

# Trout study to take stock

## Judge says planting fish in lakes could hurt native species.

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Published 12:00 am PDT Saturday, May 12, 2007

Story appeared in MAIN NEWS section, Page A1

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### California Golden trout

(*Oncorhynchus aguabonita*)

**Native to:** California. It was named the official state fish in 1947. Originally it was found only in the headwaters of the Kern River, south of Mount Whitney, but stocking of hatchery-raised fish has extended the golden's range in the Sierra Nevada. It has also been transplanted to other states.

**Typical size:** 11 to 14 inches long.

**Maximum life span:** 7 years.

Sources: California State Library, www.fishbase.org, www.bcadventure.com, McClellan Tribune



### Rainbow trout

(*Oncorhynchus mykiss*)

**Native to:** Rivers and lakes mostly west of the Rocky Mountains. It has also been introduced to New Zealand, Australia, South America, Africa, Japan, Europe, southern Asia and Hawaii. The rainbow is rated among the top sport fish in North America because of the hard fight it puts up.

**Typical size:** 12 to 18 inches long.

**Maximum life span:** 11 years.



Sacramento Bee

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Since the 1800s, Californians have artificially stocked lakes with non-native rainbow trout to improve recreational fishing. Even the Sierra Club once planted fish.

But the practice could end in some locations after Sacramento Superior Court Judge Patrick Marlette this week found evidence of harm to native fish and amphibians. He ordered the state Department of Fish and Game to conduct its first-ever environmental impact study of the program.

About 61 percent of California's 2 million licensed anglers fish for trout, mostly the hatchery-raised rainbow variety. Fish and Game collects about \$60 million annually from fishing license sales.

Officials expect to complete the study by fall 2008. The results could end rainbow trout stocking in some California lakes, especially where those fish conflict with native wildlife.

Research findings in recent decades have bolstered the argument that hatchery trout can devastate native fish and frogs and upset entire food chains. The stocking program has even had a hand in the decline of the state's official fish, the California golden trout, native to the southern Sierra Nevada.

"It's kind of like if you had 10,000 mountain lions, and you dumped them in the forest; it would have an impact on the deer population," said Noah Greenwald, a biologist with the Center for Biological Diversity, which sued the state along with Pacific Rivers Council. "Our hope is that they'll take a hard look and collect as much information as they can, and not stock waters with sensitive species."

Marlette found that Fish and Game violated the California Environmental Quality Act by failing to consider the consequences. Even as scientific evidence mounted, the department continued to stock millions of pounds of trout every year. The department claimed it was exempt from the law, a claim rejected by the judge.

"There is substantial evidence in the record that supports at least a 'fair argument' that (the state's) fish stocking program has significant environmental impacts on native fish species, amphibians and insects," Marlette said in his ruling, issued Thursday.

But the judge refused to stop the program completely, as plaintiffs requested. He cited uncertain benefits of a ban and potential economic harm.

"All the lakes that people go to, it's normally to catch rainbows," said Bob Strickland, president of United Anglers of California. "I would hate to see the lakes not stocked for people who love to fish. We gotta have fish for the people to fish with."

Plaintiffs say an end to planting some lakes will allow native fish to recover, offering an equivalent angling experience. Another likely result is more and better-managed trout stocking where it is deemed suitable.

"I don't think the average angler cares if they catch a rainbow trout or a golden trout or a cutthroat trout. They just want to catch a fish," said Brett Matzke, wild and native trout manager at CalTrout.

"The question has been asked for years: 'What does the stocking of hatchery fish on top of natives do?' " Matzke said. "This is going

to provide the definitive answer. It gives them a year to determine if it's smart or if it's not smart, then write a management plan for each area."

In the early days, rainbow trout were carried to remote lakes by mule trains, in barrels or bags. Today, the state drops fingerlings into mountain lakes from dive-bombing aircraft.

Some lakes had no natural fish at all before stocking began. As a result, predatory rainbow trout eliminated native amphibians that had never seen fish before, such as the mountain yellow-legged frog.

Once the most abundant creature in all of the Sierra Nevada, the frog has now disappeared from 90 percent of its range and is considered eligible for the federal Endangered Species Act.

In some areas where the frog vanished, so did its primary natural predator, the mountain garter snake, said Roland Knapp, who has studied these effects for 15 years as a research scientist at the Sierra Nevada Aquatic Research Laboratory, a UC Santa Barbara facility.

California golden trout declined at first from direct competition with introduced rainbow trout. More recently, Knapp said, efforts to help backfired when the state stocked golden trout raised in hatcheries. It turned out those fish had already hybridized with non-native rainbows.

The U.S. Forest Service has documented similar negative effects on other fish in the state.

"Unfortunately, the stocking program has in fact resulted in many such problems," Knapp said. "Today we have a lot more ability to predict what these effects would be, so my argument has been, let's use that foresight for a fresh look."

In studying fish stocking, the state will also be bound by the Inland Fisheries Restoration Act of 2005. State law requires the department to spend one-third of fishing license revenue on stocking programs and to meet fish production targets at hatcheries.

It also requires the state to meet targets for restocking native fish, which may end up meshing well with Thursday's court ruling, Matzke said.

Neil Manji, fisheries branch chief at Fish and Game, said the department modified its stocking program in recent years in response to new information about harmful impacts to golden trout and mountain yellow-legged frogs. He said it will continue to do so based on information from the new comprehensive study.

"The diversity of where we stock may be narrowed down," he said. "But there are still a lot of areas within the state of California where we think we can stock."