

# Climate change puts a different spin on fly fishing for once skeptical anglers

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Clad in waders and knee-deep in a clear stream, fly fishers pay attention to everything swimming, crawling and flying around them, often getting a close look at nature's wonders.

These days, that total immersion in their environment also gives them a front row seat to the way the [warming climate](#) is upending fishing calendars, altering stream systems and threatening their sport.

"When you spend a lot of time outdoors, and you do it over decades, you start to see a pattern, and you can count on those things happening over and over again at approximately the same time (of year)," said Todd Tanner, a Montana resident who has been fishing for more than 55 years. "Anyone who has been fly fishing for a decade or longer has seen the impacts of climate on our fisheries."

They see [warmer temperatures](#), heavier rains and natural events that have become more unpredictable, if they happen at all, said Tanner, founder of Conservation Hawks, a group seeking action on [climate change](#) to preserve hunting and fishing.

A trip to Michigan in late spring last year was a stark reminder for Kirk Deeter, editor of Trout Unlimited's Trout magazine. He hoped to relive "a magical event" he'd experienced by arriving at a stream to fish just as a swarm of gray drake flies emerged.

"It's a life changing event" for any angler who catches it right, Deeter said. The flies spin and drop, their glistening wings attracting trout to the surface to feast. But on his return trip, he never saw a single gray drake fly, yet another event he chalks up to the changing climate.

Both Tanner and Deeter, a Colorado resident, have friends who used to visit to fly fish in late summer. Now they tell friends not to bother until temperatures cool off. In the mountain west, Deeter said, "October is the new August for fly fishing travel."

Climate change affects fish and anglers in other ways too. Streams are more likely to be swollen and clouded with mud after an intense rain or

low from weeks of drought. The air may be filled with smoke and ash from more frequent wildfires. Or the aquatic flies anglers mimic with their own colorful, handcrafted ties may emerge far earlier than normal, at completely different times of day or not at all.

Ten years ago, it was almost taboo to mention climate change in fishing magazines. Now fly fishers are banding together in groups like Tanner's to save their favorite fishing spots, lobby lawmakers and save fly fishing. They're even buying electric cars.

As Deeter, the new owner of an electric Jeep put it, "It's time to roll up our sleeves and work together on this."

At stake is more than a sport enjoyed by the country's estimated 6 million fly anglers, but the economic benefits they bring to fishing communities across the country, said fishing guide Kiki Galvin of Virginia.

"If people don't travel, they don't spend money at hotels and fly shops," Galvin said. "It's all the people who make their businesses out of it."

## **How climate change harms fly fishing**

To catch the trout prized by many fly fishers, anglers need clear, cool, oxygen-rich water and the right fly, whether they're in a coastal river in Virginia or on a tumbling stream high up in the Rocky Mountains.

Years ago a fisherman could plan a calendar based on when the aquatic insects would hatch, Tanner said. "I could literally say I'm going to this particular river on this day and this is what I'm likely to see, and I'm going to sit down and tie flies for this trip."

Today the fly hatches are often earlier and less predictable.

In Montana, salmon flies were often the highlight of fishing around Memorial Day weekend, Tanner said. Now the hatch is often "done and over well before" then.

In Colorado, Deeter said, the Mother's Day caddisflies hatch has become the Tax Day hatch, "nearly a full month earlier than typical."

Anglers aren't the only ones challenged by variations in the fly hatch, said David Winkler, an ornithologist and retired professor who gathered and studied 25 years of insect data at Cornell University in New York with research partner Ryan Shipley, now a scientist at the Swiss Federal Institute of Aquatic Science and Technology.

Birds love aquatic insects, Winkler said. They're bigger, more nutritious and loaded with fatty acids, "sort of like caviar for birds."

Winkler, Shipley and others have found the warmer springs mean aquatic bug hatches emerge earlier and do so over shorter time periods. That's bad for some birds. If the aquatic insects peak before they can raise chicks, the birds may abandon their nests to search for better bugs.

Changes in the water cycle affect both the insects and fly fishers.

Many areas see more intense rainfall, interspersed by longer droughts, USA TODAY reported last December.

Flooding rains can "blow out a fishery for days, weeks or months," Galvin said.

The west now often sees more rain and less snow, which also hurts fly fishing. Melting snowpack supplies cool water to streams for weeks or months. When a [heat wave](#) or heavy rain melts the snowpack, it leads to runoff and lower water levels later in the summer.

Too little stream flow means the water is warmer, and that lowers oxygen levels, which can cause fish kills and prompt restrictions against taking fish after a certain time of day to prevent the fish from dying when they're released back into the water. Shipley said the same water conditions that affect the fish also can affect the [aquatic insects](#).

Higher temperatures and less moisture exacerbate droughts and contribute to the bigger wildfires plaguing the west. The Congressional Research Service recently reported the number of acres burned in the U.S. is more than double what it was 25 years ago.

The aftereffects of fires can bring changes to streams for years, in addition to the temporary disruptions from smoke and ash. Intense fires leave burn scars on slopes, with fewer trees and shrubs to stop heavy rains from flooding down the slope and washing mud and silt into nearby rivers and streams. A highway near Deeter's home still closes occasionally when heavy rain washes debris onto the road from a burn scar left by a fire several years ago.

Warmer temperatures and changes in snowpack also harm the habitat of the revered [cutthroat trout](#) found in western North America and are allowing a non-native species of introduced rainbow trout to move in and take advantage.

Two subspecies of cutthroat are found in Montana and Wyoming, the westslope and the Yellowstone. Both are prized by visiting fly fishers because they're found nowhere else, Tanner said, and not resupplied by the kinds of restocking projects used in other parts of the country.

The wild and native fish give the region its "competitive edge," said Hilary Hutcheson, a fly fishing guide in West Glacier, Montana. "This is one of the only places in the world where you can catch cutthroat trout in an intact ecosystem. That's very unique."

All of that is threatened by the introduced species of rainbow trout that aren't native to the region, because mating between the cutthroat and the [rainbow trout](#) reduces the genetic health of the cutthroat offspring, limiting their ability to survive and reproduce.

Watching these changes happen around her home motivated Hutcheson to become a climate activist. She's active in an industry climate change task force; serves on the board of Protect Our Winters, a group that helps outdoor enthusiasts become climate activists; and is a member of the Fly Fishing Climate Alliance, which helps fly fishing businesses become carbon neutral.

## **The importance of taking action now**

Whether it's talking to other fly fishers and voters, producing videos that discuss how fishing is affected by climate change or talking to legislators in Washington, D.C., Hutcheson and others said it's important to take action now on climate change to save their sport.

"Everyone knows if this keeps up, the places we can fish for trout are going to be limited," said Tom Rosenbauer of Vermont, whose job title after 44 years in marketing, outreach and other roles at sporting goods retailer Orvis is chief enthusiast.

Some fly fishers don't want to think about the changing climate and just enjoy the fishing while it lasts, he said. "Fishing is supposed to be fun and refresh your soul, and everything else."

It is scary to look at the future, Rosenbauer added. "But the people that care about what their children are going to see and their grandchildren are very worried about it."

Deeter advocates for anglers taking "a real hard look at their own carbon

footprint."

"If you're going to drive your truck that gets 12 miles to the gallon 100 miles to go fishing in the mountains somewhere, you're part of the problem," he said. Since buying the Jeep, more than 80% of his miles have been electric. Some might consider it "a glorified golf cart," he said, "but I feel good about it."

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