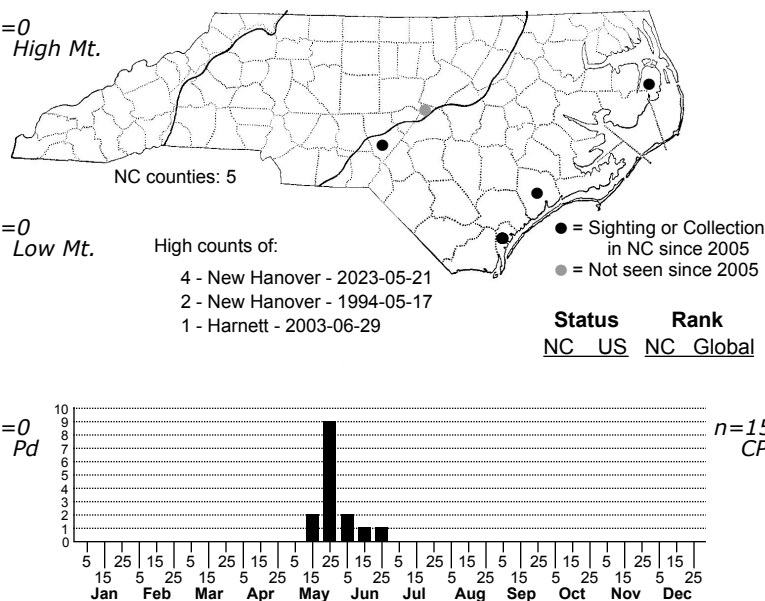


## *Catocala messalina* Messalina Underwing



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. *Catocala messalina* is the sole member of Barnes and MacDunnough's (1918) and Forbes's (1954) Species Group XIV.

FIELD GUIDE DESCRIPTIONS: Covell (1984)

ONLINE PHOTOS:

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

TECHNICAL DESCRIPTION, IMMATURE STAGES: Slotten (2015)

ID COMMENTS: A medium-sized *Catocala*. The forewing is gray and nearly unmarked, darkening towards the outer margin; a trace of the antemedian and postmedian lines may be present, usually represented by a dark streak at the costa. The hindwing is yellow-orange in the basal and medial areas; the inner black band usually present in orange-winged *Catocalas* is missing and the outer band is wide and black, either continuous or with a separate black dot at the anal angle as in the *amica* group. None of our other *Catocalas* has this combination of features but the hindwing pattern is similar to that of *Allotria elonympha* and *Noctua pronuba*, both of which are usually well-marked on the forewing.

DISTRIBUTION: Restricted to the Coastal Plain; found primarily on the Barrier Islands but occurring as far inland as the Fall-line Sandhills

FLIGHT COMMENT: Univoltine, with adults flying in May and June.

HABITAT: All but one of our records come from maritime forests or coastal sandhill scrub habitats. The exception is specimen collected by Jeff Slotten at Fort Bragg, in seepage habitat but at the base of sand ridge containing an extensive population of Bluejack Oak (*Q. incana*) and other scrub oaks.

FOOD: *Catocala messalina* probably feeds primarily on xerophytic oaks. On the barrier islands, where most of our records originate, it seems likely to feed on Live Oak (*Q. virginiana*), Scrub Live Oak (*Q. geminata*), or Sand Laurel Oak (*Q. hemisphaerica*). None of those species have been recorded at the site where this species was found at Fort Bragg, where Bluejack Oak (*Q. incana*) seems the most likely candidate. The site where Slotten (2015) obtained the female he used in his rearing study also came from a site where no Live Oaks were observed, but where Bluejack, Blackjack, and Post Oak were all present, along with a bottomland species, Cherrybark Oak. The larva reared by Slotten, however, readily accepted Live Oak.

OBSERVATION METHODS: All of our records are from 15 watt blacklights. Like other *Catocalas*, it probably comes well to bait. Tapping during the day is also likely to be effective.

NATURAL HERITAGE PROGRAM RANKS: G4? S2?

STATE PROTECTION: Listed as Significantly Rare by the Natural Heritage Program. That designation does not confer any legal protection, however, although permits are required to collect it on state parks and other public lands.

COMMENTS: Prior to Slotten's capture of a specimen at Fort Bragg, this species appeared to be strictly associated with maritime or coastal oak scrub habitats, all of which are threatened by development and sea level rise associated with global climate change. The Fort Bragg collection, however, indicates that it may use a wider array of xeric oak-scrub habitats, although if so, it appears to be very rare in those habitats, given the fairly intensive sampling that has been conducted in those habitats in North Carolina. While more needs to be learned about its presence inland from the coast, the majority of its known populations remain under significant threat.