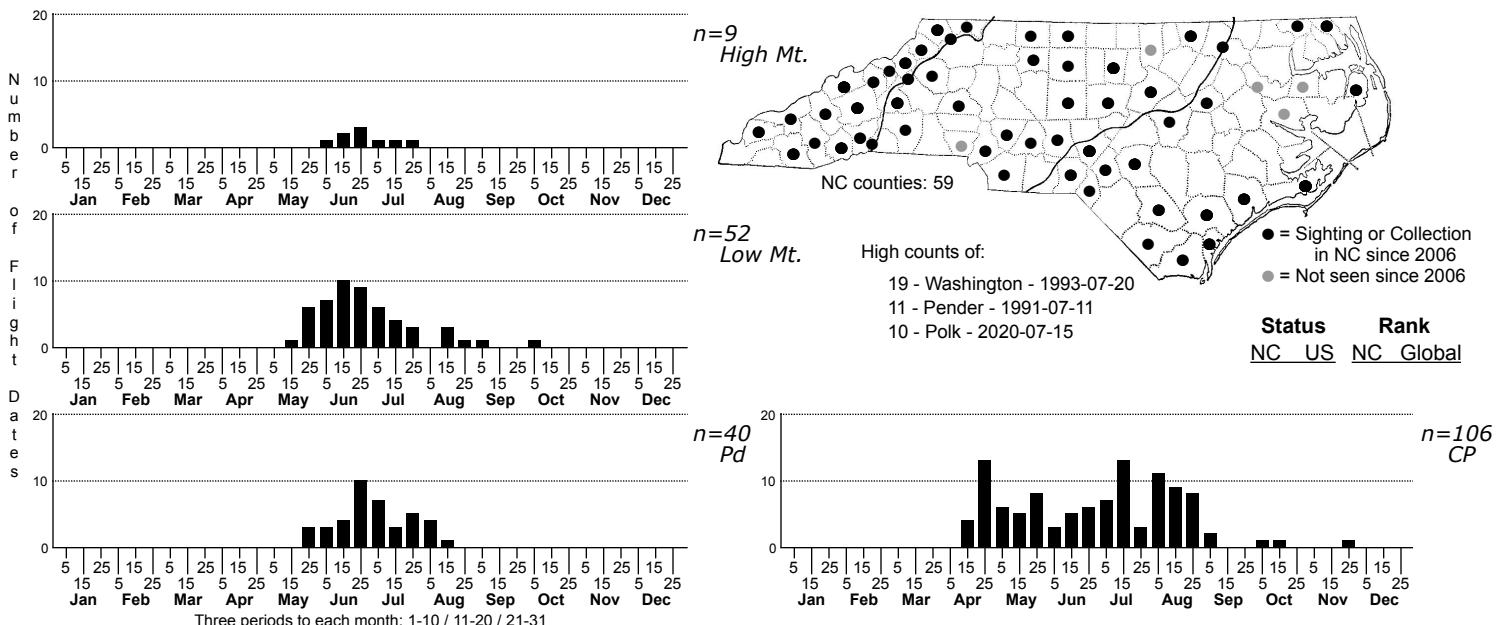


# *Euclea delphinii* Spiny Oak-slug Moth



FAMILY: Limacodidae SUBFAMILY: *Tribe:*

TAXONOMIC COMMENTS: *Euclea delphinii* is one of five species of *Euclea* that are found in North America, and the only one that is currently known from North Carolina.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1923)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner (2005); Marquis et al. (2019)

ID COMMENTS: In this species the palps, antennae, head, thorax and legs are all brown. The forewing ground color is similar, but with a tendency to be more reddish brown or faintly purplish brown. The forewing often has a violet sheen and typically bears a black discal spot. The forewing has a well-defined, elongated orange patch in the upper half of the median area and a smaller, less well-defined, orange patch or orange spot in the sub-terminal area near the apex that is sometimes reduced or absent. The most conspicuous marks are two white-edged, pistachio green patches. The largest is in the basal area below the inner margin, has a fingerlike or hook-like appendage on the anterior edge, and is immediately anterior and adjacent to the larger orange patch. The second is smaller and is in the postmedian area near the costa. It is immediately anterior and adjacent to the smaller orange patch (if present). The shape and distribution of green coloration can range from small discrete patches to connected patches that encompass much of the forewing (the "green form" is regularly encountered in the Midwest but is rare to very rare in the East).

Differentiation of *E. delphinii* from the very similar *E. nanina* can be a challenge. According to Neumoegen and Dyar (1894), the spots in *delphinii* are more angular, with the discal spot more extended than in *nanina*. In the latter the spots are more rounded and the discal spot in particular is more punctiform. According to J.D. Roberts (pers. comm. to P. Backstrom), the green basal patch is proportionally smaller than that of *E. nanina* and either borders or stops very close to vein CuA, not drifting over the vein. In *nanina* the green basal patch always rises just above vein CuA. Size is also indicative with *delphinii* always being the significantly larger of the two. Until these field marks are correlated with significant differences found in DNA or structural features, none of these differences can be considered definitive. In the meantime, we lean more towards the characters originally used by Neumoegen and Dyar (1894) and Dyar (1899). Length of the forewing should be recorded where possible, particularly if *nanina* is suspected.

DISTRIBUTION: *Euclea delphinii* is broadly distributed across most of the eastern US and in adjoining areas of southern Canada (Ontario; Quebec; New Brunswick). In the US the range extends from Maine southward to southern Florida, and westward to eastern Texas, Oklahoma, eastern Kansas, eastern North Dakota, Iowa and Minnesota. This species occurs statewide from the barrier islands in the east to higher elevations in the Blue Ridge.

FLIGHT COMMENT: The adults have been observed year-round in Florida and mostly from April through October elsewhere. As of 2023, our records extend from mid-April through late November. The adults fly primarily from May to August in the Piedmont and Blue Ridge, but have a more prolonged flight in the Coastal Plain.

HABITAT: Local populations are generally found in or near deciduous hardwoods. We have records from essentially all hardwood or mixed pine-hardwood habitats that occur across the state, including hydric, mesic, and xeric habitats. This species can also be found in semi-wooded residential neighborhoods, along fencerows, and in other habitats where hardwood trees are present.

FOOD: The larvae are highly polyphagous and feed on a large number of hardwood trees and shrubs, with oaks (*Quercus*) being the most important host taxa in many areas (Dyar, 1897b; Wagner, 2005; Heppner, 2007; Robinson et al., 2010; Murphy et al., 2011; Marquis et al., 2019). The reported host include Sugar Maple (*Acer saccharum*) and other maples, alders (*Alnus*), serviceberries (*Amelanchier*), *Andromeda*, birches (*Betula*), American Hornbeam (*Carpinus caroliniana*), Eastern Redbud (*Cercis canadensis*), Bitternut Hickory (*Carya cordiformis*), Pignut Hickory (*C. glabra*), American Chestnut (*Castanea dentata*), hackberries (*Celtis*), cocoplums (*Chrysobalanus*), *Citrus* species, Seagrapes (*Coccoloba uvifera*), hawthorns (*Crataegus*), American Persimmon (*Diospyros virginiana*), American Beech (*Fagus grandifolia*), figs (*Ficus*), ashes (*Fraxinus*), Honey Locust (*Gleditsia triacanthos*), *Hibiscus*, Dahoo Holly (*Ilex cassine*), Yaupon Holly (*I. vomitoria*), magnolias (*Magnolia*), commercial apples (*Malus domestica*), Common Waxmyrtle (*Morella cerifera*), Black Gum (*Nyssa sylvatica*), American Sycamore (*Platanus occidentalis*), poplars (*Populus*), Carolina Laurel Cherry (*Prunus caroliniana*), Black Cherry (*P. serotina*), Common Pear (*Pyrus communis*), White Oak (*Quercus alba*), Bear Oak (*Q. ilicifolia*), Shingle Oak (*Q. imbricaria*), Laurel Oak (*Q. laurifolia*), Northern Red Oak (*Q. rubra*), Black Oak (*Q. velutina*), Live Oak (*Q. virginiana*), Red Mangrove (*Rhizophora mangle*), rhododendrons (*Rhododendron*), brambles (*Rubus*), Weeping Willow (*Salix babylonica*) and other willows, greenbriars (*Smilax*), American Basswood (*Tilia americana*), elms (*Ulmus*) and blueberries (*Vaccinium*).

In North Carolina, larvae have been recorded on hickory (*Carya* spp.), Sourwood (*Oxydendrum arboreum*), cherry (*Prunus* sp.), and White Oak (*Quercus alba*).

OBSERVATION METHODS: The adults are readily attracted to lights, but like other limacodids do not come to bait or visit flowers. The larvae are frequently seen in the late summer and early autumn, particularly when they leave their host plants and wander in search of pupation sites.

NATURAL HERITAGE PROGRAM RANKS: G5 [S5]

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

COMMENTS: This species is common across the state and utilizes a very broad range of habitats and host plants. It appears to be quite secure in North Carolina.