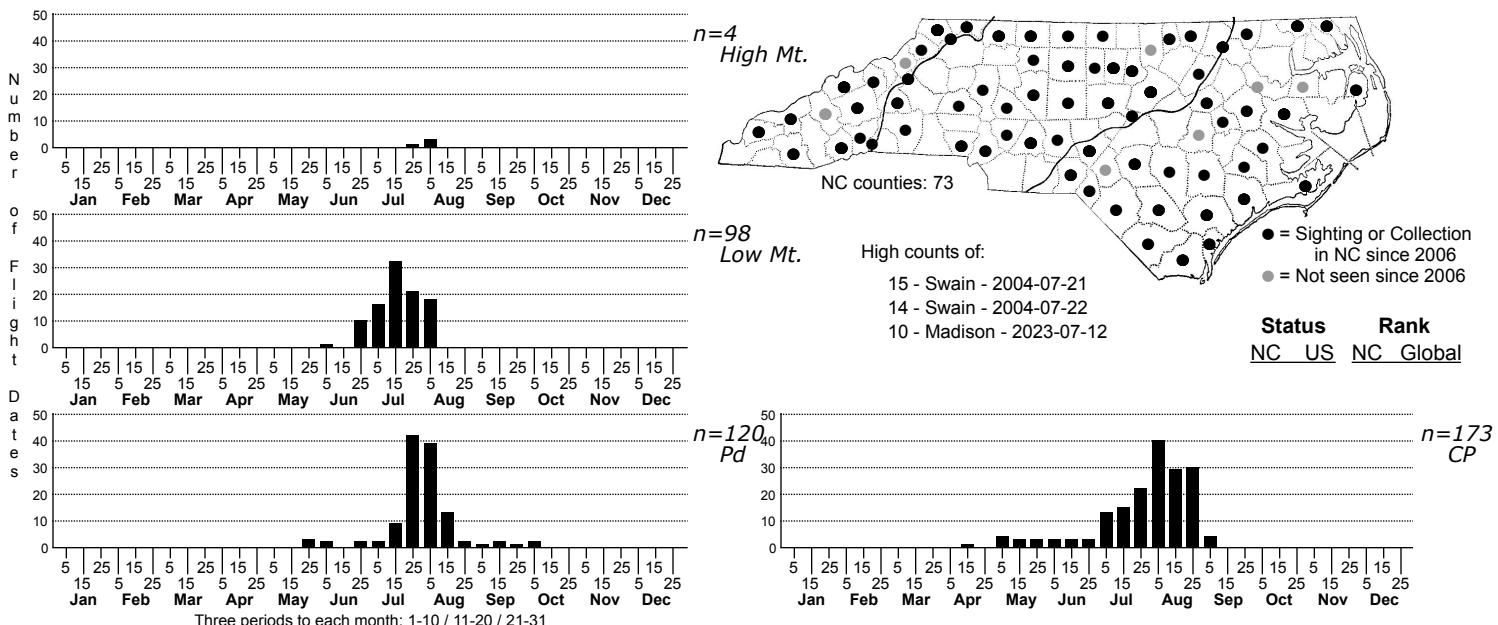


Eacles imperialis Imperial Moth



FAMILY: Saturniidae SUBFAMILY: Caratocaminae TRIBE:

TAXONOMIC COMMENTS: One of two species in this genus occurring in the United States and the only one in our area

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: The large yellow adults with pinkish- or purplish-brown spots, blotches, or lines are unmistakeable.

DISTRIBUTION: Occurs state-wide in North Carolina

FLIGHT COMMENT: One flight, mainly in the summer over most parts of the state but with individuals occasionally appearing in the spring in the Coastal Plain

HABITAT: Occurs in virtually every wooded habitat in the state, including residential areas.

FOOD: Larvae are polyphagous, feeding on many species of hardwood trees and shrubs; also on conifers. Brimley (1938) lists the following species as used in North Carolina: Eastern Red Cedar (*Juniperus virginiana*), oak (*Quercus*), American Persimmon (*Diospyros virginiana*), Sweetgum (*Liquidambar styraciflua*), elm (*Ulmus*), and pine (*Pinus*). Wagner (2005) additionally lists basswood (*Tilia*), birch (*Betula*), maple (*Acer*), *Sassafras*, sycamore (*Platanus*), and Black Walnut (*Juglans nigra*). In North Carolina, we have observed larvae feeding on Florida Maple (*Acer floridanum*), Shagbark Hickory (*Carya ovata*), American Beech (*Fagus grandifolia*), Eastern Red Cedar, American Sweetgum, Sourwood (*Oxydendrum arboreum*), Eastern White Pine (*Pinus strobus*), and Sparkleberry (*Vaccinium arboreum*).

OBSERVATION METHODS: Adults come well to 15 watt blacklights, with up to 23 being recorded in a single trap; also frequently observed at incandescent lights. Adults do not feed, so are not attracted to bait or flowers. Larvae live well up in the trees and are rarely seen. This species is easy to rear in captivity (see Tuskes et al., 1996, for details).

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 and statewide distribution, this species should easily recover from most localized and temporary losses. That may not be true, however, with respect to more pervasive, permanent threats. In the Northeast, populations of this moth have been widely and perhaps permanently extirpated, probably due to parasitism by *Compsilura concinnata*, a Tachinid fly widely introduced to combat Gypsy Moths and other pest Lepidoptera (Schweitzer et al., 2011; Wagner, 2012). *Compsilura* has spread as far south as Virginia (Kellogg et al., 2003) and the situation in North Carolina needs to be monitored.