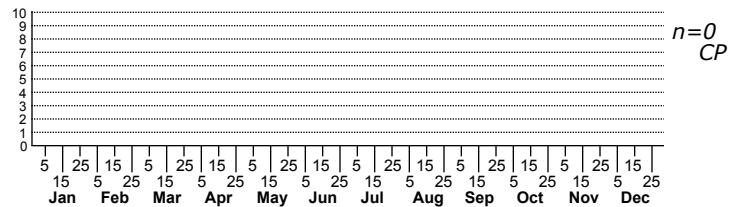
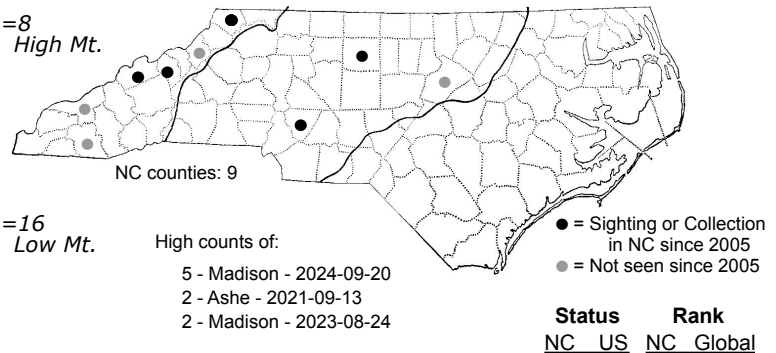
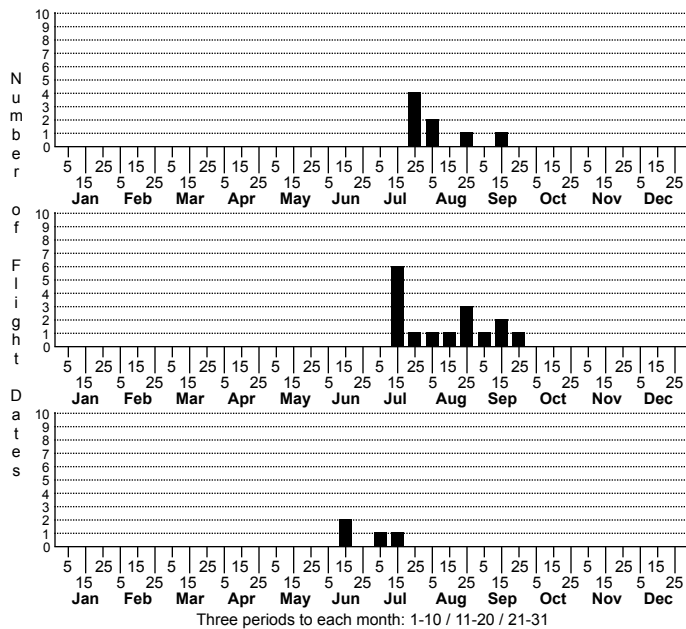


## *Catocala serena* Serene Underwing



FAMILY: Erebidae SUBFAMILY: Erebinae TRIBE: Catocalini

TAXONOMIC COMMENTS: One of 103 species in this genus that occur in North America (Lafontaine and Schmidt, 2010, 2015), 67 of which have been recorded in North Carolina. Included by Barnes and McDunnough (1918) in their Group V (also adopted by Forbes, 1954). This group comprises 10 species, all of which feed on Hickories or Walnuts (Juglandaceae). In addition to *serena*, other members of this group that occur in North Carolina include *habilis*, *robinsonii*, *judith*, *flebilis*, *angusi*, *obscura*, *residua*, and *sappho*.

FIELD GUIDE DESCRIPTIONS: Covell (1984)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1954); Sargent (1976)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner et al., 2011

ID COMMENTS: A medium-large, dull gray Underwing with black and orange-banded hindwings. The head and thorax are dull brownish gray, contrasting with the darker brown collar. The ground color of the forewings is also a fairly uniform dull brownish gray, with a somewhat darker shade of reddish brown located outside the postmedian. The lines are black and narrow and less dentate than in related species of Underwings. The subreniform is fairly open and the portion of the postmedian below forms rounded loops. Basal and anal dashes are not developed. Hindwings are marked with black and orange bands. *Catocala habilis* is similar in having fairly pale grayish forewings and black and orange banded hindwings. The ground color in *habilis* is paler gray and the lines are more dentate; an anal dash is usually well developed in *habilis* but not *serena* and female *habilis* have a basal dash that is missing in *serena*.

DISTRIBUTION: The center of this species' range is the upper Midwest; in North Carolina, it occurs primarily in the mountains but has recently been found in the central Piedmont

FLIGHT COMMENT: Univoltine, flying in North Carolina from July to September

HABITAT: Our records come from several types of rich hardwood forests, including Rich Coves, Montane Alluvial Forests, and the Rich Subtype of Northern Hardwoods.

FOOD: Larvae are stenophagous, feeding on Shagbark Hickory (*Carya ovata*), and possibly other hickories (Wagner et al., 2011). Sargent (1976) speculated that walnut (*Juglans*) might also be used. We do not have any feeding records in North Carolina.

OBSERVATION\_METHODS: All of our records come from blacklights, in some cases augmented by blacklight spotlights. Like most Underwings, it probably also comes well to bait.

NATURAL HERITAGE PROGRAM RANKS: G5 SNR [S3S4]

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

COMMENTS: This species has a somewhat restricted range in North Carolina and is moderately specialized in terms of its habitat preferences. However, the habitats used by this species are still widespread in the Mountains, with several large protected examples. It therefore appears to be secure within the state. The distribution and status of this species in the Piedmont still needs to be determined.