Offspring of hatchery trout are fishy flops: study

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By Will Dunham

WASHINGTON (Reuters) - When it comes to making babies, steelhead trout like it wild.

In a study published on Thursday with great implications for captive breeding programs, U.S. researchers found that after being set free, steelhead trout reared in hatcheries produced offspring far less fit than those of wild-bred fish.

In fact, when these captive-bred trout are released in the wild, they are roughly 40 percent less successful at producing offspring that survive to adulthood than their wild cousins, according to the research in the journal Science.

"With each generation through the hatchery, the fitness of the resulting fish when they breed in the wild declines remarkably quickly," Michael Blouin, an Oregon State University zoology professor who was one of the researchers, said in a telephone interview.

The researchers used genetics to track generations of steelhead trout in the Hood River in Oregon. They said the findings showed definitively that while they may look the same, wild fish and fish from hatcheries are not the same.

They added that the findings suggest that the idea of releasing captive-reared fish into the wild to help boost the wild population should be carefully reconsidered.

This is probably because the offspring of captive-reared fish inherited traits that might work in the slow-moving world of a hatchery but turn them into sushi in the fish-eat-fish world of the wild, the researchers said.

Blouin noted that there are two different missions for fish hatcheries. The traditional mission has been to produce fish for harvest, and Blouin said they are really good at that.

"These highly domesticated stocks perform well in a hatchery. The offspring are calm and they feed well and they grow well," Blouin said.

Another type of conservation-minded "supplementation" hatcheries produce fish intended to be added to wild populations to augment their numbers.

"There are no good data showing that supplementation programs work. And now we have genetic data showing that one might be a little concerned," Blouin said.

The steelhead trout is an important type of salmonid fish, which includes salmon and trout.

"If you're trying to create hatchery fish that are going to perform well in the wild, you want to minimize the number of generations in captivity. Even just a single extra generation through the hatchery causes a really large, detectable decline," Blouin said.