SCIENTIFIC NOTE: SOME OBSERVATIONS ON *AMAUTA CACICA PROCERA* (BOISDUVAL) (CASTNIIDAE: CASTNIINAE) IN COSTA RICA

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The castniid genus *Amauta* Houlbert includes five species that are widely distributed from Guatemala through Central America into western South America, including Colombia, Ecuador, Peru and Bolivia (Miller 1995). The moths within the genus *Amauta* are quite large (FWL ♂ = 62.0–73.0mm; ♀= 72.5–79.0 mm) and distinct with the ground color on the wings dark blackish to warm brown and with a straight lateral postmedian band which extends from R_3 on the costa to the anal margin on the forewing. The hindwing has a broad reddish orange extradiscal spotband along the distal margin. There is little sexual dimorphism in these moths with the exception of the increase in size and enlarged wing markings, especially the hindwing extradiscal spotband in females (Fig. 1). With the exception of *Amauta cacica* (Herrich-Schäffer, 1854) and *A. angusta* (Druce, 1907), there are very few specimens with adequate data in museum collections (Miller, 1986).

Very little is known about the life history of *Amauta* although there have been some recent economic studies completed in 2002-2003 on *A. angusta* (Belezaca Pinargote & Flowers pers. com.) and other studies are in progress (Belezaca Pinargote, Flowers & Miller, in prep). In June, 2005, the second author along with Delano Lewis and Michael Perry visited various sites in the Area Concervaćion Guanacaste (ACG), Costa Rica, near the biological station at San Gerardo. He observed and photographed a large inflorescence of *Heliconia pogonantha* Cuf. with two *Amauta cacica procera* (Boisduval) perched in the typical vertical position (abdomen down) on different flowers (Figs. 2 & 3). Each of the moths had the prominent proboscis extended and deeply inserted into the corolla of the flowers (Fig. 3C), apparently sucking up the resulting nitrogen-rich mixture in this abundant dry pollen environment. The "pumping" action that is more typical for butterflies was not observed (Scoble, 1992). Both moths were quite preoccupied with this activity and only when disturbed and netted did they become animated. The larvae of *Amauta angusta* have been associated with *Heliconia* in Ecuador (Belezaca Pinargote & Flowers, pers. com.). It is possible that *A. cacica procera* uses *H. pogonantha* as a larval hostplant.

Behavioral accounts of Castniinae are very limited as adults are rarely observed in the field. Adults are on the wing at specific times of the day, and some are crepuscular and are attracted to lights. The males are most frequently encountered flying very fast and patrolling trails and other areas, possibly searching for females. Females may often be observed depositing eggs near

Fig. 1. Dorsal views of *A. cacica procera*, male above, female below.

Fig. 2. Elongate inflorescence of *Helconia pogonantha* with a male and female of *Amauta cacica procera* perched on individual flowers.

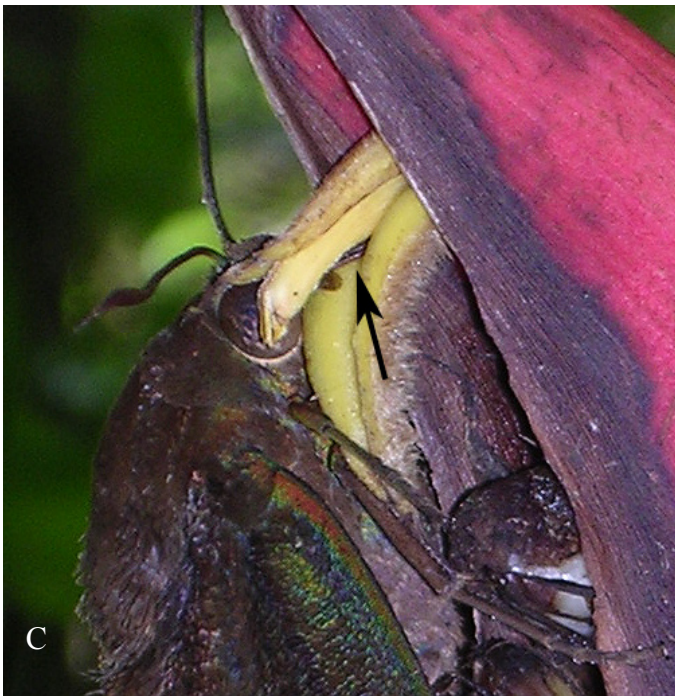

Fig. 3. (A) Dorsal view of a male *A. cacica procera* feeding on *Heliconia pogonantha*; (B) Lateral view of a female *A. cacica procera* on the single flower with prominent proboscis extended; (C) same as (B) close-up; arrow points at the proboscis.

the base of plants in the rain forest or in agricultural fields. However, there are very few published observations of castniids visiting flowers. Calaway Dodson had observed *Corybantes dolopia* (Druce) taking nectar from an orchid flower near the Rio Palenque field station, Ecuador, about 1978. Keith Brown originally disputed this observation and the fact that neotropical Castniinae took nectar as adults until 1985 when he (pers. comm.) saw a female *Geyeria decussata* (Godart) visiting a yellow cactus flower similar to *Opuntia* around 9:20 a.m. The moth was perching in the typical vertical mode with the well-developed proboscis extended into the flower.

Our knowledge of feeding and other behavioral patterns of a number of moths and butterflies, particularly crepuscular species, in addition to their associated larval hostplants is woefully inadequate. We encourage all lepidopterists to spend a little more time in the field to record and document their observations on these species.

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