

Title of Project: Survey for Occurrence of Alligator Gar in Felsenthal Lake and Movements of Alligator Gar in the Ouachita River below Felsenthal Lock and Dam

Project Summary: We propose to capture alligator gar in known wintering areas below Felsenthal Lock and Dam. Fish would be weighed, measured, tagged, and fitted with transmitters. Fishes would be searched for weekly from the time of capture through late summer to document movements and identify spawning activity and locations. Netting would also occur in Felsenthal Lake, 200 net nights, at various locations to document the status of species in Felsenthal Lake which is currently unknown. Any alligator gar captured in the Lake would also be tagged, measured, and fitted with transmitters for later re-location.

Name of Project Leader/Title: William G. Layher, Ph.D./ President

Affiliation Layher BioLogics RTEC, Inc., 7233 Camden Cutoff Road Pine Bluff, AR 71603

E-Mail address: layher@earthlink.net

Telephone: 870-692-8689 Fax: 870-879-4808

Project Partners: Eric Brinkman, Arkansas Game and Fish Commission, Camden Office

Total project cost: \$124,800

Total SWG money requested: \$62,400

Amount and Source of Matching Funds: \$62,400

Alligator gar have recently been documented in both the Ouachita River below Felsenthal Lock and Dam and in the Fouché River in Arkansas. Layher tagged nine individuals during winter in the Ouachita River old river channel. Local commercial fishermen indicate the species moves into the old channel each winter. This area was the only area of alligator gar captures by Layher et al. despite sampling other areas below the dam to the Louisiana border and upstream of Felsenthal Lake to Moro Bay. Sampling was not conducted to any large degree in Felsenthal Lake. Local bow fishermen report seeing alligator gar in the lake in recent years, however we know of no specimens collected within the Lake. Status of the species within the Felsenthal Lake is currently unknown.

Layher et al. attempted to find spawning areas of the gar during a study in 2008. While staging of the species occurred, spawning was not observed and thought to have not occurred due to cold water temperatures when suitable habitat was inundated. When warm water temperatures occurred no suitable habitat was flooded. Gar were later observed in the river during summer below the lock and dam. Netting resulted in captures of some specimens and two recaptures of tagged gar. The population was estimated to be a mere 31 individuals.

We propose to intensively capture gar during their winter aestivation in the old river channel during December 2009 through February of 2011. This would be accomplished using trammel net, gill nets, and specific nets made for gar capture. 200 Net nights should provide an excellent assessment of current populations in the river. Each fish would be tagged as per Layher (2008) and also fitted with transmitters for later identification of movements. Upon reaching the goal of net nights for capture, searching for transmitted gar would begin and continue at a rate of some 40 hours per week through July. This should allow documentation of individual fish movements as well as providing important habitat use information and possibly the identification of spawning areas and timing.

We also propose to sample Felsenthal Lake at the same level of intensity with nets to document the status of alligator gar in the Lake. Gar would be measured and tagged as well as being fitted with transmitters as in the river. A reduced level of searching would occur in the lake to document where individual fish move. Sampling would be performed for re-location of lake gar at the rate of 20 hours per week during the same time period as for the river.

The project is listed as a priority under large river fishes and alligator gar are one of the species for which data gaps occur. This study would occur in the Ouachita River of the Gulf coastal Plain Ecoregion.

Budget:

Salaries/field/lab:					SWG	Matchi ng
PI	100 days	10 hours/day	\$40/h r	\$40,000	\$24,000	\$16,000
Biologist I	100 days	10 hours/day	\$15/h r	\$15,000	\$15,000	0
Technician	100 days	10 hrs/day	\$10/h r	\$10,000	\$10,000	0
PI –report	120 hours		\$40/h r	\$4,800	\$2,400	\$2,400
Operating Expenses						
Mileage	16,000miles	.50/mile		\$8,000	\$8,000	0
Per diem	\$20/dayx3	100 days		\$6,000		\$6,000
Lodging	\$60/dayx3	100 days		\$18,000		\$18,000
Boat gas/oil				\$2,000	\$1,000	\$1,000
Preservative/jars						
Field materials: gear/boat/sampling meters/etc/tags/nets . Etc/				\$10,000	\$2,000	\$8,000
Overhead 8.8%				\$11,000		\$11,000
Totals				\$124,800	\$62,400	\$62,400

Matching 50.0% by Layher BioLogics RTEC, Inc.