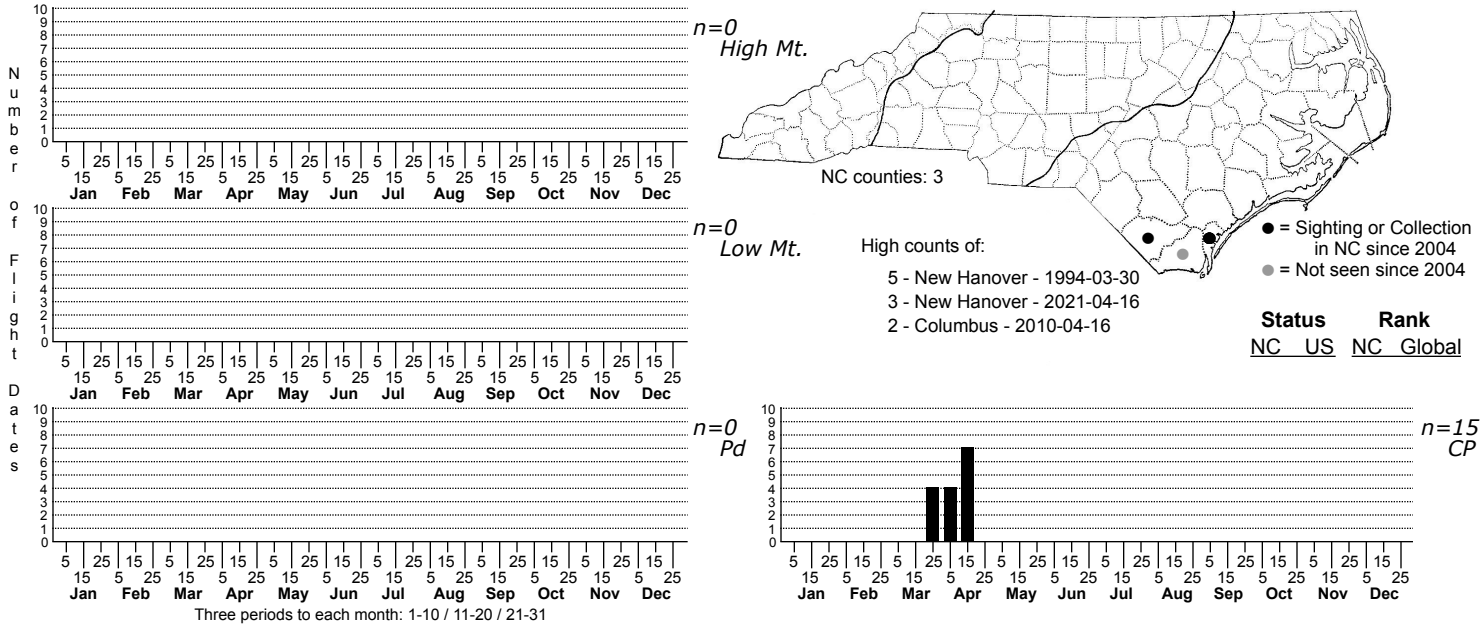
Drasteria graphica Graphic Moth



FAMILY: Erebidae SUBFAMILY: Erebinae TRIBE: Melipotini
TAXONOMIC_COMMENTS: One of 28 species in this genus that occur in North Carolina (Lafontaine and Schmidt, 2010), two of which have been recorded in North Carolina.

FIELD GUIDE DESCRIPTIONS: Covell (1984)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1954, describing both subspecies)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner et al. (2011, for the northern subspecies but mentioning the nominate form)

ID COMMENTS: Similar to some of the small species of Catocala of having a gray to brown forewing and a yellow and black banded hindwing. In males, the pattern on both of the wings is distinctively different from those of the Catocalas but similar to Drasteria grandirena and other members of the Melipotini, especially in the extremely undulating postmedian: it bulges outward at the end of the cell, enclosing a conspicuous pale area following the narrow reniform; it then makes a sharp sweep back upward to the lower end of the reniform and then retracting downward to the inner margin. The area between the postmedian and subterminal line is filled with black, similar to the basal area but strongly contrasting with the pale median area and post-reniform loop. In the nominate subspecies, the subterminal consists of a series of separate white dots; in subspecies graphica, the subterminal in usually continuous, although at least occasionaly interrupted (Forbes, 1954). In females of the nominate species, the dotted subterminal may be the most conspicuous markings on an otherwise dark gray forewing; in atlantica, females may have as strongly a contrasting pattern as in the males (Forbes).

DISTRIBUTION: All of our records come from the extreme southern part of the Outer Coastal Plain. Despite sampling conducted March and April in Hudsonia-containing habitat in the northern Outer Banks (Hall, 1999a), specimens of Drasteria graphica atlantica have not yet been found in the state.

FLIGHT COMMENT: Univoltine, flying in March and April (subspecies atlantica is bivoltine according to Wagner et al., 2011)

HABITAT: All of our records come from xeric sand ridges, mainly from Coastal Fringe Sandhills habitats bordering the mouth of the Cape Fear River, but also from at least one inland site that also contains an extensive sand ridge.

FOOD: The northern subspecies apparently feeds primarily on Wooly Beach Heather (Hudsonia tomentosa) but with at least a few records from another member of the Cistaceae, Beach Pinweed (Lechea maritima) (Wagner et al., 2011). Although we have populations of Hudsonia along the northern Outer Banks (as well as some places in the Mountains), our records for D. graphica all come from sites well outside the range of that plant. The same is true for Beach Pinweed, but several other species of Lechea occur in both the maritime dunes and inland sand ridges where we have records for the moth. Crocanthemum (= Helianthemum) species are another possibility, as members of the Cistaceae that also inhabit maritime and sandhills habitats (Weakley, 2016).

OBSERVATION_METHODS: Comes at least moderately well to blacklights.

NATURAL HERITAGE PROGRAM RANKS: G4 S1S2

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: Although much still needs to be learned about the host plants -- and hence habitats -- used by this species in North Carolina, it appears to be a habitat specialist based on our collection records. Most come from Coastal Fringe Sandhills, a habitat that is highly threatened by both coastal development and by sea level rise. Given that we have just thirteen records for this species from only three sites, this species appears to be of significant conservation concern within North Carolina.