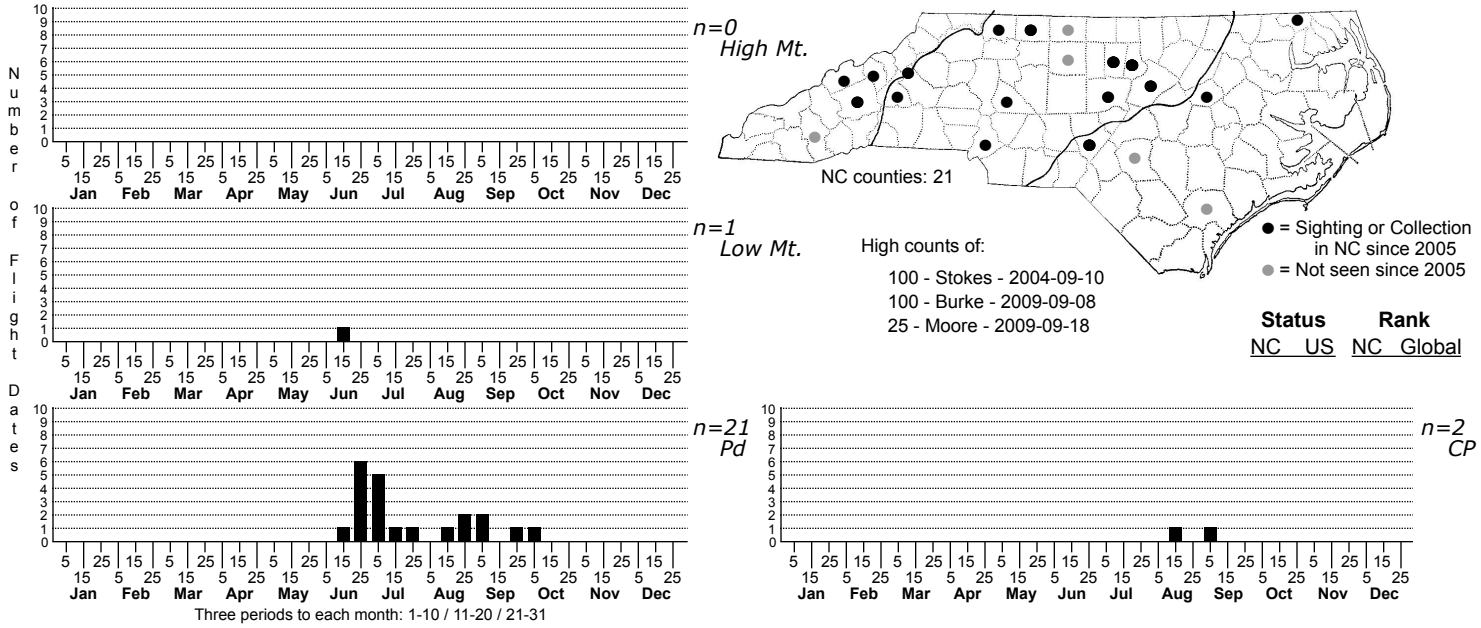
Anisota senatoria Orange-tipped Oakworm Moth



FAMILY: Saturniidae SUBFAMILY: Caratocaminae TRIBE:
TAXONOMIC_COMMENTS: One of four species in this genus that occur in North Carolina. Tuskes et al. (1996) placed senatoria and peigleri in the same species group (Senatoria), along with finlaysoni, which occurs in Canada.

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: Few, if any, characters exist that can be used to distinguish adult senatoria from peigleri (Tuskes et al., 1996). Females are also similar in color and possession of dark speckling to females of Anisota stigma and can be difficult to distinguish unless the hindwings are clearly in view: in senatoria, the hindwings are paler in color than the forewings and have only a faint trace of a medial line if any; in stigma, both sets of wings are similar in color and there is a definite medial line (Forbes, 1923; Ferguson, 1971). Males, like those of A. viginiensis and peigleri, are believed to be bee mimics, possessing translucent forewings and flying only during the day (Tuskes et al., 1996). Males of senatoria tend to have less transparent forewings than virginiensis and have straighter outer margins on both sets of wings (slightly concave in the hindwings; see illustrations in Covell, 1984).

DISTRIBUTION: Probably occurs in all areas of the state except the High Mountains, where oaks become scarce

FLIGHT COMMENT: Probably single-brooded in North Carolina, but our records for adults are too few to determine a clear pattern.

HABITAT: North Carolina records come from primarily from dry upland habitats, including sandhills in the Coastal Plain and monadnocks in the Piedmont.

FOOD: Larvae feed primarily on oaks. Ferguson (1971) lists records for the following species: White Oak (Quercus alba), Northern Red Oak (Q. rubra), Black Oak (Q. velutina), Bur Oak (Q. macrocarpa), Scarlet Oak (Q. coccinea), Swamp White Oak (Q. bicolor), and Bear Oak (Q. ilicifolia). In North Carolina, larvae have been recorded on Scarlet Oak, Overcup Oak (Q. lyrata), Willow Oak (Q. phellos), and Northern Red Oak. Wagner (2005) also lists maple (Acer), birch (Betula), hickory (Carya), chestnut (Castanea), hazelnut (Corylus), and beech (Fagus), but we have not seen any evidence of these being used as hosts in our state.

OBSERVATION_METHODS: Males are diurnal and do not come to lights at night; the best way to observe them is through captive rearing or by attracting them to tethered or caged females. Females are also rarely observed (or correctly identified), but their attraction to lights is not clear. Adults do not feed and do not come to bait. Larvae are strongly gregarious and are especially conspicuous during outbreak years.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S4S5]

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 has declined, although still occasionally abundant (Wagner, 2012). Declines may be 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.