



Fish Plentiful In Guatemalan Lake

(Editor's Note: The following article appeared in the August 25, 1967 edition of the OKLAHOMA COURIER, the state Catholic diocese newspaper. The story concerns work done by two OSU zoology professors in the Guatemalan community of Santiago Atitlan, to help that city of 14,000 overcome what was thought to be a major shortage of fish.)

There are plenty of fish in Lake Atitlan. The problem is educating the natives on modern fishing methods to catch them.

That, in effect, is the finding of two Oklahoma State University zoology professors who have returned from Santiago Atitlan, Guatemala, where they conducted a three-week study of the fish population of the scenic lake which fronts the site of Oklahoma's diocesan-sponsored mission.

Dr. Troy C. Dorris, professor of zoology at OSU, and Dr. Robert C. Summerfelt, associate professor and leader at OSU's Cooperative Sport Fisheries Unit, are preparing their report for Guatemalan officials.

They will suggest new fishing methods, and stocking of plant-eating fish and trout or white fish species to inhabit the deeper area of the lake where fish are practically non-existent.

Because the lake had been yielding only an average of two or three pounds per day to native commercial fishermen, it had been assumed that large-mouth bass that had been put into the lake in 1956 had consumed most of the smaller fish.

The OSU team found plenty of bass and crappie in the lake. The natives simply aren't catching them because of their primitive harvesting methods. They insist on using worms for bait on a 30 to 40-foot line.

Dr. Summerfelt suggests artificial shallow-running lures as the best bait for Lake Atitlan fishing. The OSU team also introduced electro fishing, a method that is taboo in the United States, to the natives.

"Some natives were encouraged to use lures and they doubled or tripled their fish harvest," Dr. Summerfelt said.

The fishing industry is vital to Santiago Atitlan because it provides the fishermen with an income, although now the average take is less than 50

cents per day, and adds protein to the diet of the people.

Dr. Summerfelt said they caught bass in large quantities by electro fishing. A generator is used to send electrical shocks through the water. The fish are stunned and float lifelessly to the surface where they are harvested in the same manner a farmer would gather potatoes.

Guatemalans were not receptive to electro fishing at first. They thought it would rapidly deplete the fish population.

The OSU professors explained that the size of the lake, coupled with the vast fish population, makes over-harvesting practically impossible.

An agricultural cooperative in Santiago Atitlan was convinced enough that it has purchased a generator and is now electro fishing on an experimental basis.

Dr. Summerfelt said a three-man team could bag "100 to 150 pounds" per night by electro fishing. "This would be a real contribution to the economy of the village in that the fish can be sold at Guatemala City (three hours away) for 30 cents a pound."

Because of the clearness of the water, the electro rig can be easily detected by the fish in the daytime. Therefore, electro fishing is recommended after dark.

"The largest bass we caught went five and a half pounds," Dr. Summerfelt said. "But while we were there, a spear fisherman caught one that went 10 pounds."

Dr. Summerfelt said the potential of Lake Atitlan as a fishing resort is unlimited. "The lake is beautiful," he said. "It has very blue, clear water and I think most sportsmen would find it a beautiful place to fish. There is a resort area on the north side with good housing accommodations and fine food. It would be a wonderful place to spend a vacation."

The lake's productivity, he said, is far greater than most lakes in the United States. However, it doesn't have enough species of Herbivores (fish that eat plants). "We found an abundant amount of Carnivores (fish that eat insects or other fish)," Dr. Summerfelt said.

He suggests providing enclosures for breeding and rearing of the Tilapia, a Herbivores specie that now inhabits the lake. "The reproduction of this fish is being held in check by heavy predation from the bass and crappie," he said.

The OSU professors also favor stocking the lake with blue-gill sunfish, which would provide food for the bass, and would be an easy catch for the hook-and-line angling methods of the natives.

They also favor introduction of chemical fishing in the shallow waters which would make the bass an easy prey.

Dr. Summerfelt said the Guatemalan Department of Renewable Natural Resources is "vitaly interested" in developing Lake Atitlan.

"That department has encouraged building a laboratory for a continuing research and development program. Such a program would be very beneficial to our university graduate students. It also would provide training opportunity for Guatemalan employees who are responsible for management of the lakes."

He said the trip was sponsored by Ed Leroux and A. F. Boudreau, both of Tulsa.

"We went with two objectives: first to determine if we could improve the harvest of the existing fish population by experimenting with modern fish-harvesting methods, and secondly to determine if we could enlarge the fish population," Summerfelt said.

RESEARCH REPORTS

published bi-monthly
by the

Research Foundation
Oklahoma State University

Marvin T. Edmison, Ph.D., Director
John C. Egermeier, Ed.D., Assoc. Director
Howard R. Jarrell, Asst. Director
Bob Cox, Editor

The Oklahoma State University Research Foundation administers research programs conducted in the Colleges of Arts and Sciences, Business, Education and Home Economics, and the Electronics Laboratory. Its objectives are to assist government, industry and other sponsors to establish mutually beneficial relationships with members of the University's research staff and to assist in coordinating research activity with the training of students. For additional information on any phase of the research program, write to Dr. Marvin T. Edmison, Research Foundation Director, Stillwater, 74074.