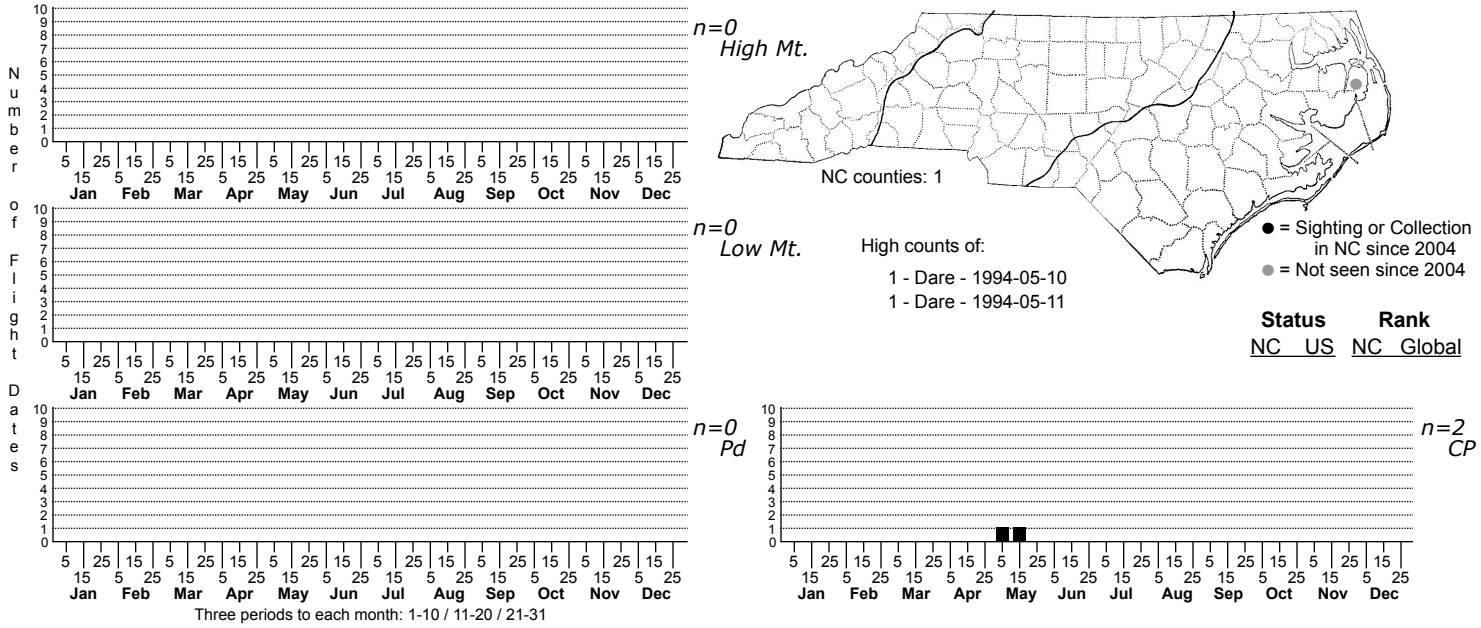
Hemipachnobia monochromatea Sundew Cutworm Moth



FAMILY: Noctuidae SUBFAMILY: Noctuinae TRIBE: Noctuini
TAXONOMIC_COMMENTS: Hemipachnobia is a North American genus composed of two species, both of which have been recorded in eastern North Carolina. The genus Hemipachnobia was defined by McDunnough in 1929, with H. monochromatea designated as the type species (McDunnough, 1929; Lafontaine, 1998). Although Smith (1891) tentatively listed subporphyrea as a synonym of monochromatea, other authors treated the two species as belonging to separate genera until relatively recently (Hall and Sullivan, 2000).

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1954, as Cerastis monochromatea); Lafontaine (1998)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Hooker (1919, as Epipsilia monochromatea); Forbes (1954, as Cerastis monochromatea); Lafontaine (1998); Wagner et al. (2011)

ID COMMENTS: A medium-sized Noctuine. The ground color is typically reddish-brown, occasionally with a tawny tint (Forbes, 1954; Lafontaine, 1998), as in our two specimens, although there is a a form in New Jersey that has a purplish color similar to specimens of subporphrea (D.F. Schweitzer, pers. comm.). The only conspicuous markings are the darker brown antemedian and postmedian lines; the antemedian is slightly excurved and the postmedian is somewhat dentate and outwardly bent at the end of the cell. A diffuse whitish subterminal line may be present in some specimens, separating the otherwise concolorous median and basal areas of the forewings from a paler subterminal band. The orbicular, reniform, and claviform spots are all obsolete, distinguishing Hemipachnobia species from those of Cerastis (Forbes, 1954). Monochromatea is similar but smaller than subpoprhyrea (Lafontaine, 1998). Although Lafontaine also stated that the postmedian is less serrated in monochromatea than in subporphyrea and the subterminal area usually more concolorous, these characters, as well as wing color and other features of the markings appear to overlap in at least some specimens of these two species. For that reason, as well as the conservation significance of records for either of these two species, we recommend that identities be established based on dissection of the males.

DISTRIBUTION: Appears to be restricted to the Albemarle-Pamilico Peninsula in the northern part of the Coastal Plain.

FLIGHT COMMENT: Our two records for this species come from early to mid-May, just beyond the latest records we have for H. subporphyrea. This difference, however, may be due to the more northerly location (and probably cooler microclimate) of the location where monochromatea was collected in the state.

HABITAT: Both of our records come from an extensive area of peatlands. One record was from a High Pocosin and the other from a Pond Pine Woodland. Both of these areas are located close to a large area of Low Pocosin that contains one of the largest concentrations in North Carolina of Cranberries and Sundews occurring in close association.

FOOD: Hooker (1919) described early instar larvae as feeding on the undersides of the leaves of Sundews (Drosera sp.), but later switching to feeding on Cranberry (Vaccinium macrocarpon). Timothy McCabe (pers. comm.) has also observed larvae feeding initially on Sundews but subsequently feeding on other species of Vaccinium. Wagner et al. (2011) also mention use of Sheep Laurel (Kalmia angustifolia) as another heath used in later instars.

OBSERVATION_METHODS: Comes well to blacklights but we are not aware of records from bait or from flowers.

NATURAL HERITAGE PROGRAM RANKS: G4 S1?

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

COMMENTS: The sole North Carolina occurrence of this species appears to be disjunct from the rest of its range; the next nearest known populations occur in New Jersey (Lafontaine, 1998). This species may also be an extreme habitat specialist, occurring in open peatland habitats that contain both Sundews and Cranberries (or other heaths). The sole North Carolina occurrence of this species is located at a site that is highly vulnerable to the effects of sea-level rise, including the destructive effects on peatlands due to salt-water intrusion. This species, thus, appears to be one of the most endangered species in the state.