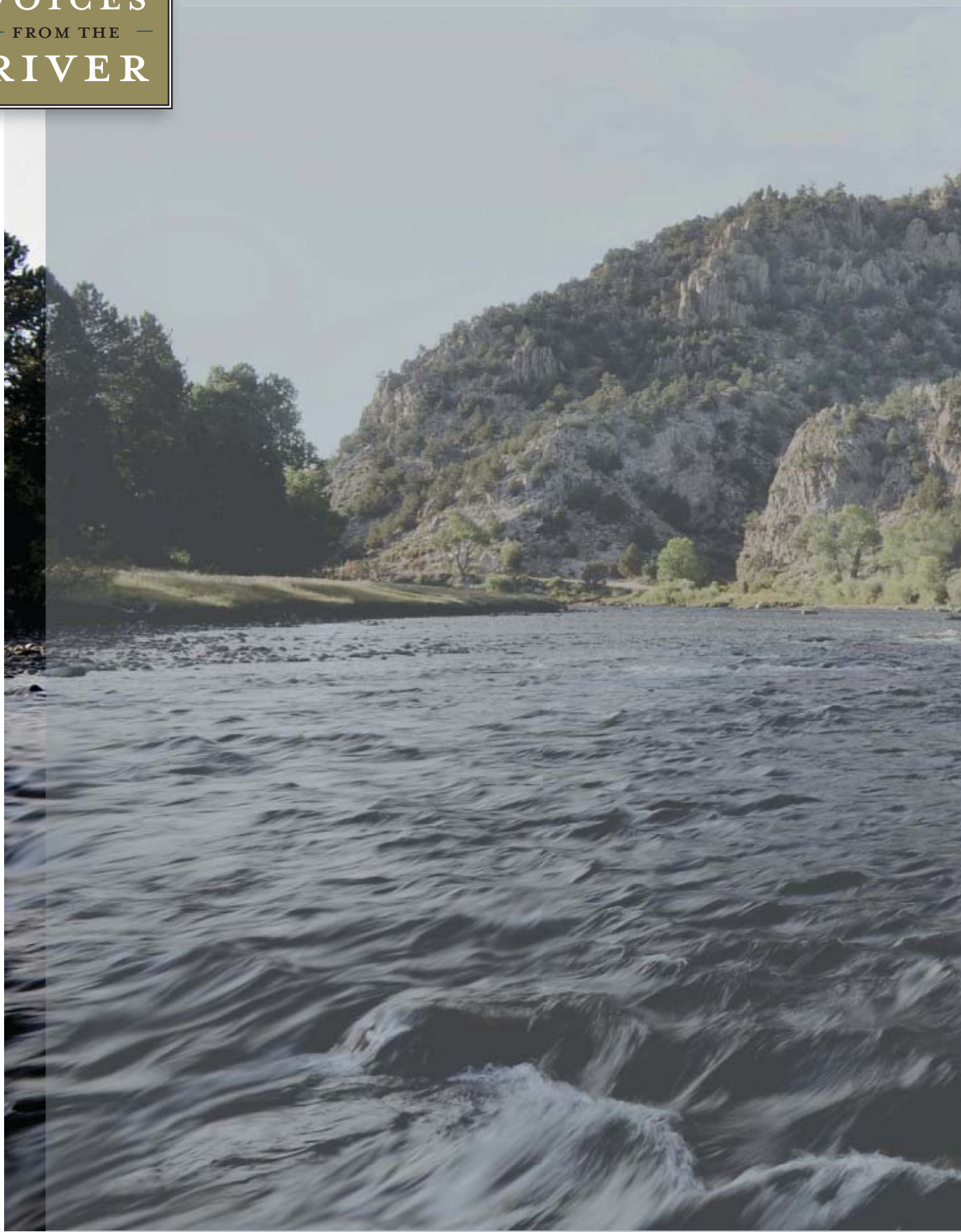
From a dollar-and-cents standpoint, culvert removal makes sense.

Visit TU.ORG/BLOG *to see a video illustrating how culverts can make passage difficult or impossible for fish.*

TU and partners opened up four miles of habitat in Oregon's Circle Creek by replacing a circular culvert (left) with a bottomless arch (right), allowing water to scour a natural course.

RIGHT: JIM YUSKAVITCH

VOICES FROM THE RIVER



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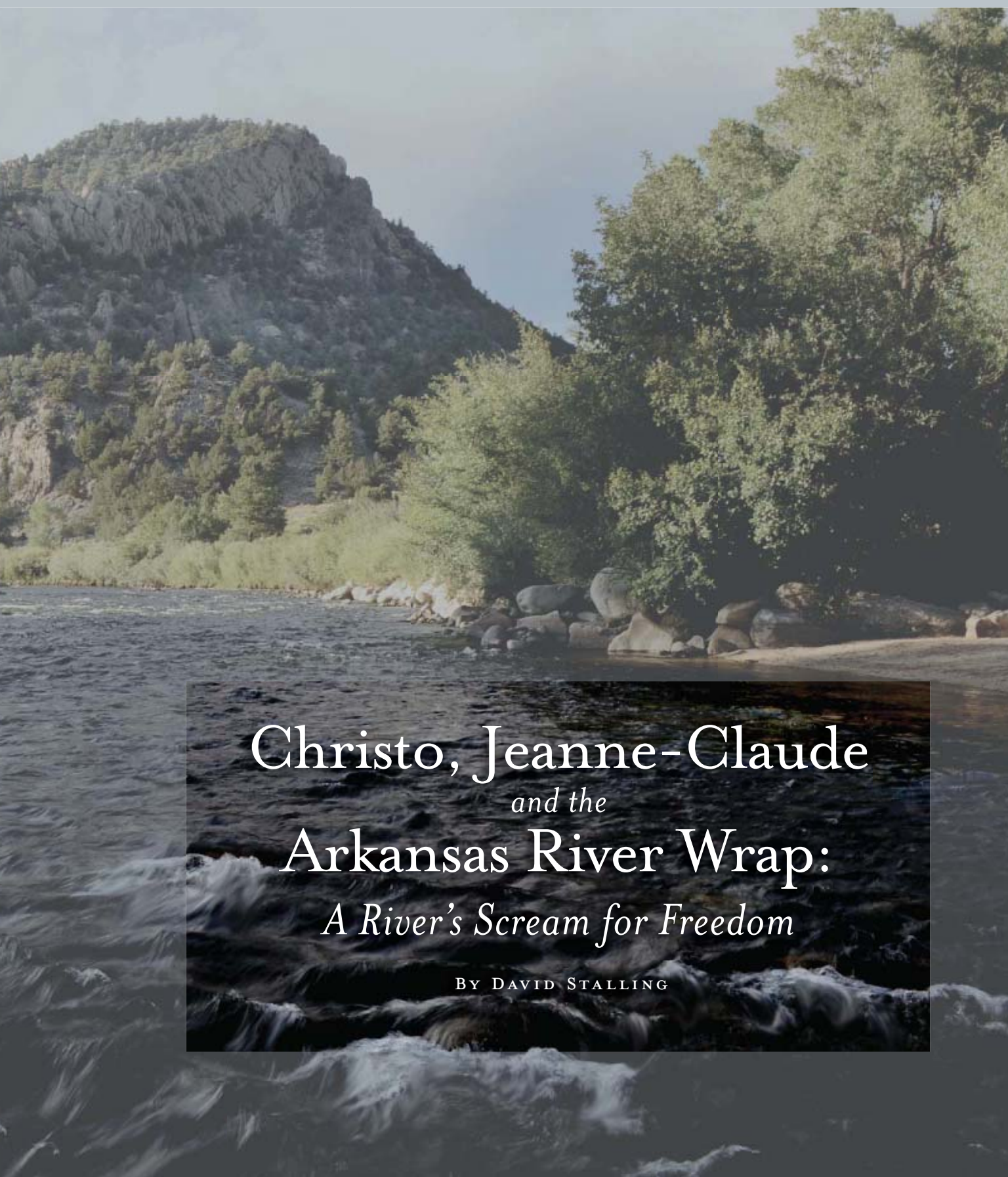

Christo, Jeanne-Claude *and the* Arkansas River Wrap: *A River's Scream for Freedom*

By David Stalling

Christo and Jeanne-Claude have been

literally wrapping things up for more than 50 years. They started off small, in 1958, with a dumpster-sized, black-glob of a package wrapped in fabric, lacquer and rope. By the mid-1960s they were wrapping up fountains and towers in Italy. Then they began wrapping up nature, covering cliffs, rocks and beach along the coast of Australia with erosion-control fabric. In 1972 they ventured to Colorado, and hung a 1,250-foot orange, nylon curtain across a valley in the Grand Hogback mountains. It looked like a giant dam.

In the 1970s and 80s, they created a 24-mile fence of white nylon hung from steel cables across the hills near San Francisco and surrounded 11 islands with pink, floating fabric off the coast of Florida. Then, in 2005 in the Big Apple, they hung 7,502 panels of saffron-colored fabric across the gates of Central Park. From the high vantage of a skyscraper, it looked like a flowing golden river of flags blowing in the breeze. Or laundry hung out to dry.

Now they want to cover a river—a 40-mile stretch of the Arkansas River between Salida and Canon City in south-central Colorado—with silvery, luminous fabric suspended from steel cables anchored into the river banks.

A few weeks after moving from Montana to Washington, D.C., I received an invite to Christo and Jeanne-Claude's exhibit at The Phillips Collection entitled "Over the River: A Work in Progress." It was a pleasant, relaxed gathering with white wine only (lest you spill red on the samples of translucent fabric on display). We were the "first to survey the artists' preparations for their next widely anticipated work of art."

Below: Visitors to New York's Central Park in 2005 could walk through Christo and Jeanne-Claude's "The Gates" exhibit.

Right: The artists are still in the planning phases for "Over the River," the proposed Arkansas River fabric-wrap.

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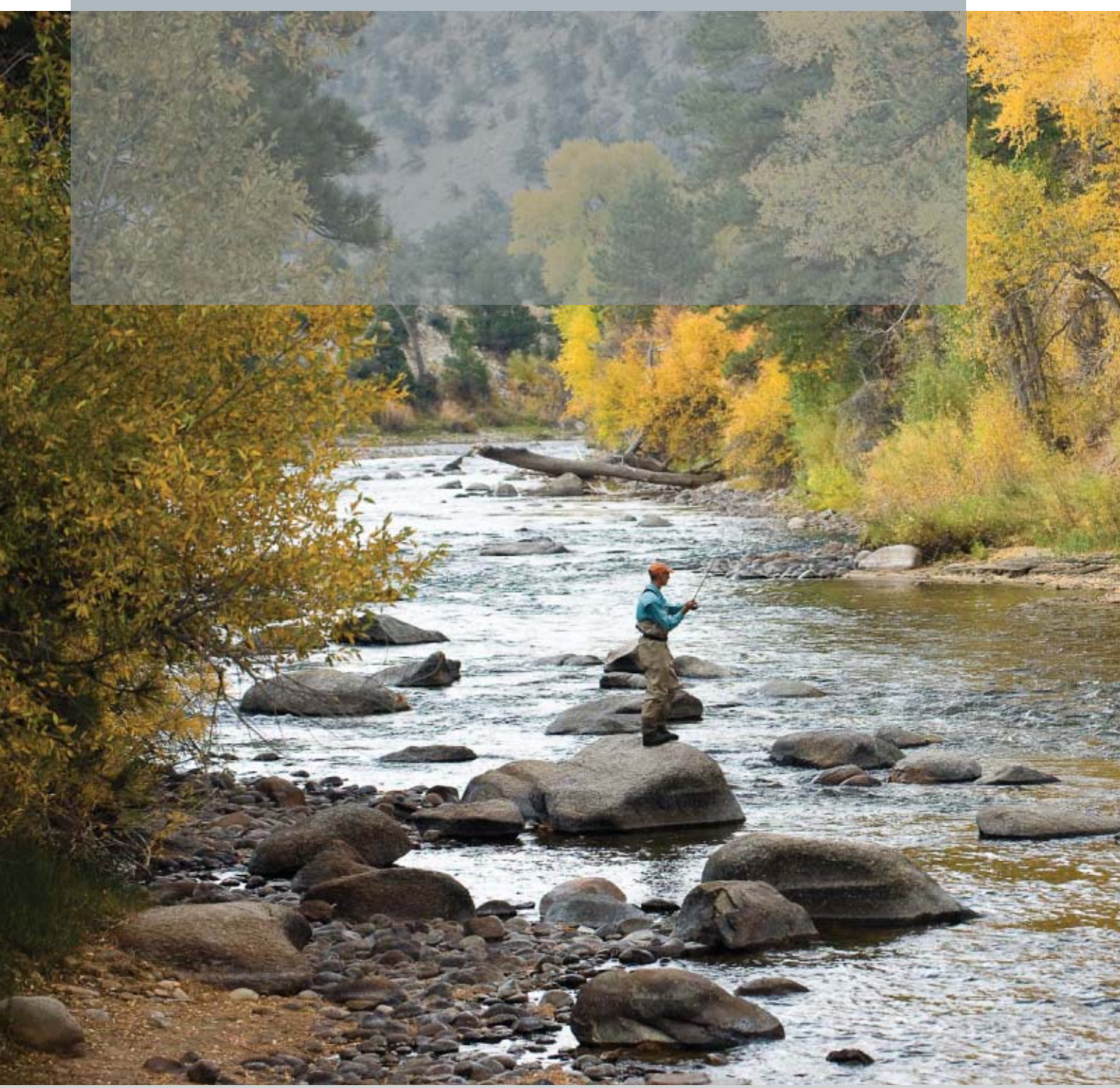
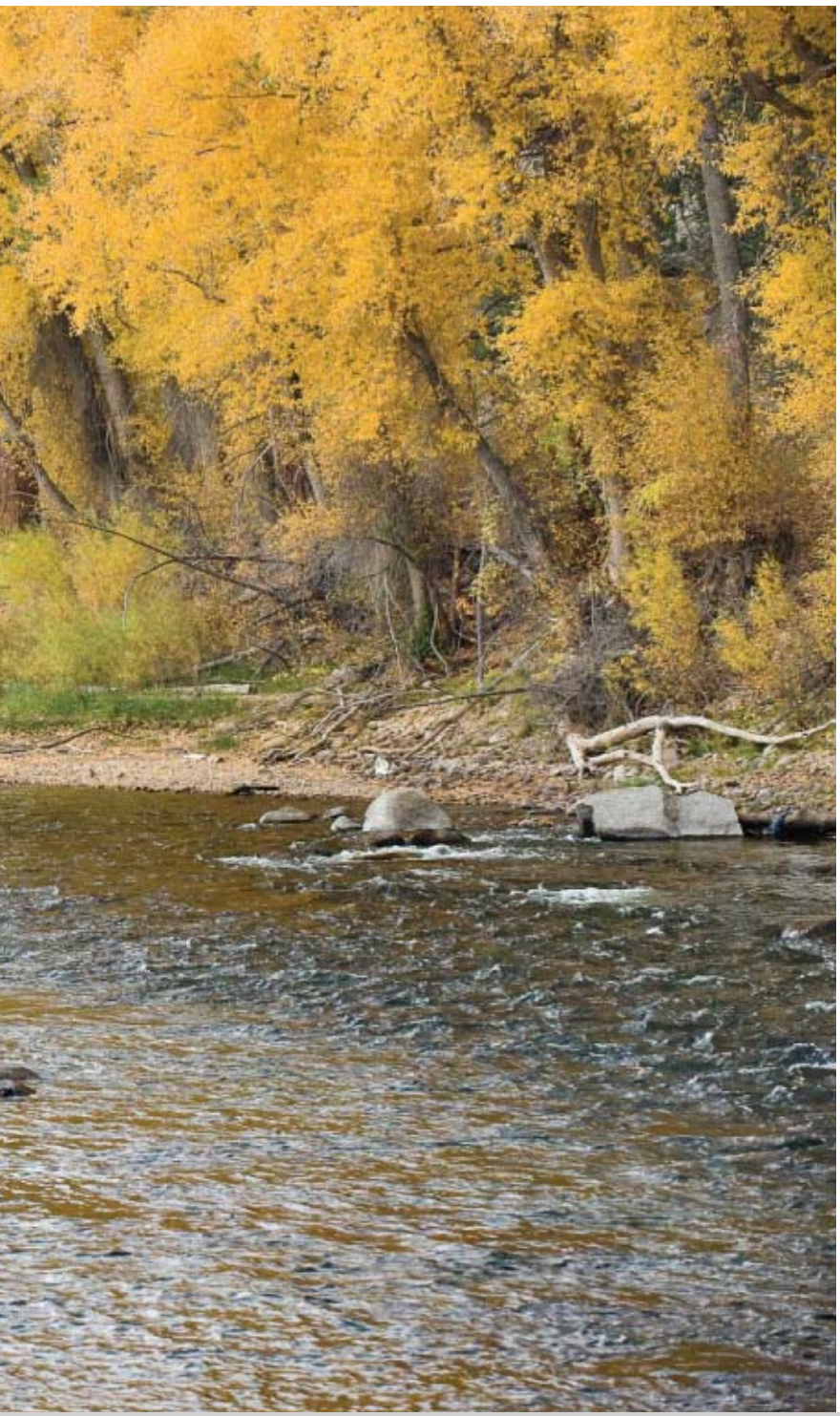
We will need plenty of carbon dioxide-emitting fossil fuels to power planes, cars and SUVs for the 560,000 people Christo and Jeanne-Claude estimate will flock to the area to view their work.



I forgot my glasses, and so had to squint to see the collages, conceptual drawings, photographs, technical diagrams, maps, writings, sample fabric panels and cables hanging on the walls and set up on the wooden floors. Christo and Jeanne-Claude haven't started the actual installation of the fabric yet, as they await completion of an environmental impact statement and approval from the Bureau of Land Management.

If the agency treated this proposal as carelessly and hastily as they allow coal-bed methane wells, roads, power lines and pipelines to permeate and scar our public lands, Christo and Jeanne-Claude could have proceeded long ago. But this is art; hardly worthy of the same attention and "priority status" given to the extractive industry. Then again, we will need plenty of carbon dioxide-emitting fossil fuels to power planes, cars and SUVs for the 560,000 people Christo and Jeanne-Claude estimate will flock to the area to view their work.



MARK LANCE

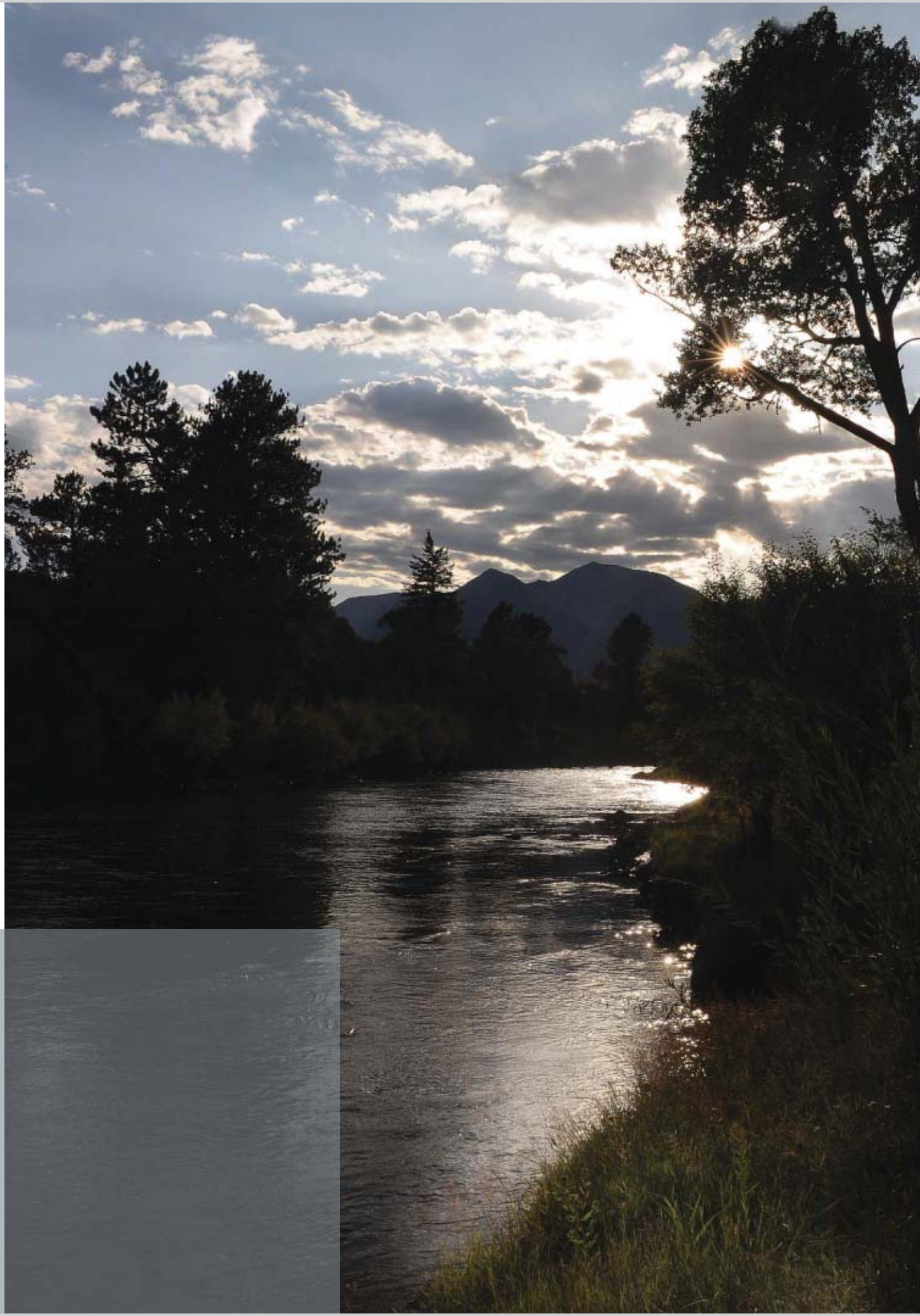
Modern art: creative, inspiring, lucrative. Like everyone working to persuade anyone of most anything nowadays—particularly Westerners in struggling rural communities—Christo and Jeanne-Claude present an alluring economic case. On their website, here's how they put it:

"Many visitors will spend the night in areas surrounding the Arkansas Valley, bringing economic benefits to many communities. The total number of visitors represents slightly more than twice the number of persons who raft the Arkansas River in any given year. Three out of five visitors are anticipated to come from out of state, spending an average of 4-5 days in Colorado for their trip…In total, Colorado may garner more than $195 million in new direct visitor spending."

Which explains why nearly every chamber of commerce and visitors bureau in the area has endorsed the project. As have cultural centers, who are pleased to have the well-known duo back in their part of the world.

Christo and Jeanne-Claude met in Paris in 1958. They've been collaborating ever since. Their art is creative, inspiring, and has been described as "transcending the traditional boundaries of art, profoundly shaping the way in which we see and experience our environment." Jeanne-Claude describes their art as "works of joy and beauty," but is reluctant to classify it. "Christo and I believe that labels are important, but for bottles of wine, not for artists, and we don't like to put a label on our art," she said in a 2005 interview. "If one is absolutely necessary, then it would be environmental artists because we work in both the rural and the urban environment." To which Christo added, "Our work is a scream of freedom."

Christo and Jeanne-Claude seem smart, bold, feisty, energetic, ambi-



AL NORAKER

tious, genuine, sincere and nice, if not a tad quirky. I recently read about an interview in which Jeanne-Claude told a photographer, "You're too close. We are 73, and I don't want to be seen from so close. Then, I look like a fish."

There are fish in the Arkansas. Brown trout and rainbows, thriving in the cool, clear waters of the upper portion that meanders through Colorado. Originating from snowmelt in the Sawatch Mountains near Leadville, the Arkansas River is the sixth longest river in the country, flowing 1,469 miles through Colorado, Kansas, Oklahoma and Arkansas before merging into the Mississippi. Like most rivers, unfortunately, much of the Arkansas has been tamed, altered, defiled and otherwise subjugated to human greed, needs and desires—the usual sad assortment of environmental ailments including dams, mining waste, erosion, sedimentation and artificial introduction of non-native species. But parts of the river, in the headwaters in Colorado, remain wild—a torrent of water cascading through and over and down ledges and narrow canyons in a series of waterfalls, rapids, riffles, pools and eddies. Spend enough time in or around wild rivers and you learn they are living, breathing entities in themselves, with their own distinct sense of smell, sound, taste and feel. Beauty and joy, indeed! Wild rivers, too, are a scream for freedom.

Needless to say I felt a bit uneasy at The Phillips Collection exhibit. I was selfishly, provincially relieved that Christo and Jeanne-Claude did not choose any of my favorite rivers in Montana during their 5,000-mile quest for the "right one." I read the artists' vision of "waves of fabric…playing off the natural lighting throughout the day, transitioning from shimmering pink in the morning light, to shiny silver in the mid-day sun, to golden as the sun sets." And their statement that "From the water level, rafters, kayakers and canoeists on the Arkansas River will view blue sky, white cloud formations and the undulating mountain skyline through the fabric." I wondered: Have they ever just sat along the bank of a wild river in solitude at sunrise or sunset or times in-between? Can such things be improved? Is this like altering the "Mona Lisa" to better fit one's own notion of beauty? Plastic surgery for Mother Nature?

"There's a sense that this kind of '70s-era 'environmental art' has more links to heavy industry—to old-fashioned well-drilling and dam-building—or to industrial-scale tourism than to some more recent art that's been made with genuine ecological feeling," wrote Blake Gopnik in *The Washington Post*.

Indeed. Even the artists' response to concerns seems cut-and-pasted from a gas and oil industry PR template: "Christo and Jeanne-Claude have a proven track record of avoiding and mitigating impacts associated with their works of art…Christo and Jeanne-Claude view wildlife as one of the valley's greatest resources and are

Have they ever just sat along the bank of a wild river in solitude at sunrise or sunset or times in-between? Can such things be improved? Is this like altering the "Mona Lisa" to better fit one's own notion of beauty? Plastic surgery for Mother Nature?

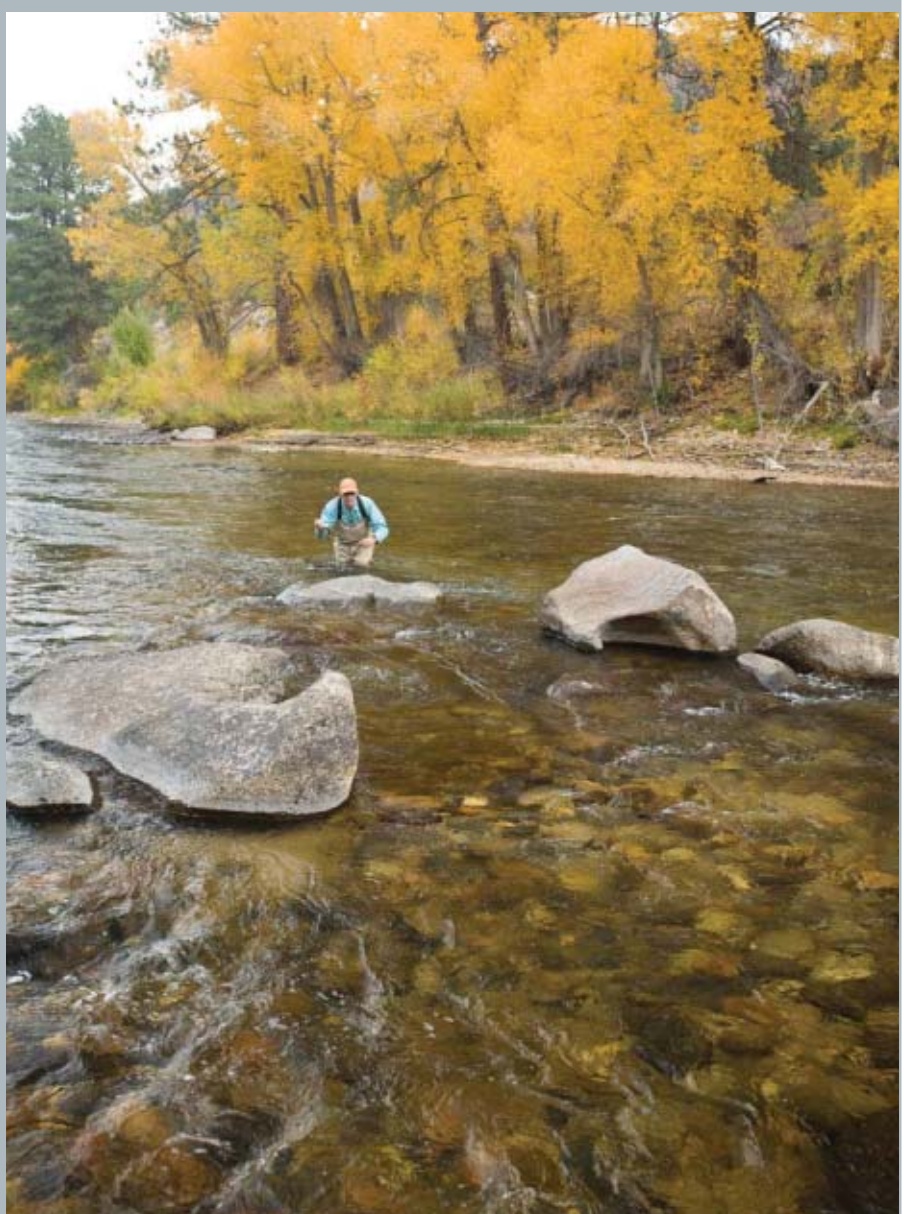
committed to ensuring that installation and viewing activities do not disturb wildlife…Christo and Jeanne-Claude understand the importance of the fishing and rafting industries to the Arkansas River Valley and are committed to working with them in the planning and execution of the temporary work of art." And so on. Regarding the hefty environmental impact statement that will be released, Jeanne-Claude noted in an interview that: "…some of those who are against would say, 'Ah, you forgot about the butterflies, what about those butterflies?' Then the engineers who have prepared it will answer, 'If you look at page 257, you will see that we are talking about the butterflies.' That's just an example. If we have indeed forgotten something, which might happen, since this is only a draft there is time to correct it and say that no alligator will be endangered, for instance. [laughs]"

Ah, you forgot the inherent, intrinsic value of the free, wild river itself. If someone proposed temporarily wrapping my beautiful, 8-year-old son up in translucent saffron plastic, so the light made his hair look more golden—even if "mitigated" with a few breathing holes to ensure his safety—I would not be pleased. I feel that strongly about wild rivers. Like any love, like good art, it's difficult to grasp, never mind explain. But I tried, when asked, at the Phillips exhibit, to explain my hesitation to endorse the project. My thoughts were met with apparent looks of amusement, giving me a distinct feeling they were thinking, "this guy just doesn't get it." Maybe I don't. But even after reviewing instructions in the "How To Read The Works" section of Christo and Jeanne-Claude's website, I still don't quite get it. Yet I think a purpose, the value, of good art is to evoke thought and discussion, to help bring out emotions and passion. In that regard, I commend Christo and Jeanne-Claude for their inspiring work.

I've spent a lot of time alone in remote places, listening to the ancient songs and stories of wild rivers running over rock on tumultuous journeys from snowmelt toward oceans; bathing in the clear, cool waters; watching the various lights and shadows dance across the surface; seeing, smelling, tasting and watching through ice and snow, thunderstorms and floods, clouds and sun, and shining under stars and moon. Wild rivers are the greatest art of all, growing ever scarcer. Beauty and joy, they scream for freedom; we should let them have it.

Learn more about the "Over the River" project at TU.ORG/BLOG*, or see Christo and Jeanne-Claude's website at christojeanneclaude.net.*

Wild rivers are the greatest art of all, growing ever scarcer. Beauty and joy, they scream for freedom; we should let them have it.



MARK LANCE

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Restoration Breathes Life Back into Flat Creek

WYOMING

Old timers in the Jackson, Wyo. area remember a time when Flat Creek was a healthy fishery filled with native Snake River fine-spotted cutthroat. But as growth in and around Jackson exploded in recent years, with the town becoming one of the West's more popular tourist destinations and a winter and summer playground, the stream took the brunt of the development.

Not that that was anything new for Flat Creek. The stream had been previously channelized to accommodate for growth in Jackson's historic downtown. Sediment has been degrading Flat Creek's habitat since the failure of an irrigation head gate deposited a heavy layer of silt. More recently, streets and parking lots added to the problem as sediment, storm water discharge and road sand—laid down to make driving easier in the winter—poured into Flat Creek, adversely affecting water quality and stream habitat.

The result was that the creek, especially the three and a half miles running through the town of Jackson, had become wide and shallow and largely void of its natural runs and pools. Populations of resident native trout, as well as spawners from the Snake River, suffered. In the winter, anchor ice would form on the creek's bottom, threatening trout and causing flooding in the town of Jackson. The waters were so imperiled that the Wyoming Department of Environmental Quality placed the stream on its threatened waters list.

In an attempt to restore the creek's natural character, the Flat Creek restoration project was conceived—a cooperative effort among the Town of Jackson, TU's Jackson Hole Chapter, the Teton Conservation District, Wyoming Game and Fish Department, the Jackson Hole One Fly Foundation and Tom Wesche of Habitech, Inc. The project embarked on an aggressive four-phase restoration effort beginning in 2004.

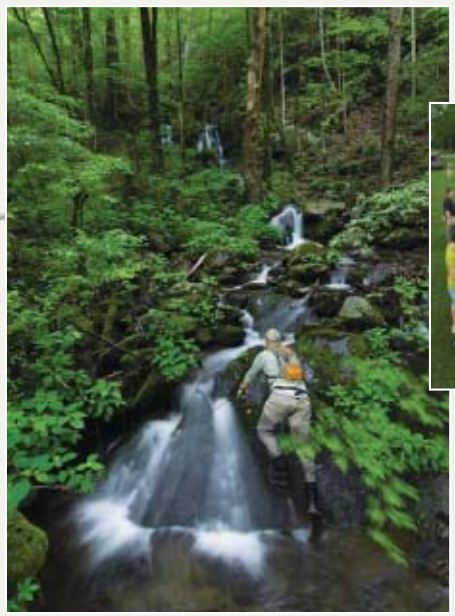
"This was not just a Band-Aid approach," says Phil Cameron, board president of the Jackson Hole TU Chapter, "The goal of this project was to improve habitat, reduce anchor and frazil ice, and allow the creek to reach its ecological potential."

TU volunteers, partners and contractors used logs and boulders to build structures intended to restore habitat variability and maintain bank stability.

The restoration efforts have already started to produce results. Wyoming Game and Fish population surveys have shown an increase in fish populations and the number of spawning redds. "It's very gratifying to see a collaborative effort by a diverse group of stakeholders produce such positive results for Jackson's cold water fisheries." said Jim Broderick, the chapter's treasurer.

The final phase of the Flat Creek restoration project will include the completion of a storm water wetland that will serve as a filter, capturing run-off and sediment before it reaches the creek.

For more information on the Flat Creek restoration, visit jhtroutunlimited.org



Birthday Bash in the Smokies

TENNESSEE

Anglers have always been integral to the success of the national park movement, and that's certainly the case with local Trout Unlimited chapters' work in the Great Smoky Mountains. In June, the park celebrated its 75th anniversary, commemorating the remarkable fact that this once clear-cut parcel of hills has now returned to a pristine, natural state. Human beings did a lot of damage to the Smokies before the park was established, nearly wiping out the native brook trout in the process. If it weren't for fly anglers—and conservation groups like TU's Little River Chapter—today there might not be any brook trout left at all.

In 2005, largely because of the Little River Chapter's successful brook trout restoration, a 30-year moratorium on brook trout fishing in the Smokies was lifted and anglers were once again allowed to pursue the native trout of these hills. In the years before, clear-cutting and acid rain had eaten away at brook trout habitat, to the point where only a few miles of streams above 3,000 feet could still support these fish. Seeing the need for major restoration, in 2004 the Little River Chapter organized Troutfest—an annual festival celebrating the brook trout angling tradition—to raise

The Little River Chapter's Troutfest raises money for brook trout restoration, like the Lynn Camp Prong project.

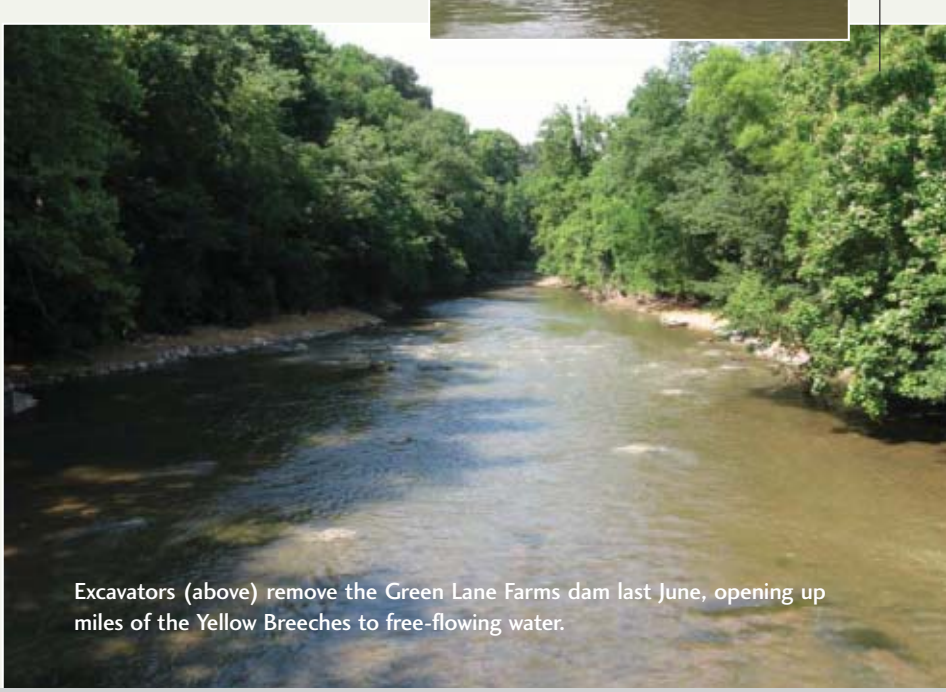
money for restoration work in the Smokies. This year, Troutfest hit new milestones, with more than 3,000 anglers on hand, and more than $30,000 raised for fisheries restoration. Thanks in part to support from the chapter, the U.S. National Park Service has recently reclaimed 17.2 miles of lower-elevation waters for brook trout (all protected by barriers against invasive browns and rainbows). By bringing together live music, great food, free casting competitions and instruction, and with vigorous support from the tackle companies and local communities, the Little River Chapter is making continued restoration possible. Troutfest is held every May at the Townsend Visitors Center in Townsend, Tenn., and next year's event promises to be even bigger. For more information, visit troutfest.org.

—Zach Matthews

Yellow Breeches Free at Last

PENNSYLVANIA

This summer, the Cumberland Valley Chapter oversaw the removal of the second of two low-head decommissioned dams on the Yellow Breeches, restoring flows to several miles of the historical central Pennsylvania trout stream. The two former grist mill dams, constructed at the beginning of the 20th century at Spangler's Mill and Green Lane Farms on the lower Breeches, had outlived their useful lives and for decades



Excavators (above) remove the Green Lane Farms dam last June, opening up miles of the Yellow Breeches to free-flowing water.

TENNESSEE PHOTOS: ZACH MATTHEWS

impounded a large section of the stream causing increased stream temperatures, loss of habitat for trout and aquatic invertebrates, blockage of fish migration, build-up of silt and bank erosion. Grants from the Pennsylvania Department of Environmental Protection and the National Fish and Wildlife Foundation supported the dam removal. Contractors URS Engineering and Gleim Environmental provided the planning, permitting and construction to remove the first dam, Spangler's Mill, in September, 2008; and the second one, Green Lane Farms, in June, 2009. Where, at one time, the impoundments acted as stream obstructions, the Yellow Breeches now flows freely over a newly uncovered gravel bottom with excellent habitat for aquatic life. The final step of the project was the reinforcement of the new bank contours, much of which was completed with re-used material from the dismantled dams. This fall, the Pennsylvania Fish and Boat Commission will plant native vegetation on the banks of the project to further strengthen the habitat for wild trout.

Kokanee Surveys Precede ESA Decision

WASHINGTON

This spring, the Bellevue-Issaquah Chapter finished the first phase of its Lake Sammamish fish tagging project, capturing and releasing over 12 kokanee and 20 cutthroats after tagging them with acoustic transmitters. Populations of native kokanee—landlocked sockeye salmon—have crashed in recent years due to habitat loss and degradation. Former Washington Council President Mark Taylor says tagging will provide periodic data throughout the summer and fall on the movements and habitats of kokanee and other fish in the lake, including small mouth bass, northern pikeminnow and others, to see where and how all of the fish interact and thereby pinpoint the best ways to help restore the native salmon. The tagging project, along with the chapter's fry trapping on Lewis Creek, a tributary to Lake Sammamish, will be made available to agencies, including the U.S. Fish and Wildlife Service, which has yet to make a decision on whether to list kokanee under the Endangered Species Act. The chapter's efforts are among the most extensive surveying work on the kokanee to date. The chapter's sole focus for the past several years has been to bring the populations of the fish back from the abyss, and ESA protection would provide crucial protections and funding. To help fund the surveying and restoration efforts, visit tu-bi.org and Adopt-a-Kokanee.

Landmark Project for Allegheny Coalition

PENNSYLVANIA

Although the region boasts several stretches of Wild and Scenic designated waters, headwater streams in the Allegheny River watershed in Pennsylvania are increasingly showing signs of impairment. Acid rain, oil and gas development and fish barriers are taking their toll on formerly robust populations of native brook trout in the Allegheny

National Forest. Over 2,000 miles of oil and gas access roads now wind through the remotest places of the forest, causing sedimentation of nearby streams and raising water temperatures. Because of the severity of these impacts, a group of like-minded conservation groups, including three Trout Unlimited chapters, the U.S. Forest Service, and state and local agencies have formed the Allegheny Watershed Improvement Needs Coalition. The coalition launched its first projects this spring including the Morrison Run project, which was spearheaded by TU's Cornplanter Chapter. Morrison Run is classified as an Exceptional Value stream, but its brook trout fishery has suffered from unsustainable timber harvests and historical industrial development. Ambitious plans for the project include removing two dams and two other fish barriers, reducing erosion by decommissioning two fords and improving drainage from a forest road. Thus far, volunteers have completed three restoration projects and plans are in place to start on a fourth this fall, in addition to the nine other projects TU and the coalition completed in the Allegheny National Forest in 2009.

Gov. Signs TU-led Bill

WASHINGTON

The Washington Council, led by its Icicle Valley Chapter, spearheaded a successful legislative effort this year to develop a pilot program aimed at reducing hatchery steelhead and salmon impacts on wild fish recovery by allowing carefully monitored fishing, targeting the hatchery fish in specific mixed populations. Previously, state budgetary restrictions and the associated lack of scientific monitoring, data collection, permitting, enforcement and other activities meant that hatchery steelhead and salmon mixing with imperiled wild fish runs received the same protections, often including no fishing. The new program, called the Columbia River Recreational Salmon and Steelhead Pilot Program, uses additional angler fees to fund the monitoring and enforcement necessary to allow anglers to "weed out" the hatchery fish while protecting the wild fish and allowing them to continue on to spawning grounds. The result will be a significant reduction in the problems associated with competition, genetic mixing and reduced fitness that are known to impede wild fish recovery. Sponsored by state Sen. Linda Evans Parlette and signed into law by Gov. Chris Gregoire last May, the program establishes a new account funded primarily through an additional fee of $7.50 that must be paid by any person over the age of 15 who is participating in a recreational salmon or steelhead fishery on the Columbia River or one of its tributaries.

Washington Council representative Ric Abbett (left) was on hand when Gov. Chris Gregoire signed a WATU-spearheaded bill. The legislation establishes funding for scientific monitoring, data collection, permitting, fisheries enforcement and other provisions to boost wild steelhead and salmon fisheries restoration in the Columbia River Basin.

Got Big News from Your Chapter? We want to hear about it.

The Actionline section of ***Trout*** provides a perfect forum for exchanging information and sharing successes. Send us a short item—150 to 300 words—describing your project or event, why it was significant and, if possible, how it might benefit other chapters. Send Actionline submissions, plus photos (slides and snapshots are preferable), to Hannah Moulton Belec at hmoulton@tu.org, 1300 North 17th Street, #500, Arlington, VA., 22209, (703) 284-9422.

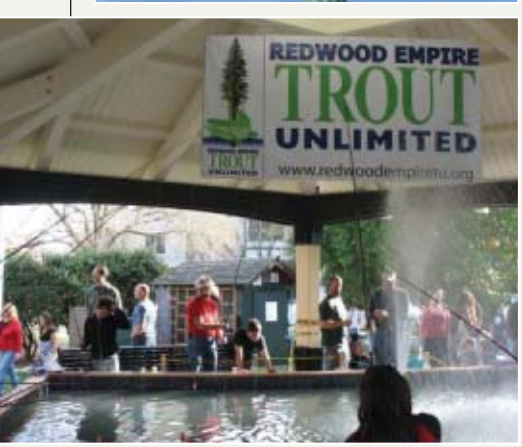
et cetera

Across the country, TU chapters sponsor countless community events to bring our conservation message to a broader audience. Here are a few highlights:

Celebrate Steelhead in Style

CALIFORNIA

Northern California isn't known for its great February weather, but Trout Unlimited's Redwood Empire Chapter took advantage of a few sunny days last winter to celebrate the Russian River's native steelhead at the second annual Healdsburg Wild Steelhead Festival. The festival builds local awareness of steelhead conservation issues and brings together local anglers, environmental groups, wineries, restaurants, artists and others who have contributed to steelhead habitat work or outreach. The festival's success this year inspired locals to donate nearly $100,000 to restore Foss Creek, which runs through downtown Healdsburg, Calif. into the Russian River. TU grassroots organizer Kent MacIntosh says the festival does wonders for local support of native fish conservation. "We're looking forward to the day, hopefully sometime soon, when both the Russian River and Foss Creek will be known once again for their prolific wild steelhead runs, as well as the festival." Check out next year's festival on February 6. Visit healdsburgsteelheadfest.org for more information.



More than Homework

WASHINGTON

When planning her senior high school project, it was natural that two of Whitney West's passions—fishing and working with special needs kids and adults—would intersect so brilliantly. Assisted by her parents—who are longtime members of the Icicle Valley Chapter—TU's Leavenworth Chapter, the Washington Council and others, West's project brought together 14 special needs anglers from the Leavenworth, Wash. area. West says she was inspired by the support and donations from local businesses, organizations and volunteers, and by the enthusiasm of the anglers. "They were the greatest and most energetic people I had ever met in my life," she says. Bob Stroup, a family friend and an Icicle Valley Chapter member, presented West with a youth conservation award from TU's Washington Council for her work, saying the project is a great example of what TU represents. "The results of this project have brought many people in our part of the state to join and become involved in conservation activities," says Stroup.

Left: Recent high-school graduate Whitney West helps Nora Schott on the fishing day West organized with help from Washington TU.

Trout Camp with a Cameo

GEORGIA

The Georgia Council held its sixth annual Trout Camp this June in Rabun Gap, Ga. During the week-long camp, 24 campers between the ages of 12 and 15 learned the basics of fly-fishing, fly-tying, entomology, catch-and-release practices and coldwater conservation. The campers left with all the gear and skills they need to fish on their own. TU volunteers and agency representatives led conservation lessons and projects, including electroshocking native brook trout streams, seining for macroinvertebrates and installing habitat structures for brookies. TU's Chief Operating Officer Chris Wood attended one day of the camp to offer one-on-one fly-casting instruction. Campers responded to the conservation messages as well as the fishing. "I've learned that we need to protect our trout streams so that maybe, one day, they'll all be back," says 12-year-old camper Andrew Brown. "I

TU's COO Chris Wood helped teach casting at the Georgia Trout Camp last summer.

learned a whole lot this week and caught a lot of fish," said camper Austin Summers. "Now, I'm ready to go home and show my dad how it's done."

—Joe A. DiPietro

50th Celebration in the Constitution State

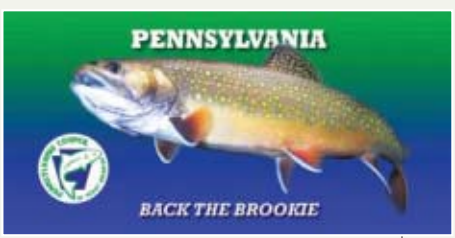
CONNECTICUT

The Farmington Valley Chapter kicked off 50th anniversary celebrations last January by hosting its first annual All TU Day at Cabela's in East Hartford, Conn. Other TU chapters—including Thames Valley, Hammonasset and Northwest—joined the celebration to offer seminars on Trout in the Classroom, setting up a fly rod, knot tying, reading a river and fishing for native brook trout. Over 80 children participated in a hands-on fly-tying session, tying their own woolly buggers while parents and other visitors learned about fishing and the chapters' conservation projects.

Author Donates Proceeds to TU

MAINE

A longtime TU volunteer's book proceeds have provided thousands of dollars in donations to the Maine Council, and continue to do so with his current limited-edition book. Twenty-five percent of the proceeds of Dennis LaBare's *Tagewahnahn, the Landlocked Salmon at Grand Lake Stream* go directly to the Grand Lake Stream Historical Society and to TU, helping fund council's projects like a youth camp and Atlantic salmon restoration. The book details everything an angler needs to know about the famed fishing destination, including fish ecology, hatches and the area's history. To support the Maine Council and purchase the book for $65 (price includes shipping), visit glssalmon.com.



Drive in Brookie Style

PENNSYLVANIA

Give your car some conservation "cred" and support brook trout restoration at the same time with the Pennsylvania Council's new Back the Brookie decorative license plates. The council designed the plate, which features a photo by Pat Clayton, to benefit brook trout restoration on wild brook trout streams in Pennsylvania. Individual plates cost $23.50 and orders of 20 or more cost $15.00 each. Contact Emily Gates at c-egates@state.pa.us or send orders with checks payable to PATU to P.O. Box 5148 Pleasant Gap, PA 16823.

TOP: JOE A. DIPIETRO

Tools & Tips...
From the Tackle Box

I've never much liked goodbyes. They tend to be sad, plus I always like to think there will be one last time to say or do something before things are final. So, since no one likes to see a big tough guy cry, think of this more as a "see you on down the stream."

For nearly seven years, I've lived a dream and proudly served this organization. Looking back at my time as TU's director of volunteer operations, I've realized that the absolute greatest part about the experience has been working alongside every single one of you. In the process of living out the TU mission, we've become friends and colleagues, and in the process have saved a whole lot of fish! That is something we should all be proud of.

To further this great work, I encourage you to continue to build bridges; not just across rivers and streams, but within communities and among partners. TU's ability to work with a diverse array of partners has been one of the secrets if its success, and something I've always been proud of. And there's one other thing you chapter and council leaders can do to help TU on the organizational level: Be sure to file your Annual Financial Reports. (Sorry, I had to sneak that in one last time.)

Before leaving, I also want to thank a few people who have played a special part in my TU life: to my kids for making me excited to teach them how to fish; to Tim Linehan and my pal Chris for convincing me that it would be cool to exchange a football helmet for oars and a 4 weight; to my mates at Spotted Bear Ranch who showed me it's cool to be grizzled mountain men and to care about the resource; and finally, to westslope cutthroat trout, for opening my eyes and my soul to the big, bold natural world.

Lastly, I'd like to salute all of you for the work you've done to make sure the fish we all cherish and work for will be around for our children's children to enjoy. You have helped to make all the difference in the world.

I'm going to miss all of you.

Tight Lines, *Dave Rogers, Director of Volunteer Operations*

Embrace-A-Stream 2010

Trout Unlimited will begin accepting Embrace-A-Stream grant applications for eligible coldwater fisheries conservation projects from September 15 until December 11. Contact your local EAS representative by November 16 to discuss any proposed projects. For more information, visit www.tu.org/eas.

Bulk Email Tool for Volunteers

TU offers volunteers the ability to easily email their council or chapter membership with the utmost regard for a member's privacy and communication preferences. This tool is designed to communicate important information without concern for C-SPAM violations or for the costs associated with outside emailing vendors. Visit leadersonly.tumembership.org/email to learn more.

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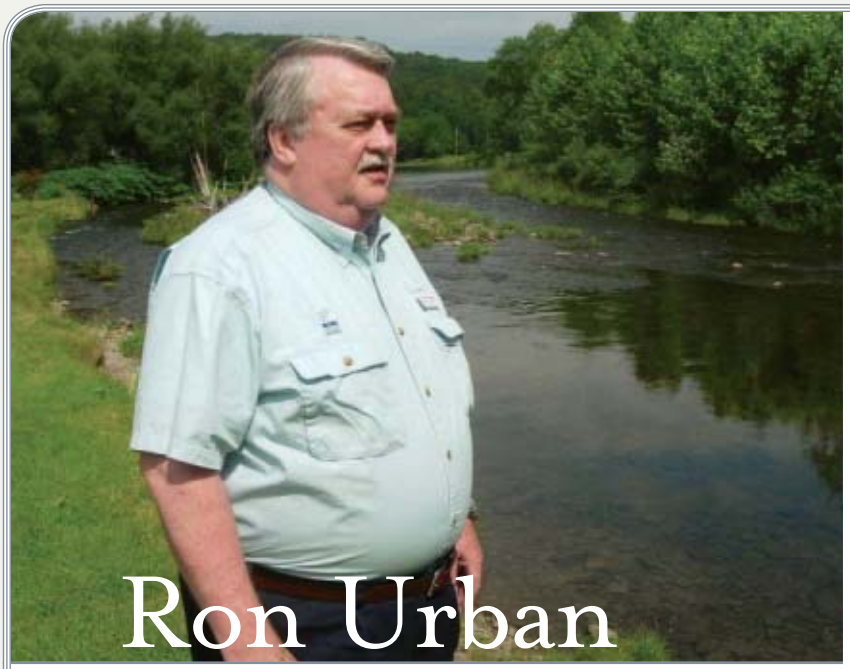
calendar

November 15 – Annual Financial Reports deadline

November 16 – Deadline to contact Embrace-A-Stream representative to discuss proposed projects

December 11 – Embrace-A-Stream grant application deadline

January 1 – Council Strategic Plans deadline



Ron Urban

PORT EWEN, NEW YORK

Favorite Fly:
#16 Parachute Adams

Favorite Place to Fish:
Headwaters of the Connecticut River in Northern New Hampshire

Most Memorable Fish:
The first fish caught with the first fly he tied himself

Ron Urban can't prevent the "hundred-year rains" that occasionally hit New York's Catskills region. But he can help the region prepare for and react to these events. That's why he became a familiar face in the area in recent years after floods took lives, damaged property and wreaked havoc on communities and world-renowned trout habitat. As TU's state council chairman, Urban felt compelled to visit affected areas, and report back to TU's staff, members and partners across the state in hopes of preventing more devastation in the future.

According to Nat Gillespie, fisheries scientist and director of TU's Eastern Lands Protection program, both the region's human and non-human inhabitants are lucky to have this "tenacious environmentalist" on their side.

"Ron's the kind of guy you want on your side when it comes to protecting coldwater resources from any type of damage, whether it be development, extraction, pollution or in this case, floods," says Gillespie. "Ron has proven skill in persuading local, state and national leaders to let science guide creative solutions that will benefit local streams and surrounding communities."

In the case of the Catskills, Urban's persistence paid off. Last summer, federal and state officials launched a comprehensive flood mitigation and ecosystem restoration study in a part of the Catskills region that has experienced some of the worst flooding, including the sensitive and world-famous Willowemoc and Little Beaverkill watershed. The study will examine ways of lessening, and even avoiding, such serious and recurrent damage through reconfiguring stream paths throughout the floodplain and restoring habitat where possible. The study will proceed with input from partners including the New York Department of Environmental Conservation, the U.S. Army Corps of Engineers, the Open Space Institute, The Nature Conservancy and TU.

"We'll help wherever we can to find ways of reconfiguring and restoring the landscape in ways that recognize the water's need to spread out from time to time," says Urban. "We also want to ensure that local communities are better equipped to respond to flooding in the future."

To achieve these goals, Urban will pull together New York's 34 chapters to work as a united body, a role he values as one of the organization's volunteer leaders. "It's the combined strength of these chapters that made it possible to gain support for this flood mitigation study in the first place," he says.

Gillespie has no doubts about his colleague's ability to find creative solutions to ensuring that both trout and humans fare better in the face of future floods, noting that "Ron is a strong voice for TU and will represent the organization well as it moves forward with this study in the Catskills."

—Sara Kaplaniak

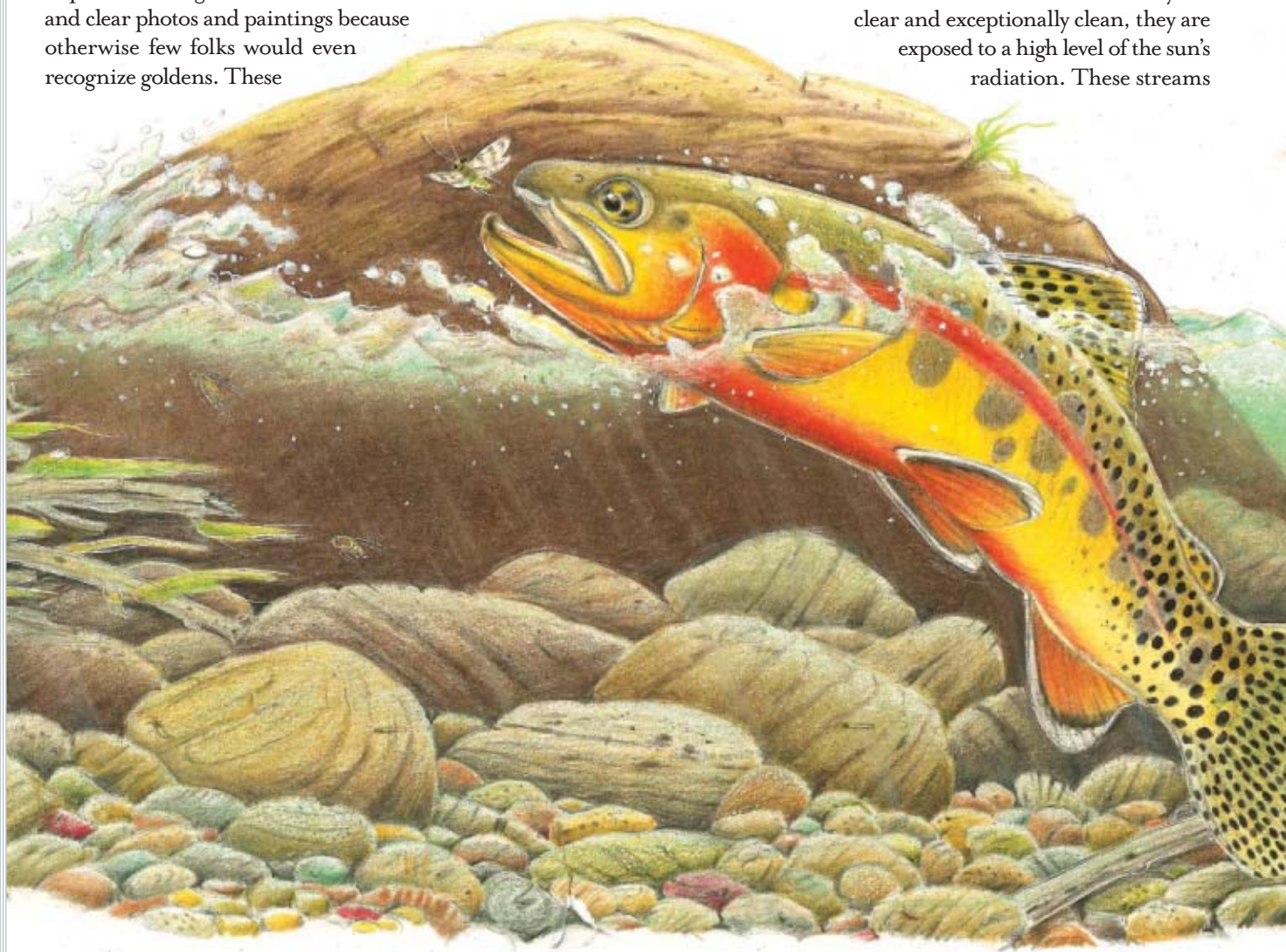
[By Dave Whitlock]

Trout Profiles: Golden Trout

Oncorhynchus mykiss aguabonita and Oncorhynchus mykiss whitei

Golden trout, especially the Volcano Creek golden, are one of the world's most rare, colorful and beautifully marked trout and have always enthralled me. They are an artist's and fly fisher's dream to catch, photograph or paint. Thank goodness for those vivid and clear photos and paintings because otherwise few folks would even recognize goldens. These wild-living trout are among the most remote in the United States, living very isolated in tiny, icy cold streams and natural lakes, usually above the tree line in the thinnest atmosphere. They seem to flourish best above 10,000 feet making it very difficult for most of us to get to them. But just knowing such magnificent trout exist is a wonderful feeling for trout fishers and nature lovers, alike.

When wild trout live at high altitudes where the waters are crystal clear and exceptionally clean, they are exposed to a high level of the sun's radiation. These streams



Golden rising: Goldens are fast, spontaneous risers looking for any natural food that becomes available, or flies that suggest food. Each 6 to 16 inch wild golden trout is a beautiful treasure from nature.

are usually lacking algae growth and silt and so the stream bottom rocks are clean and often gemstone colorful. As a protective response to the intense sun rays and the colorful surroundings, these high-living trout are always brilliantly and deeply colored and marked. The Volcano Creek golden, particularly the mature males close to spawning season, will challenge your senses with their chromatic vividness.

The backs of these fish are a perfect mix of pure gold and light olive, blending into a glowing cadmium yellow on the sides. Slashed along their lateral line and belly is a fiery orange-red that is unique to this sub-species. Over the back and sides is often a row of nine to 12 olive or violet-pewter parr marks starting just behind the deep-crimson gill plate all the way to the tail. Add to that pectoral, pelvic and anal fins that are marked and colored in orange, white and black that even surpasses the gorgeous brook trout. As a final finish, the upper body and ivory white-tipped dorsal and caudal fins are overlaid with large, wonderfully distinctive, ink black spots. Like wild brook trout, goldens have tiny scales that, in sunlight, look like twinkling galaxies of golden stars.

If you want to catch wild goldens in any of the remote locations where they thrive, you'll need to get your feet, legs, back, butt and lungs in shape…big time.

The golden trout is the Golden State's (California) state fish and is now closely protected in most of its native high Sierra Mountain range. This helps prevent threats of hybridization with rainbows and deadly competition with exotic brown and brook trout. A close look at the Kern River golden clearly shows its recent ancestry with coastal rainbows, while the Volcano Creek golden is still more purely how trout enthusiasts picture a golden trout.

Shortly before 1939, when exportation of golden trout eggs and fry became prohibited by California, goldens were successfully established in remote high altitude lakes and small streams in the Beartooth Mountains of Montana and the Wind River Range of Wyoming. Today, California has some 300 golden trout waters. If you want to catch wild goldens in any of the remote locations where they thrive, you'll need to get your feet, legs, back, butt and lungs in shape…big time.

Goldens were initially native to only small, high altitude streams, but they have been successfully introduced to lakes in these same areas of the Sierras. They grow larger in lakes. In most streams a "nice" golden would be 8 to 12 inches and just fit nicely into the palm of your hand, but the state and world records of 9 pounds 8 ounces and 11 pounds were both caught in food-rich lakes.

Goldens act and feed much as do wild rainbows and cutthroats. They are quick and nimble swimmers and use the entire water column to dine, favoring mayflies, caddis, midges and stoneflies in streams. High altitude waters are usually cold, swift and relatively infertile so goldens in these types of streams must be opportunistic and impulsive so as not to miss a chance at a meal. So, a good cast with a reasonable presentation of a buggy fly will often get instant rises. These little beauties hang out in riffles and runs, especially around larger rocks, cut banks and beneath overhanging brush. In lakes they cruise shorelines to eat abundantly on midges, water fleas, scuds and damselflies.

Ralph Cutter, in his *Sierra Trout Guide*, recommends using Royal Trudes, black ants, Elk Hair Caddis, Adams and gold-ribbed flies for goldens. I'd add Dave's Damsel Nymph, Red Fox Squirrel Nymph, midge larvae and scud patterns when tempting golden trout in still waters.

An ideal tackle set up for typical stream goldens would be a 7 to 8 foot, four piece, 3 weight fly road, a 3 or 4 weight double-taper floating fly line, and a 7 ½ foot 4X or 5X leader. This

Spawning pair – future gold: Golden trout only occur naturally in the alpine streams of the Sierra Mountains. They are vividly-colored trout and when spawning their colors defy even an artist's description. I painted this scene using two photos, one of the male and one of the female.

set-up will also work if you plan to fish lakes but I'd also carry an extra spool with a 3-weight, clear intermediate line for still-water nymphing. A waterproof digital is indispensible to capture the incredible golden experience.

I've often written that a wild trout is a true treasure. In the case of a wild Volcano Creek golden trout, they are more precious than gold, in my opinion. And with goldens remember it's not the size or the number, it's the total experience: the anticipation; the preparation of body and equipment; the rare air, sky, mountains, alpine sounds and smells, that perfectly frame your breathtaking sight of a wonderfully wild, live golden trout across the palm of your wet, icy-stream-chilled hand.

I'd recommend getting a copy of Ralph Cutter's exceptionally informative and beautifully illustrated *Sierra Trout Guide*, published by Frank Amato, as a must read and complete reference guide to your future golden trout plans and success. And remember, every mile you hike farther from the road in golden country, the better your experience will be.

davewhitlock.com

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www.croppmetcalfe.com

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Derek@emergingrivers.com
www.emergingrivers.com

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dan@jacksonfork.com
www.jacksonfork.com

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www.sweetwaterfishing.com

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www.2rivers.net

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CANADA

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NATIVE FISH

Atlantic Salmon

Salmo Salar

By Dr. Robert Behnke | Since ancient times, of the more than 30,000 fish species, one has been hailed as the king; the noblest fish. In Russian, the common name for Atlantic salmon translates as the "noble salmon" to distinguish it from species of Pacific salmon. Unfortunately, nobility cannot protect a species from the vagaries of nature, especially the long-term trend of the environment of the North Atlantic Ocean where the production of fewer nutrients has negatively affected survival of the fish from smolts to returning spawners. The net result has been a decline in the abundance of wild Atlantic salmon throughout their native range. It may appear contradictory to state that, despite the plight of wild Atlantic salmon, the total abundance of *Salmo salar* existing has never been greater than it is today. Approximately 98 percent of the species' total current abundance is artificially propagated and raised in cages on salmon farms, primarily in Norway, Scotland and Chile. In Norway and Scotland, salmon farms further negatively impact wild populations of Atlantic salmon and sea trout by spreading parasites and pathogens. The issues associated with wild versus farmed Atlantic salmon provide insight into how economists value natural resources and recreation. It is common for wealthy anglers to spend more than $1,000 per day for the opportunity to catch (and release) wild Atlantic salmon. I wonder what they would be willing to pay to catch a salmon at a farm?

Atlantic salmon's historical range extended from Canada's Ungava Bay down to Connecticut's Housatonic River.

You Can Help Bring Back the Natives

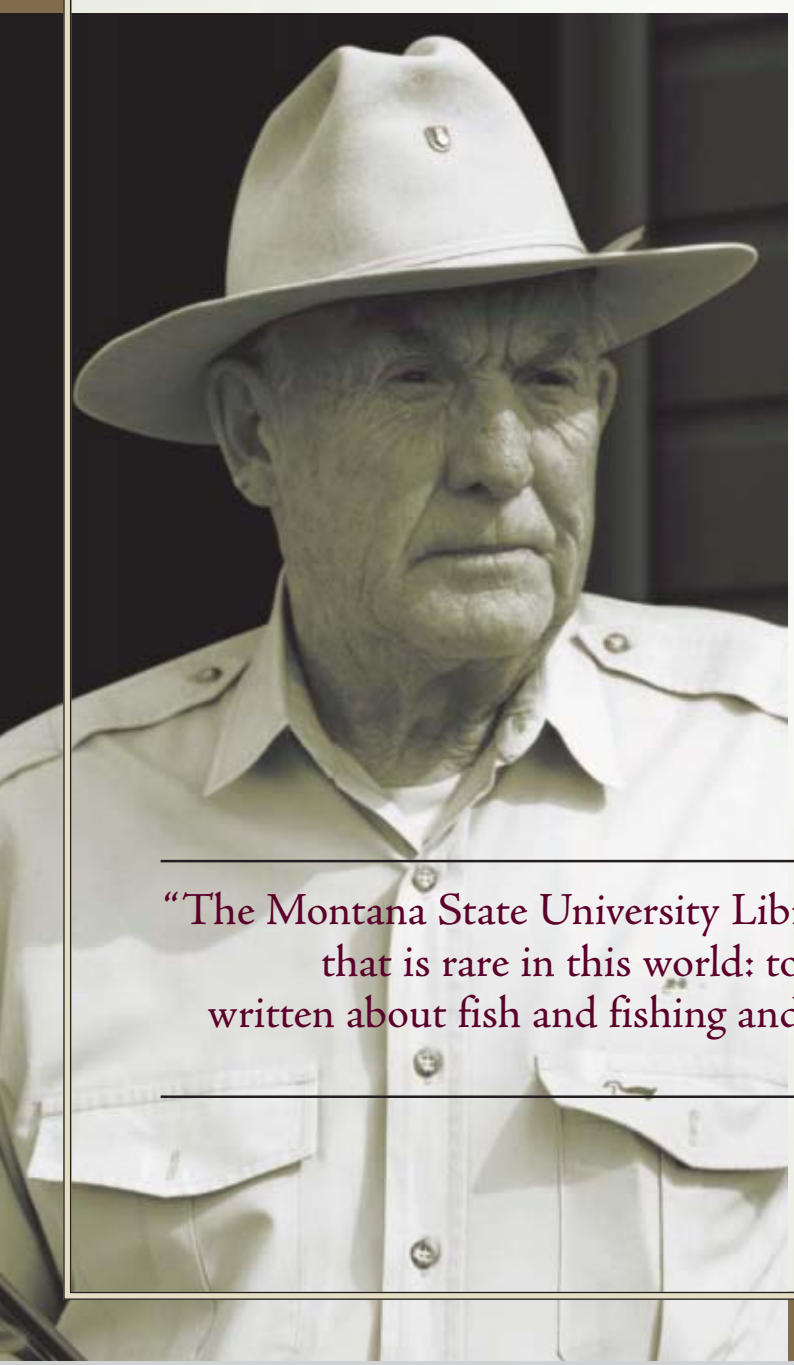
TU is working to promote recovery of the wild Atlantic salmon by improving spawning and rearing habitat in rivers in the Northeast United States, leading efforts to improve flows and fish passage on important spawning rivers like Maine's Penobscot, and working to ensure that the Endangered Species Act listing for the fish will be effective for its recovery. For more information, visit tu.org/atlanticsalmon.

ILLUSTRATION BY SKETCHANDRELEASE.COM

THE TROUT AND SALMONID COLLECTION

at

Montana State University



Montana State University Libraries in Bozeman, Montana has embraced the challenge of becoming the world's preeminent center for trout information by building an extraordinary Trout and Salmonid Collection. Composed of thousands of titles ranging from sixteenth century scientific works to modern angling, the collection offers unparalleled resources for scholars, researchers, students and interested anglers worldwide.

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"The Montana State University Library provides an opportunity that is rare in this world: to read some of the finest things ever written about fish and fishing and apply it to the total experience."

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For more information, contact Patricia Denison at 406-994-3119, pdenison@montana.edu or visit www.lib.montana.edu/trout.

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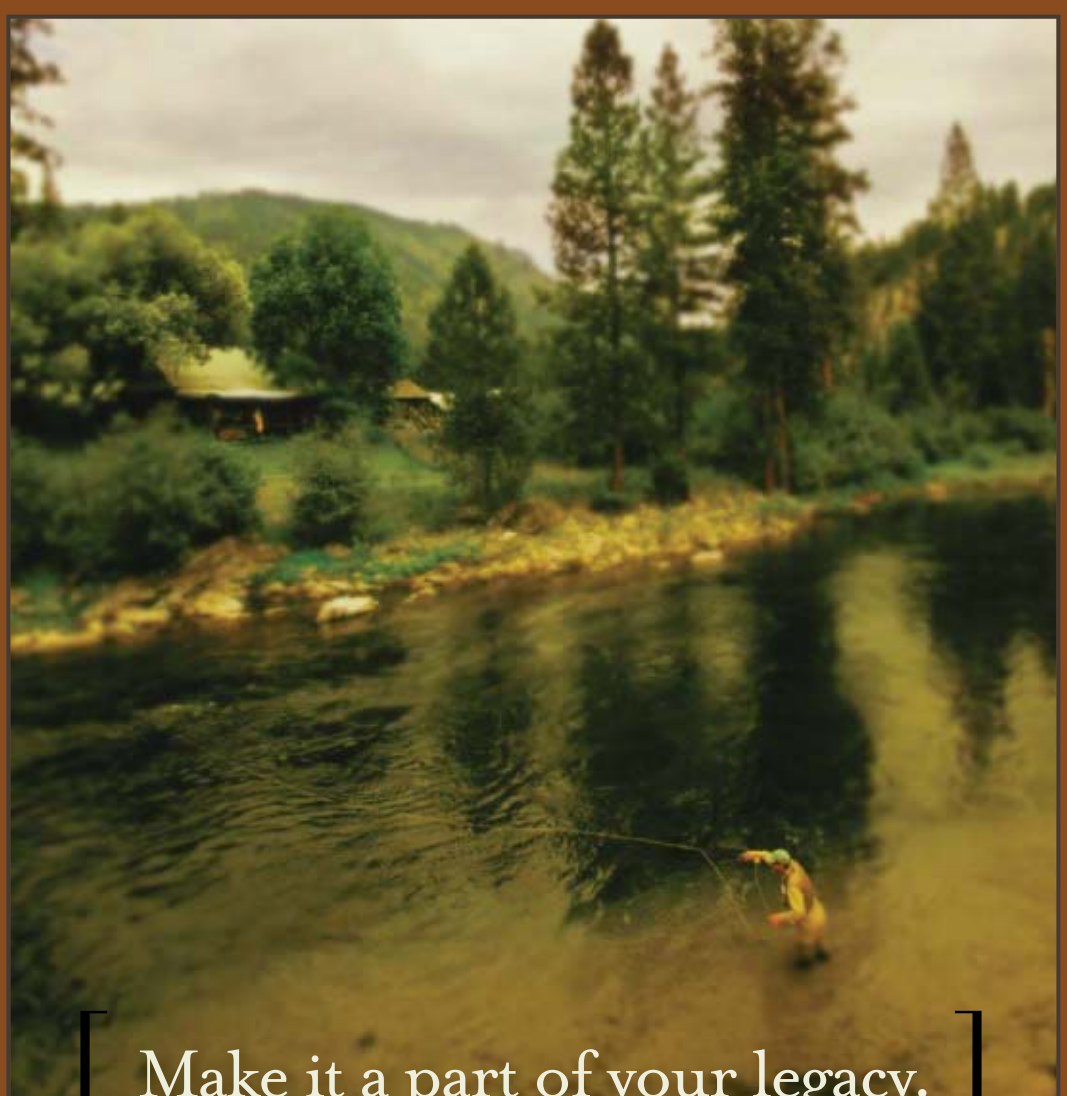

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For more information, contact Matt Braughler in the Arlington office. (703) 284-9413. MBraughler@tu.org.

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