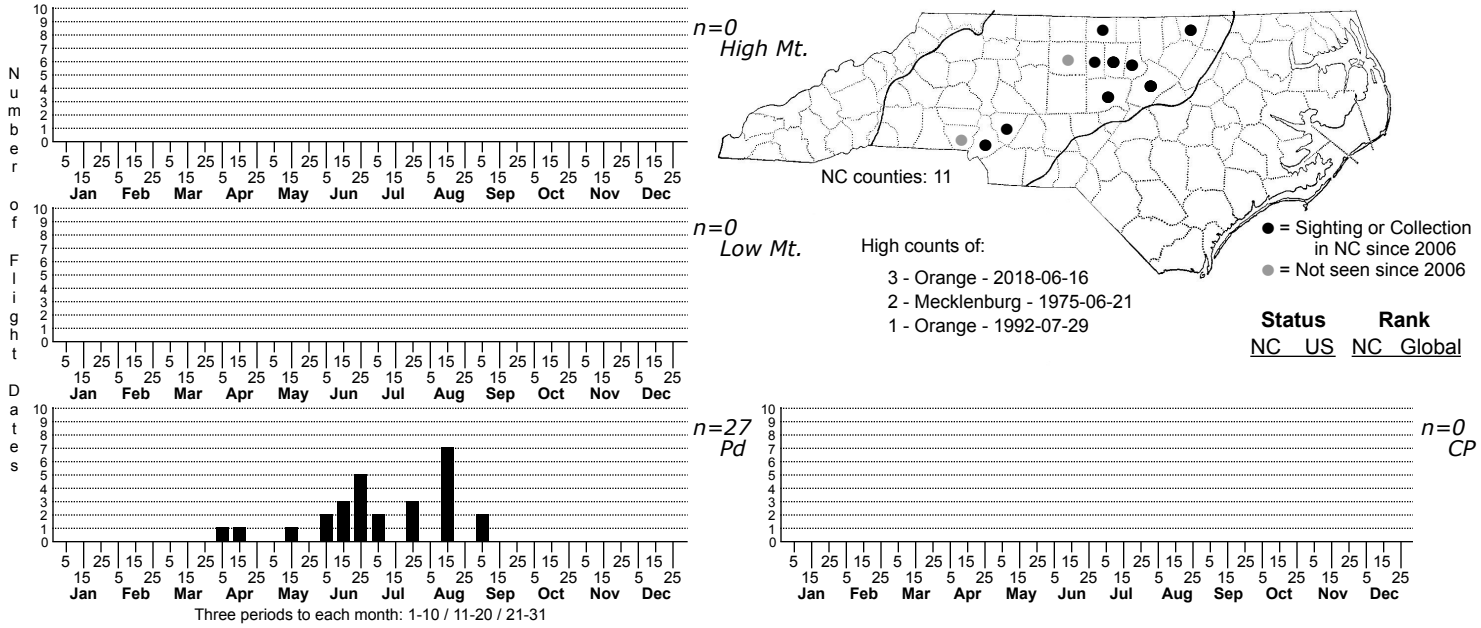
Mellilla xanthometata Orangewing Moth



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Macariini
TAXONOMIC_COMMENTS: The sole species in this genus, which is found only in eastern North America but marginally east of the Appalachians

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Ferguson (2008)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner et al. (2001); Ferguson (2008)

ID COMMENTS: A small brown Geometrid with bright orange hindwings. Transverse lines are dark brown but the antemedian and median line may be incomplete or obscure. The postmedian is usually strongly developed and inwardly edged with pale brown or yellow; it often forms the boundary between the lighter median and basal areas and the darker outer third of the forewing. The spring form shows a strong contrast between the basal/medial areas and the postmedial/terminal areas, whereas the summer form is more concolorous reddish-brwon; the summer form also usually has a dark spot in the postmedial area (Ferguson, 2008). Females are larger and paler in both forms, but otherwise similar in pattern. Other small moths with orange hindwings, e.g., Ilexia intractata and Virbia rubicundaria, lack the two-toned postmedian and forewing and do not have males with broadly bipectinate antennae.

DISTRIBUTION: All of our records come from the Piedmont.

FLIGHT COMMENT: Our few records are consistent with the two flight periods that have been noted elsewhere (see Ferguson, 2008), with the first occurring in May and June and the second in July and August. However, the spring form that Ferguson describes appears to occur only in May, with summer form individuals appearing in June.

HABITAT: Orange County records come from wooded areas but located either near old homesites or pastures possessing scattered Honey Locusts (S. Hall, pers. obs.). Records from Chatham County come from developed areas where Honey Locust has been planted as an ornamental (P. Backstrom, pers. obs.). Habitats present from other sites where this species has been found in North Carolina are unrecorded but are likely to be similar.

FOOD: Larvae are apparently monophagous, at least in our area, feeding on Honey Locust (Gleditsia triacanthos) (McDunnough, cited by Ferguson, 2008; Forbes, 1948; Wagner et al., 2001). Florida populations also feed on Water Locust (Gleditsia aquatica) (Ferguson, 2008) but Wagner et al. (2001) reported that it refused to feed on Black Locust (Robinia pseudoacacia).

OBSERVATION_METHODS: Comes to blacklights at least to some degree although not in large numbers in our experience. This species also flies during the day (Covell, 1984; Wagner et al., 2001; but see Ferguson, 2008, who thought it was entirely nocturnal).

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S2S3]

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

COMMENTS: Honey Locust is not believed to be native east of the Appalachians (Weakley, 2015) but was introduced to this area after European colonization by farmers who used its seed pods as livestock fodder or its wood for fence posts (it was also used by Native Americans for food or for constructing bows). The status of Honey Locust specialists as native species in our area is thus uncertain. Some of these species have been known from North Carolina for a fairly long time, however. The type locality for Sphingicampa bicolor -- described by Harris in 1841 -- is North Carolina (see Ferguson, 1971), and both Mellilla xanthometata and Spiloloma lunilinea were recorded by Brimley (1938). Other species, including Sphingicampa bisecta and Catocala minuta appear to have been recorded in North Carolina only recently. While all of these species now appear to be established as residents, their conservation status is still problematic, especially since most of their populations are not associated with native habitats. Some of them may actually be increasing in numbers, especially with the planting of Honey Locust in parking lots and other urban locations. While that could be the case for Mellilla, the number of records for this species still appear to be fairly small for a species that was first recorded in our area in the early part of the 20th Century. Its populations are likely to be very sparse and scattered, although spread over a wide geographic area.