

# 'Judas' fish could help wipe out Asian carp

January 18 2013, by Doug Smith

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Methods used to eradicate feral pigs and goats in Hawaii, Australia, the Galapagos Islands and southern United States could be employed in Minnesota to fight the Asian carp invasion.

"It should work," said Peter Sorensen, director of the new Minnesota Aquatic Invasive Species Research Center at the University of Minnesota.

Sorensen said the lessons learned elsewhere using "Judas" animals to locate and kill unwanted species could be used here to fight Asian [carp](#). They are called "Judas" animals because, as the biblical reference implies, they betray.

Radio-collared Judas pigs, sheep and goats have been released into the wild, then tracked until they lead officials to difficult-to-find [herds](#) of the same unwanted species.

"Basically most animals are really social, so they are very good at finding each other," Sorensen said. "Then they send in the helicopters and blast them."

This week, he will use Judas [fish](#) implanted with tracking devices to locate the common carp in Staring Lake in Eden Prairie. Though carp are dispersed in lakes during the summer, they congregate in the winter, and the Judas fish reveal to researchers exactly where they are.

A commercial fisherman then will net the mass of unwanted carp,

estimated at about 26,000 fish, which root up vegetation, causing lakes to go turbid. [Water quality](#) and [fish habitat](#) usually improve after carp are removed.

Sorensen started using the method in 2008 as part of his carp research.

"It's been very successful," he said. "Carp are really [social animals](#) - one will always lead you to another."

Sorensen said officials could apply the same method to seek out and destroy Asian carp.

"First we'd have to figure out how to sterilize them," he said. "You wouldn't want to release fertile animals." Common carp implanted with transmitters and released don't have to be sterilized because there already are so many in the lake.

"There's been some research on sterilizing fish, so it's doable, but not a lot of effort has been put into it," Sorensen said. "Until now, no one had a good reason to sterilize fish."

Sorenson's new Aquatic Invasive Species Research Center is just getting started, and he is awaiting more funding for such research.

Sorensen is convinced the Judas fish method would work with Asian carp, and it could be tried now before lakes and rivers are teeming with them, as they are with common carp.

"Right now would be a great time to do it," he said. "Let's say there were five silver carp at the Coon Rapids dam; they probably are all together. If you put in a sixth fish (with a tracking device), I bet it would find the other five in a day."

Then all could be netted.

"Chasing these animals around isn't getting us anywhere," he said. "They are wily. Just let them show us the way."

No established populations of Asian carp - including big-head, silver, or grass carp - are known in Minnesota. However, individual specimens have been caught by commercial fishermen in the Mississippi and St. Croix rivers. And water sampling by the DNR found DNA evidence of silver carp in the Mississippi and St. Croix rivers as far north as the Twin Cities.

Asian carp can consume 5 to 20 percent of their body weight each day, often outcompeting native fish for food and disrupting the aquatic ecosystems that support more desirable fish and plants. Big-head carp can weigh up to 110 pounds and silver carp up to 60 pounds.

Department of Natural Resources officials said recently that a barrier of noise and bubbles at the Ford Dam near Fort Snelling, costing at least \$12 million, is the best option to stop the spread of invasive Asian carp to Minnesota's northern lakes.

But even if that is built and works, it wouldn't help the St. Croix or Minnesota river systems.

Sorensen said he also is working on implanting hormones that make carp sexually attractive to other fish.

Sorensen said the Judas method doesn't remove 100 percent of the carp from lakes, but "it's a big step forward."

Sorensen has used Judas fish to remove common carp from two west-metro lakes, Lake Riley in Eden Prairie and Lake Lucy in Chanhassen,

as well as Lake Gervais in Little Canada.

The Judas technique has been used in Yellowstone National Park to try to wipe out non-native lake trout in Yellowstone Lake. And it's been deployed to destroy non-native goats and feral pigs in the [Galapagos Islands](#), Hawaii, Australia and New Zealand.

Southern states, including Texas, Arkansas, Oklahoma and New Mexico, have used the technique on [feral pigs](#), too.

Next up could be [Asian carp](#).

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Citation: 'Judas' fish could help wipe out Asian carp (2013, January 18) retrieved 20 March 2024 from <https://phys.org/news/2013-01-judas-fish-asian-carp.html>

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