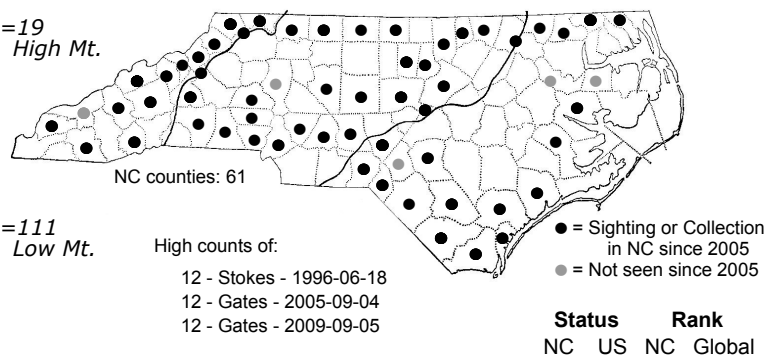
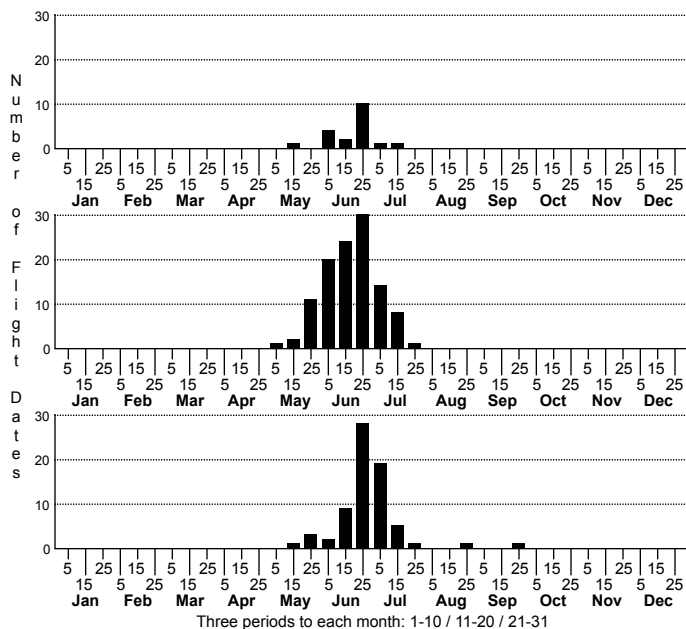


## *Automeris io* Io Moth



FAMILY: Saturniidae SUBFAMILY: Hemileucinae TRIBE: Hemileucini

TAXONOMIC COMMENTS: One of seven species in this genus found north of Mexico but the only one found east of the Appalachians (Tuskes et al., 1996). Ferguson (1971) recognized two subspecies along the Atlantic Slope: *Automeris io io* from Maine to South Carolina and *A. io lilith* from South Carolina to Florida and west to Louisiana. Tuskes et al. (1996), however, did not find any consistent geographic differences between these forms and did not recognize *lilith* as a distinct subspecies.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1923), Ferguson (1971), Tuskes et al. (1996)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1923), Ferguson (1971), Covell (1984), Tuskes et al. (1996), Wagner (2005)

ID COMMENTS: Adults are unmistakable: medium-large moths with yellow (males) or reddish-brown (females) forewings and large black, pale-centered eyespots on the hindwings.

DISTRIBUTION: Probably statewide except possibly the Outer Banks and other barrier islands.

FLIGHT COMMENT: Double-brooded in the Coastal Plain and possibly the Piedmont but apparently single-brooded in the Mountains.

HABITAT: The Io moth occupies a wide variety of habitats throughout its range, including residential areas and croplands in addition to natural ecosystems (Ferguson, 1971; Tuskes et al., 1996; Wagner, 2005). In North Carolina, records are missing from the Outer Banks and barrier islands but otherwise include xeric sandhills and wet savanna, peatland, and bottomland habitats in the Coastal Plain; upland forests and lakeshores in the Piedmont, and dry to mesic slopes in the Low and High Mountains.

FOOD: Larvae are broadly polyphagous, feeding on many species of hardwood trees, shrubs, forbs, and graminoids, but not on conifers, however (Ferguson, 1971; Wagner, 2005). In North Carolina, larvae have been recorded feeding on White Oak (*Quercus alba*), Water Oak (*Q. nigra*), River Birch (*Betula nigra*), hickory (*Carya*), Florida Maple (*Acer floridanum*), *Lespedeza*, Wax-myrtle (*Morella cerifera*), Sourwood (*Oxydendrum arboreum*), Sassafras (*Sassafras albidum*), dogwood, and Winged Elm (*Ulmus alata*). It likely also uses many other genera of host plants in our state.

OBSERVATION METHODS: Adults of both sexes come well to blacklights and incandescent lights but since they do not feed, they do not come to bait. Larvae are gregarious in the earlier instars and are often quite conspicuous. Pupation occurs in leaf litter.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S5]

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

COMMENTS: Populations are locally vulnerable to the effects of weather, outbreaks of disease, parasites, and predators, and to the effects of pesticides. However, given the commonness of their host plants, wide habitat range -- including suburban areas -- and statewide distribution, this species can easily recover from localized losses. In the Northeast, however, this species is declining and becoming more localized in Connecticut and other areas where it once occurred (Wagner, 2012), possibly due to parasitism by a Tachinid fly, *Compsilura concinnata*, that was widely introduced in the Northeast to control Gypsy Moths and other pest Lepidoptera. This fly represents a serious and pervasive threat for many species of moths and is suspected to be responsible for the marked declines in several Saturniids. While such impacts have not yet been documented in North Carolina, *Compsilura* has spread as far south as Virginia (Kellogg et al., 2003) and will probably continue to expand its range southward. The situation in North Carolina needs to be monitored.