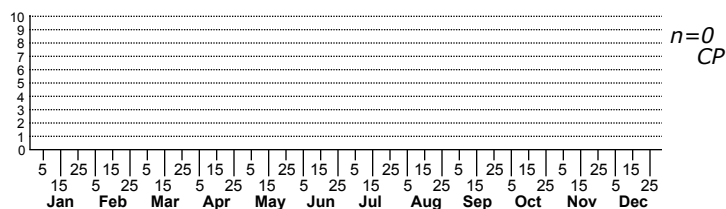
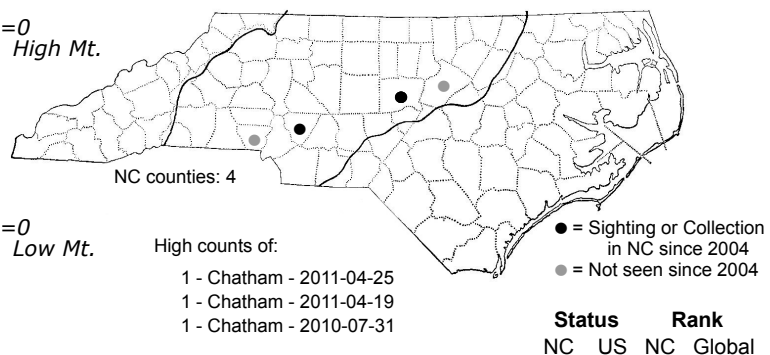
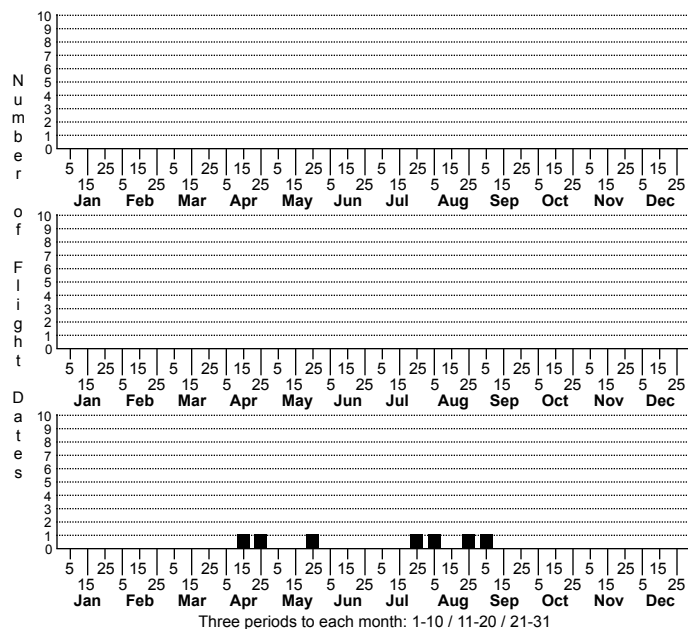


# *Syssphinx bicolor* Honey Locust Moth



FAMILY: Saturniidae SUBFAMILY: Caratocaminae TRIBE:

TAXONOMIC COMMENTS: One of two species in this genus found in our area (six others occur in the western US -- Tuskes et al., 1996). Despite the rarity of this species along the Atlantic Coast, the type locality for *Sphingicampa bicolor* is North Carolina (Ferguson, 1971).

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012; as *Syssphinx bicolor*)

ONLINE PHOTOS: MPG, Bugguide, BAMONA

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: Both Forbes (1923) and Ferguson (1971) noted that *Sphingicampa* and *Anisota* species may be hard to tell apart. This is particularly true for the summer forms of *S. bicolor*, which resemble both *A. stigma* and *senatoria* in possessing a reddish or yellowish ground color, dark speckling, and a diffuse postmedian separating a darker medial area from a paler submarginal area. Where the hindwings are visible, *Sphingicampa* species have a basal patch of crimson or rose that strongly contrasts with the color of the forewing; in *Anisota* species, both sets of wings are similar in color. In photographs of living individuals, however, the hindwings may not be clearly visible and other characters need to be used. In a lateral view, the length of the inner margin (the edge next to the back when the wings are folded) is about the length or slightly longer than the outer margin (the edge located at the posterior end when the wings are folded); in *Anisota*, the inner margin is noticeably shorter (Forbes, 1923). The white discal spots are also often doubled in *Sphingicampa* but always single in *Anisota*; some individuals of *Sphingicampa*, however, show only a single spot or none at all. Finally, many bicolor (and some bisecta) show two dark streaks on the thorax, which is typically unmarked in *Anisota* species. The two *Sphingicampa*s in our area also resemble one another but can be distinguished by the postmedian line: in *S. bicolor*, the postmedian is brown and fairly diffuse and terminates at the edge of the wing well in front of the apex; in *S. bisecta*, the postmedian is a finer, darker line that terminates close to or at the apex. *S. bisecta* also has a similar fine, dark antemedial line which is usually missing in *S. bicolor*.

DISTRIBUTION: Apparently has an extremely patchy distribution in North Carolina, although documented in the state since the early 1800s.

FLIGHT COMMENT: Triple-brooded in the Mid-west (Ferguson, 1971). In the eastern Piedmont, Parker Backstrom has records for adults from April through September, with possibly three distinct peaks: early spring, mid-summer, and late-summer/early fall. Ferguson noted that each brood has a distinctive primary color phase: brood one has predominantly grayish fore-wings and extensive areas of bright rose on the hind-wings; brood two has yellowish-brown fore-wings and much less extensive areas of rose on the hind-wings; brood three is browner/less yellow and more heavily spotted on the fore-wings and again has more extensive areas of rose on the hind-wings.

HABITAT: The naturalness of the habitats used by *S. bicolor* in North Carolina is uncertain, since neither of the two host plants recorded for this species is believed to be native here (Alan Weakley, pers. comm. to S. Hall, 2014). However, *S. bicolor* was recorded in the state in the early 19th Century, suggesting that *Gleditsia* (the most likely host) was present in sufficient quantities and distribution to sustain populations of the moth. While it is possible that most, if not all, of the populations recorded more recently have been associated with groves of *Gleditsia* planted around old homesites or escaped into pastures, the high concentration of *Gleditsia*-feeding moth species recorded in the vicinity of Goldston in Chatham County is difficult to account for based solely on random and highly infrequent colonizations from the Mid-west. A large sill of diabase occurs in that area along the Deep River floodplain and could provide at least an approximation of the calcium-rich floodplains that are some of the main habitat for *Gleditsia*, *Gymnocarpus*, and their associated moths in the Ohio and Mississippi Valleys. Whether this site actually represents a natural, relict habitat, however, needs much further investigation.

FOOD: Brimley (1938) lists Honey locust (*Gleditsia triacanthos*) and Kentucky coffeetree (*Gymnocladus dioica*) as host plants. However, he did not mention any actual observations of larvae feeding on them in North Carolina and may have been referring to host plants known to be used in the Mid-west. Both of these trees are considered non-native introductions from the Mid-west and only *Gleditsia* occurs fairly widely, if sporadically, over most of the state.

OBSERVATION\_METHODS: Comes to both blacklights and business lights fairly well; Parker Backstrom has observed up to three individuals at a time on several occasions. Adults do not feed, however, so do not come to bait. *Sphingicampa* larvae are reported to be fluorescent and can be searched for using blacklights (Stahnke, 1972, cited in Tuskes et al., 1996).

NATURAL HERITAGE PROGRAM RANKS: G5 S3?

STATE PROTECTION: Currently placed on the NHP Watch List as W3: seemingly rare species that are too poorly known to assess their conservation status in North Carolina

COMMENTS: The naturalness of the habitats used by this species still need to be assessed before its conservation status can be determined. If it makes use primarily of cultivated *Gleditsia*, particularly those commonly planted in parking lots, then its habitat may actually be increasing in the state. On the other hand, if it is associated with relict communities, such as mafic floodplain forests, then it could be highly vulnerable to extirpation.