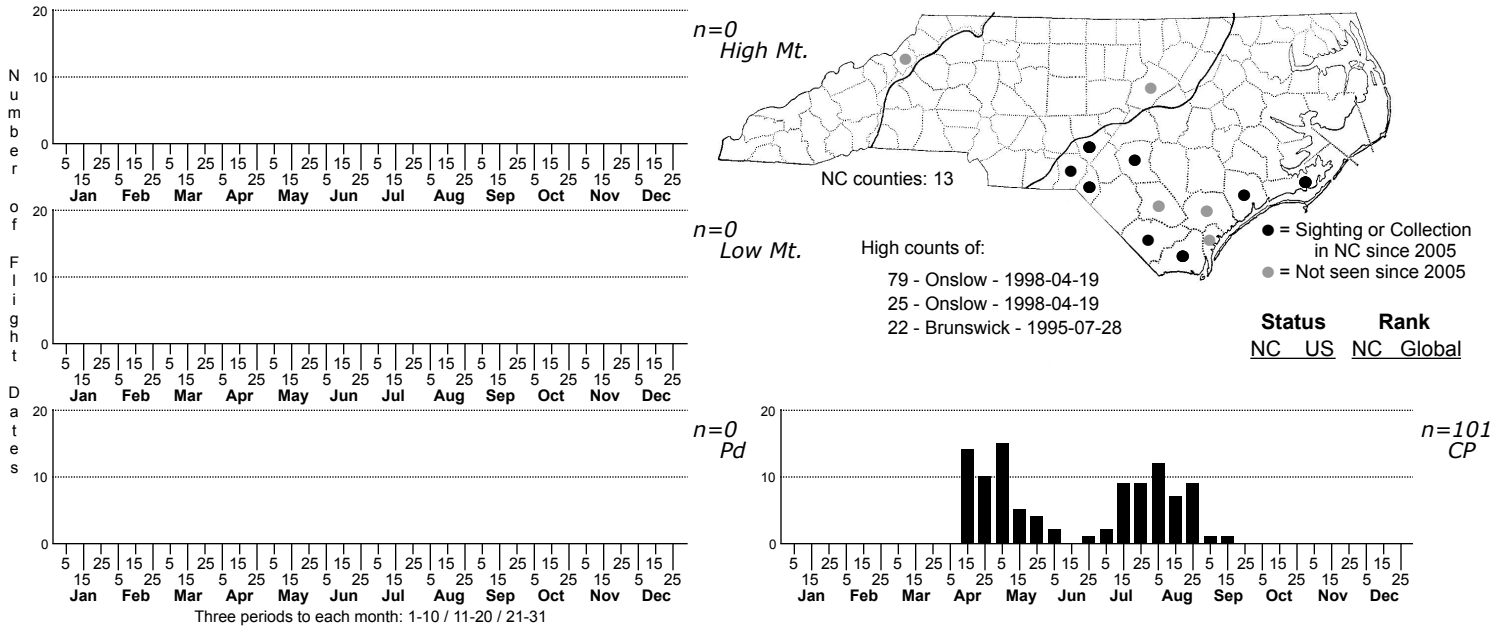
Datana ranaeceps Post-burn Datana



FAMILY: Notodontidae SUBFAMILY: Phalerinae TRIBE:
TAXONOMIC_COMMENTS: One of thirteen species in this genus that occur in North America (Lafontaine and Schmidt, 2010), nine of which have been recorded in North Carolina.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Schweitzer et al. (2011)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1948); Schweitzer et al. (2011)

ID COMMENTS: A moderately large Prominent. The forewings are deep brown to reddish brown and are characteristically heavily frosted with gray, often producing a violaceous sheen (Forbes, 1948). The postmedian line (the outermost complete transverse line) is located approximately one quarter the winglength in from the outer margin, whereas it is located much closer to the outer margin in other species of Datana (Forbes, 1948; Datana robusta also appears to have a wide terminal area).

DISTRIBUTION: All recent records come from the Coastal Plain, including the Fall-line Sandhills; historic records from the Piedmont and Mountains need to be confirmed

FLIGHT COMMENT: Appears to have two definite flight in North Carolina, in the spring and later in the summer

HABITAT: Except for two historic records from Brimley (1938), where the habitat is not described, all records in North Carolina come from Longleaf Pine habitats and virtually all from wet savannas, flatwoods, or seepage areas or from peatland ecotones adjacent to Sandhills habitats. These sites all support populations of the heath species that are the host plants used by ranaceps, particularly Lyonia mariana (Weakley, 2015). These habitats also burn on a regular basis, at least under natural conditions, which appears to be a requirement of this species. While other possible host plants, such as Eubotrys racemosus, also occur in peatlands and swamps, we have no records of D. ranaeceps from habitats where fire is much more irregular in its occurence.

FOOD: Larvae are stenophagous, feeding on heaths in the genera Lyonia and Eubotrys (= Leucothoe) (Wagner, 2005). Schweitzer et al. (2011) state that Staggerbush (Lyonia mariana) is the primary host used in New Jersey but that Swamp Fetterbush (Eubotrys racemosus) may also be used by late instars and that Vaccinium may also be used when the normal hosts are defoliated. In North Carolina, J.B. Sullivan recorded a larva on Lyonia.

OBSERVATION_METHODS: Comes well to blacklights but adults have short mouthparts and may not feed; they have not been recorded at bait or flowers. Larvae are conspicuous, not hiding and often clustered together; in recently burned areas, they may are unlikely to go unnoticed.

NATURAL HERITAGE PROGRAM RANKS: G3G4 S2S3

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: While the host plants used by D. ranaeceps are common and widespread in the Coastal Plain, the moth is rarely found outside frequently burned areas: it was found very commonly in the artillery impact areas at Camp Lejeune, most of which burn on an annual basis, but only rarely in less-frequently burned areas. The inference is that this species is a nearly obligate fire-follower -- its larvae feeding primarily on the fresh foliage of plant regenerating immediately following a burn -- and that it has been severely affected by the widespread suppression of wildfires, along with fragmentation of its habitats. Far more than other Longeaf Pine associates - as reduced as they all are by habitat loss, degradation, and fragmentation -- this species appears unlikely to persist without careful management of extensive, fire-maintained landscapes.