



## **KLAMATH TRIBES OF OREGON**

**Klamath-Modoc-Yahooskin**

**FOR IMMEDIATE RELEASE**

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### **Ambodat Facility Produces Another Generation of Endangered c'waam and koptu**

CHILOQUIN, Ore. — C'waam (Lost River sucker) and koptu (shortnose sucker) are two species of fish unique to Upper Klamath Basin, and both were once a plentiful food source for the Klamath Tribes. However, in the last 50 years, the population of these fish has been decimated from degradation of their habitat, the rivers they spawn in, and lakes where they live.

Ambodat is a Klamath Tribes' facility involved in fish rearing of endangered c'waam and koptu, a water quality lab, a staff that conduct environmental monitoring for water quality and hydrology, and habitat restoration. The facility is located a couple of miles from downtown Chiloquin across from the Sprague River. Alex Gonyaw is Ambodat's senior fish biologist overseeing the c'waam and koptu propagation project, and assisted by a supporting staff that includes Charlie Wright, James Esqueda, Brandi Travis, Eddie Mitchell, and Carlie Sharpes. They are a dedicated group with a mission to save the koptu and c'waam from extinction.

"We are putting in our best effort to maintain the current genetic diversity of the species," he said. "They are on the brink of extinction; they are very quickly fading from the planet, and our goal here, at least in the short-term, is to have as many in safety, which means captivity, in this case, until environmental conditions can be improved in Upper Klamath Lake."

Recently, the Ambodat hatchery crew prepared two holding ponds to receive larval suckers collected from the Williamson River and larvae reared from eggs collected at springs in Upper Klamath Lake. The staff also participated in adult sucker salvage operations at Iron Gate and Copco Reservoirs in California. These fish were transported to ponds on Lower Klamath Lake National Wildlife Refuge. Salvage operations were done in preparation of Klamath River Dam removal. Fisheries staff will be rescuing fish from JC Boyle reservoir next week and returning them to the Tribes' homeland.

And with the onset of spring, there is a new cohort of c'waam, now four weeks old, that will eventually be relocated to the holding ponds where they will be left to grow for up to three to four years before being released into Upper Klamath Lake. It is a lengthy process with no guarantee that the fish will survive.

"This is one of two places in the world where these fish are raised," Gonyaw said. "So, we've had to largely figure out from scratch a methodology and techniques to have them at least survive in captivity. They're two unique species that are only found in Upper Klamath Lake, and a few other locations. It's all relatively new, and we're doing our best."

In 2018, the U.S. Fish and Wildlife Service in California began operating a facility to raise and release c'waam and koptu, and they work closely with Ambodat to share information.

The two facilities have a great challenge ahead of them to save the fish from extinction, and the fish face many survival challenges because of a variety of environmental obstacles when they are released into the wild, including degradation of water quality in the lake, which annually becomes toxic from *Microcystis*, a harmful algal bloom; nutrients in the rivers that feed the lake such as phosphorous from agricultural run-off into the tributaries to the lake, habitat destruction, and non-native species introduced to the lake, preying upon the suckers and competing with them for food.

"They still need an intact environment that is healthy, that allows them to complete their lifecycle unassisted," said Gonyaw. "So, it is very much a long-term project. Simply keeping the fish around until the habitat can be improved."

Most importantly, for the suckers to survive, they need improvements in their water quality and quantity, which is also related to wetland habitat.

"Water quality is related to every single aspect of the natural world," Gonyaw said. "For Upper Klamath Lake, it relates to the quantity of water that's present; the quantity and quality of water that comes into the lake from its tributaries, and also the wetland habitat that the young life stages of the fish need during their first few months of life."

The last generation of wild c'waam and koptu in Upper Klamath Lake, were born between 1991 and 1993, and they are reaching the end of their life span and ability to produce fertile eggs.

"Fish, as they age, once they reach the later stages, go through a process called senescence," Gonyaw said, "essentially late stage aging where often the eggs aren't viable. Some fish are probably reaching that point."

For this reason, the Ambodat fish project is critical to the survival of the species, representing future generations of both c'waam and Koptu.

"They're a very slow growing fish," Gonyaw said. "They live to be between 35 and 50 years old, depending on the species. So, it can take two to four years to get a fish to the size that it can be released."

Gonyaw is hopeful that the c'waam that survive being raised in captivity will possess the strength necessary to live and thrive in the harsh and perilous environment of Upper Klamath

Lake. The larger the fish prior to release, the better the survival rate, particularly from predation.

The first release of captive suckers took place last spring when approximately 700 c'waam and koptu combined were released to the Sprague River by Ambodat staff and Chiloquin Elementary students. The fish were implanted with tracking chips to monitor their locations in the lake. Now all the researchers can do is wait and see whether they survive and live a full life.



Charlie Wright, a fisheries technician at the Ambodat research facility in Chiloquin, monitors c'waam eggs for health and development. (Credit: Ken Smith/Klamath Tribes. Image is available for media use.)

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