The genus *Callosamia* Packard (Saturniidae), in Louisiana

by

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ABSTRACT. New information on the Saturniidae genus *Callosamia* Packard, in Louisiana, is discussed. Two species are newly reported for the state: *C. angulifera* (Walker) and *C. securifera* (Maassen). Dates of capture illustrating number of annual broods are displayed for two species.

Additional key words: moths, voltinism.

Ferguson (1972) reviewed three species of *Callosamia* Packard in North America, north of Mexico, restoring the genus to full rank. He listed the ranges of the species in the Gulf coastal area as: *C. promethea* (Drury) to include the area Florida to eastern Texas, *C. angulifera* (Walker) to include the area Florida to the Mississippi River, and *C. securifera* (Maassen) to include the area Florida to Mississippi.

Both Ferguson (1972) and Covell (1984) stated all three species are double brooded in the southern part of their ranges, though Ferguson did note the possibility of a third brood of *securifera* in Florida. *C. promethea* was first reported for Louisiana by von Reizenstein (1863), who stated the species had only one brood occurring in February and March in the New Orleans area. All of these prior statements concerning voltinism for these species appear incorrect in Louisiana. Less than a dozen female specimens of *promethea* have been collected using ultraviolet light traps by this author, confirming Ferguson's statement "... only females of *promethea* are collected at light". No wild collected males have been collected at light despite over 380,000 light traps hours logged throughout Louisiana over the past 24 years by this author. Dates from the few *promethea* specimens indicate this species does have more than one brood, having been taken in the months of March through August, and in the parishes: East Baton Rouge, Iberville, St. Tammany, and Tangipahoa.

Where encountered in areas undisturbed by artificial lighting, *C. angulifera* is a rather populous species. Often hundreds can be collected on a single night with a single light trap, where males are five times as common as females. *C. angulifera* have been collected February through September, and in the following parishes: Ascension, East Feliciana, Evangeline, St Helena, St. Tammany, Tangipahoa, and West Feliciana.

Ferguson (1972) agreed with and noted prior literature records of *angulifera*’s mating activity occurring between dusk and midnight. In Louisiana, flight time begins just after dusk and continues for about two hours, based on light trap data. Fig. 1 illustrates time of capture at ultraviolet light, and peak activity 45 minutes to one hour after dusk, roughly about 2100 hours (CST).

Ferguson (1972) stated "only females of *C. securifera* are collected at light". Based on the past 12 years of year-round light trapping, I have found *securifera* females to be five times more prevalent than males at ultraviolet light. One noteworthy occurrence, having taken 54 *securifera* one night using 5 light traps, 53 specimens were male.

The third brood of *securifera* is much larger in size, 20-25%, with elongated wings and less brilliantly colored than the first brood. Some specimens are so different that they appear to be different species. This notion is dispelled when a large series of specimens representing various broods are compared. The second brood appears intermediate, without the extremes of variance in size and brilliance noted in adjacent broods. This brood specific appearance phenomena occurs in many lepidoptera species, including other multiple brooded Saturniidae species e.g. *Actias luna* (L.), where the first brood specimens appear small, narrow-winged, boldly colored green with strong purple markings, as opposed to fall specimens being larger, broad-winged, and pale green with dull purple to brown markings. Ferguson (1972) did mention brood related variances in appearance of *angulifera*, but made no mention of this concerning *securifera*. Fig. 2 illustrates size differences of typical spring versus fall broods.
All three *Callosamia* species occur at my home near Abita Springs. Fig. 3 represents dates of capture for the two common species, *C. angulifera* and *C. securifera* taken at this location using ultraviolet light traps. It appears both of these species have at least three broods, *angulifera* peaking at approximately 58-day intervals, and *securifera* peaking at approximately 69-day intervals.

*C. securifera* has been captured in St. Tammany Parish and the most westward known locality, adjacent to the Mississippi River in West Feliciana Parish near the villages of Weyanoke and Turnbull.

**Literature Cited**


Fig. 1. Time of capture (CST) of male and female C. angulifera captured at ultraviolet light during two random nights, August 1992, at sec76T1SR3W, near villages of Weyanoke and Turnbull, Louisiana. One dot equals one specimen, n=83.

Fig. 2. C. securifera male phenotypes:
A. first brood, B. third brood.

Fig. 3. Dates of capture for Callosamia at ultraviolet light traps 1991-93, at sec24T6SR12E, 6.8km NE Abita Springs, Louisiana,
A. C. angulifera n = 485, B. C securifera n = 226.