

**THICKET OF DIVERSITY
TAXA WORKING GROUP PROGRESS REPORT**

TWIG GROUP Parasites of Aquatic Ectotherms

NAME OF GROUP LEADER Michael Barger

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Report (Check) Semi-Annual Annual Final

**Research Permit #BITH 2009-SCI-0002 (to apply for permit visit the following website:
<http://science.nature.nps.gov/research/ac/ResearchIndex> or call (409) 951-6821**

REPORT THE FOLLOWING:	
▪ Number of hours in the Field:	30
▪ Number of volunteer hours in the Field:	60
▪ Collecting Sites/ Units:	3/2
▪ Number of species collected:	10
▪ Number of new to the Preserve:	10
▪ Number of new species:	2
▪ Number of threatened species:	not known

Comments: (attach additional comments on separate sheet)

see attached

Signature *Michael Barger*

Date 30 Sept. 2009

Submit copies to: Dale Kruse, Science-Technical Committee / S.M. Tracy Herbarium, TAMU. 2138 TAMU, College Station TX 77843-2138, dakruse@tamu.edu Linda Brindle, BTA Executive Director, P.O. Box 198, Saratoga TX 77585 director@bigthicket.org
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Previous collections (in 2007 and 2008) approached the survey of parasites through a traditional “dissect-what-you-catch” approach. This led to recovery of many individual host and parasite taxa, each unfortunately represented by very few individuals. In the case of parasites, numerous individuals are usually needed in order to identify each species. Thus, for the great majority of parasite species recovered in 2007-08, only a small fraction could be identified. This represents the key logistical problem to be solved in order to ensure that a comprehensive survey of the parasites can be made, and that it will result in data that is useful and accurate. Nevertheless, two species new to science were discovered and described in 2007 and 2008 (publications in *Comparative Parasitology* in Jan. 2010).

In 2009, I altered my collection strategy to a “targeted-host” approach, in which I selected, prior to collection, a limited number of host taxa to collect and dissect for parasites. This resulted in a far smaller overall recovery of hosts and parasites, but a massive increase in the number of taxa recovered that could be identified to species. Whereas in past years only ~10% of parasite species could be identified (because of insufficient numbers of specimens), in 2009 all parasite species are represented by sufficient individuals to allow species-level identification (including discovery of species new to science). Finally, although the total number of parasite species recovered is smaller in 2009 than previous years, the absolute number of species that can be positively identified has increased 2-fold.

Having solved the primary logistical problem of this work this past summer, I am now in a position to tackle the survey and inventory in a more comprehensive and dedicated manner. My research plan for 2010 (see request for funding, to follow) involves spending the entirety of the summer of 2010 in Texas working on the ATBI. I will spend approximately 15 weeks in SE Texas, and I will dedicate 100% of my research efforts to the work of this TWiG. With a successful collection strategy evolved and a lengthy period of time to work, I can move this parasite work forward immensely. In addition, there is a possibility that I will be granted sabbatical in Fall, 2010. If that is the case, then I will be able to nearly double the 2010 ATBI work.