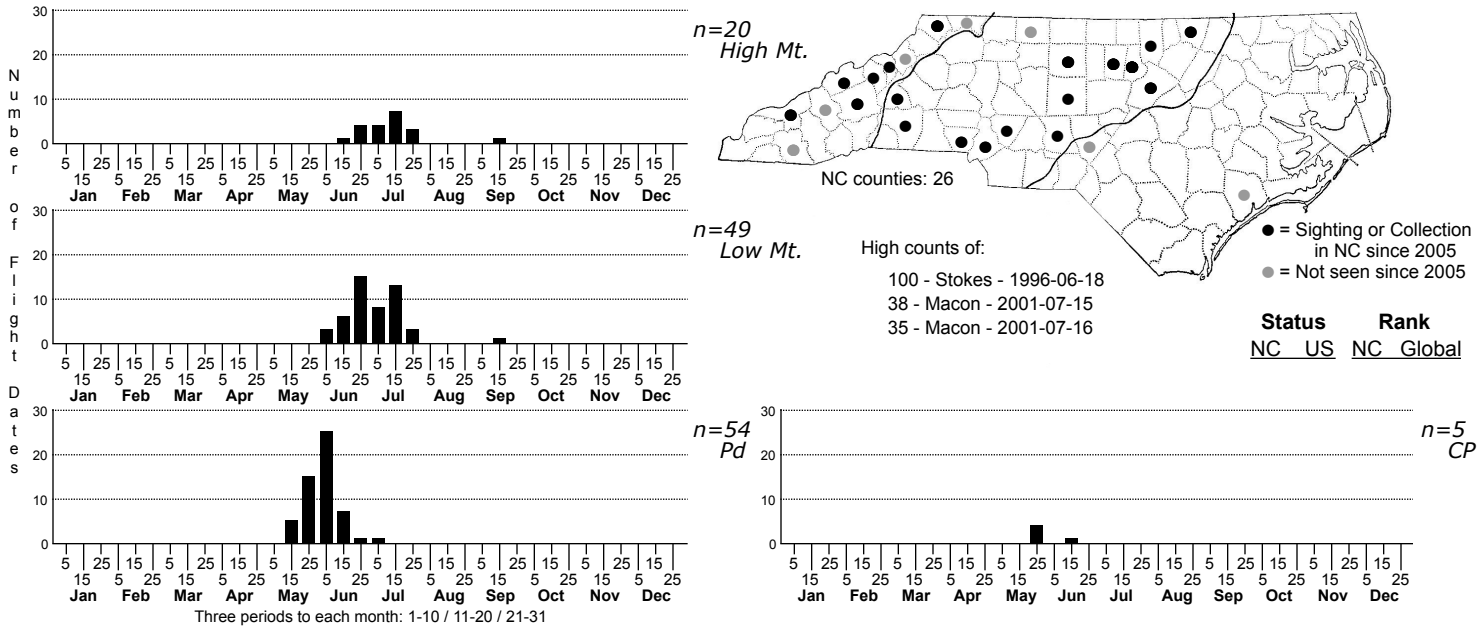
Cosmia calami American Dun-bar Moth



FAMILY: Noctuidae SUBFAMILY: Noctuinae TRIBE: Xylenini
TAXONOMIC_COMMENTS: The genus consists of some 31 species, of which 23 are European, 4 African and 4 from North America. One species reaches North Carolina and is found throughout the state. The genus is subdivided into two subgenera based on the form of the female genitalia. Our species belong to the subgenus Calymnia which has highly modified anal papillae and was recently reviewed (Lafontaine and Troubridge, 2003).

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Lafontaine and Troubridge, 2003
TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1954); Wagner et al. (2011)

ID COMMENTS: Our species is smallish, about the size of many Lacinipolia species, with rounded and somewhat blunted forewings. The maculation is highly variable from a uniform pale yellow to a highly spotted orange-tan. The courses of the antemedial and postmedial lines form a triangle which is diagnostic. The lines are well separated on the costa but approach each other at the anal edge of the wing. Sexes are similar.

DISTRIBUTION: The distribution in the Coastal Plain is very spotty; abundant where found but in few places. Elsewhere, it occurs with more regularity but is seldom common.

FLIGHT COMMENT: There seems to be one principal flight period in the early summer and then stragglers in September.

HABITAT: Our records are predominantly from upland hardwood forests or from mixed stands where at least some hardwoods -- particularly oaks - are present. These range from mesic to dry, but we have no records from maritime forests or from stands of bottomland hardwoods. It also appears to be missing from Longleaf Pine savannas and flatwoods, where hardwood trees are generally absent. No records come from peatlands, which possess hardwood trees in some cases, but usually not oaks.

FOOD: Larvae are associated with oaks. They are famous for voraciously feeding on other caterpillars but can be reared on foliage alone. Reported hosts include White Oak (Quercus alba), Scarlet Oak (Q. coccinea), Northern Red Oak (Q. rubra), and Live Oak (Q. virginiana) (Covell, 1984; Robinson et al., 2010). We do not have any host records in North Carolina.

OBSERVATION_METHODS: Adults respond to light but their response to bait or flowers seems to be unknown.

NATURAL HERITAGE PROGRAM RANKS: G5 [S3S4]

STATE PROTECTION: Has no legal protection, although permits are required to collect it on state parks and other public lands.

COMMENTS: This species presents a wonderful opportunity for additional study. Why are the female genitalia so modified - is it related to egg laying? Why do the caterpillars prey on other caterpillars? With but a single brood, there seems little pressure (unique to this species) to quickly pass through the larval stages. Are they cannibalistic? Do females select specific oak species, and do they utilize other plants? What limits their distribution in the Coastal Plain? Certainly this is a most interesting and little understood species. Nonetheless, its wide distribution and use of a broad range of habitats makes it seem secure within the state.