The Great NANFA Loach Hunt of 1999

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In early June I received a phone call from Tulalip Salmon Hatchery manager Cliff Bengston. The hatchery is located on the Tulalip Indian Reservation near Marysville, Washington, about 30 miles north of Seattle. Cliff had an odd-looking fish that came from a pond on Tulalip Creek. He said it looked like a gunnel with barbels. It was obviously not a native fish and I suggested that it might be a loach or weatherfish. I was glad when he said "I think someone should be told about this. Do you want to take care of it for me?" He gave me the fish and sure enough, it was a loach of some kind, 7-1/4 inches in length. I told him that reproducing populations of loaches have been found in several states, including Oregon and Idaho. They've been found in areas of still water with mud substrate in Oregon. Cliff then added that the fish was found in a silt-filled settling pond used to filter the hatchery's intake water supply.

Established populations of the Oriental weatherfish (*Misgurnus anguillicaudatus*) have been found as near as Portland, Oregon. NANFA member Dan Logan had found the fish near Portland in 1985, and recently wrote a paper on it and other aquarium-released exotics in Oregon (Logan et al., 1996). Also, a single specimen of the Chinese fine-scaled loach (*Misgurnus mizolepis*) was found in the Snake River drainage in eastern Oregon in 1977. Subsequent searches for additional specimens of that fish didn't turn up any, and the Snake River discovery was the only documented find of *Misgurnus mizolepis* anywhere in North America.

According to the book *Nonindigenous Fishes Introduced into Inland Waters of the United States* (Fuller et al, 1999), neither loach has ever been found in Washington. However, I spoke to Dr. Fuller and she mentioned hearing that there had been other collections by University of Washington staff of single fish in Lake Washington near Seattle approximately two years ago. She added she didn't have any details. Dr. Fuller contacted NANFA member Kevin Aitkin of the U.S. Fish and Wildlife Service (USFWS) in Lacey, Washington, with the information on the Tulalip Creek loach. Kevin informed me that additional populations of a loach, probably *Misgurnus anguillicaudatus*, were discovered in Lake Washington this summer (1999) by Roger Tabor of the USFWS while performing electrofishing surveys in a shallow, vegetated portion of the lake. Over 30 fish of various sizes and sexes have been found so far this summer.

I believe the Tulalip Creek loach is one of these two loaches, and most likely *M. anguillicaudatus*. Photos I've seen on the Internet and in aquarium fish books have been rather unhelpful in identifying this fish, but it does appear to be of the genus *Misgurnus*. I donated the fish to the University of Washington fish collection. Someone there will identify it. However, the systematics and taxonomy for the weatherfish are in need of clarification. The previous Oregon specimens of *M. mizolepis* and *M. anguillicaudatus* were sent to loach taxonomist Maurice Kottelat in Switzerland, and it may take similar efforts to learn the identity of the Tulalip Creek loach.

Before I sent the fish to the University of Washington, Jan Gleckler of the Tribal Fish Health Center in Olympia tested it for viral pathogens, and found none. When she opened the fish she found that it had eggs.

I asked Cliff if he'd like to find out if there was a population of the fish in the creek, and I offered the help

# Oriental weatherfish Misgurnus anguillicaudatus

## Home: China, Korea and Japan Last observed: Tulalip Creek, Marysville, Washington, USA

## **Offenses:**

- 1- Attempting to invade non-native habitat
- 2- Carrier of the viral pathogen bivarnus LV-1 (related
- to a major salmonid disease pathogen)
- 3- Predator on native fishes and eggs

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On June 26, 1999, NANFA members from Washington and Oregon will return to Tulalip Creek to look for additional specimens (which if found will suggest that the species is established in the creek). Join the hunt. Contact Jay DeLong at thirdwind@att.net, or (360) 705-2663.

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## Never release your aquarium fish!

The North American Native Fishes Association-dedicated to the appreciation, study and conservation of the continent's native fishes since 1972. of NANFA members to conduct such a search. He gratefully accepted. There is a concern that weatherfish could be predators on native fishes or parasite and disease vectors. So, the call went out for "The Great NANFA Loach Hunt" on June 26!

Five people from Portland drove up that morning and picked me up in Olympia. They were Norm Edelen, Lisa Hayashi, Layn and Amy Leudtke, and Rachel Lusby. We drove 1-1/2 hours north and met up with Sam Beavin, Jeff Kruse, Richard Bell, and Brian Bell, a few miles from the hatchery, and formed a caravan to the hatchery collection site.

Up to this point I had high hopes that we'd have a successful search (success being measured by our being able to state with some certainty that additional fish either were or were not present). Previously, I had tried to think of all the ways we could locate the fish, so we had shovels, rakes, dip nets, a seine, and Jeff even brought a wetsuit and snorkel. The second I saw the site my heart sunk, and I tried thinking of other things we could do besides look for loaches. I recalled that on the drive up Layn had been telling me that he wanted some sticklebacks, so I pointed out that we could probably find some sticklebacks in the vegetation along the banks. You see, the site was a pond that there was no way we could sample thoroughly-200 by 90 feet in size, 6-8 feet deep in the middle, with steep sides and 3 feet of silt and organic muck on much of the bottom. Ugh!

Still, we did the best we could, and the day turned out to be great fun! The bottom was like quicksand and hard to walk on unless we were close to the bank. So Jeff donned his wetsuit and mask and snorkel and proceeded to scoop up netfuls of muck from various places in the pond, which he poured on the bank for other people to check for fish. Others worked along the bank in the shallow water with dipnets scooping along the bottom and through vegetation.

We spent three hours here. The weather was perfect and we enjoyed discovering the underwater life of the pond. We didn't find any loaches, but we found many threespine stickleback (*Gasterosteus aculeatus*), some juvenile cutthroat trout (*Oncorhynchus clarkii*), a few crayfish, and many insect larvae, mostly dragonflies. The odor and gases rising all around us from the decaying sediments we stirred up made for more than one joke.

Afterwards we drove to the home of Jeff and Katrina Kruse, where we were treated to a dinner of fresh salmon

and a salad and squash picked from the garden. We then talked Katrina into treating us to a slide show of her spectacular photographs of Puget Sound fishes and invertebrates. Katrina is a scuba diver and her photos are all taken in the wild. She recently decided to make her photos commercially available, and she can be contacted at underseavisions@ibm.net.

I thank everyone for their company and enthusiasm and look forward to the next time we get together!

#### Literature Cited

- Fuller, P. L., L. G. Nico, and J. D. Williams. 1999. Nonindigenous fishes introduced into inland waters of the United States. U.S.G.S. Biological Resources Division, Gainsville, Florida. American Fisheries Society Special Publication 27.
- Logan, D. J., E. L. Bibles, and D. F. Markle. 1996. Recent collections of exotic aquarium fishes in the freshwaters of Oregon and thermal tolerance of oriental weather fish and pirapatinga. California Fish and Game 82(2):66-80.

#### **Author's Note**

My slightly humorous account of the loach hunt and associated events should not detract from the seriousness of the topic. Introductions of exotic plants and animals have harmed natural ecosystems worldwide. NANFA members need to educate people to *Never Release Aquarium Fishes!* The loach discovery has been reported to the Nonindigenous Aquatic Species information resource (http://www.nfrcg.gov/nas/nas.htm) for the United States Geological Survey. This is a valuable organization with an excellent web page containing up-todate accounts of exotic plants and animals by species, major drainage basin, and state.

### Contact Information for Other Washington Loach Collections

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