

**REPRODUCTIVE BIOLOGY OF THE HILL COUNTRY WILD MERCURY  
(*ARGYTHAMNIA APHOROIDES*, EUPHORBIACEAE) IN BROWN COUNTY, TEXAS**

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Knowledge of ecological characteristics and reproductive success of rare plants is vital for accurately assessing threats and developing sound management programs. *Argythamnia aphoroides* (Euphorbiaceae) is a rare endemic of Central Texas; this study is the first report of this species' natural history and reproductive biology. Flowers are unisexual and plants are staminate, pistillate, or monoecious. Nectar is the dominant attractant; it is hexose dominant with sucrose, glucose, and fructose levels significantly different. A diversity of insect visitors (i.e. Lepidoptera, Diptera, Hymenoptera, Coleoptera, Tricoter, Hemiptera, Homoptera) collect nectar and pollen. The three most common flower visitors were *Archytas apicifer* (Diptera) [nectar], *Callophrys gryneus* (Lepidoptera) [nectar], and *Apis mellifera* (Hymenoptera) [nectar and pollen]. Fruit set was not significantly different between experimental cross-pollination treatments and open pollinated controls. Sample size for geitonogamous pollination treatments in monoecious plants was too small for meaningful interpretation. Fruit set is high and laboratory based seed germination studies resulted in high germination rates following a seven-month dormancy period. Reproductive success results from high diversity of generalists pollinators, an extended period of stigma receptivity, and the small number of pollen grains required for maximum seed production.