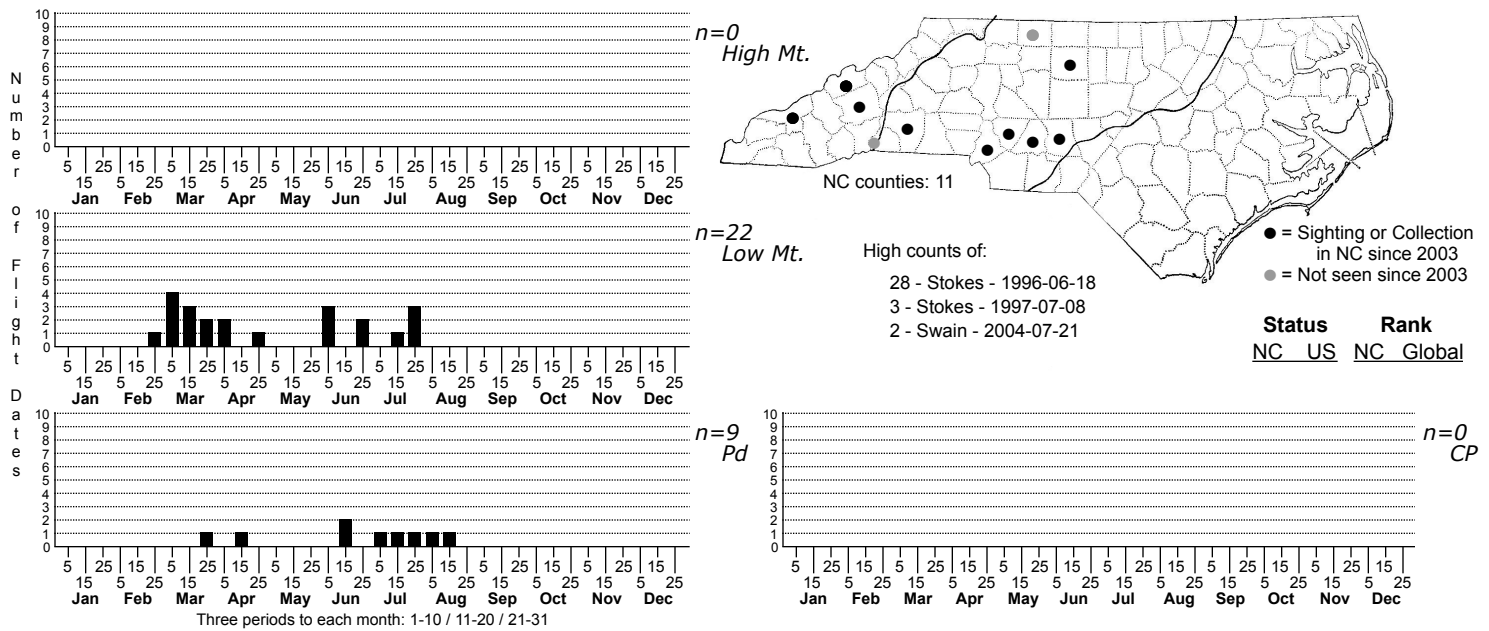


Zale bethunei Bethune's Zale



FAMILY: Erebiidae SUBFAMILY: Erebinae TRIBE: Ophiusini

TAXONOMIC_COMMENTS: One of 39 species in this genus that occur north of Mexico, 23 of which have been recorded in North Carolina

FIELD GUIDE DESCRIPTIONS: Covell (1984)

ONLINE PHOTOS: MPG, Bugguide

TECHNICAL DESCRIPTION, ADULTS: McDunnough (1943); Forbes (1954); Rings et al. (1992)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1954); Wagner et al. (2011)

ID COMMENTS: Belongs to a group of pine-feeding Zales, all of which possess a sharp, outward-pointing tooth on the antemedian line where the radial vein crosses. *Bethunei* is fairly easy to recognize, being reddish brown with a heavy overlay of blackish scales. The median line is often composed of triple lines of black, strongly contrasting with lighter reddish brown areas before and after; the postmedian and subterminal lines are also usually black (Forbes, 1954; Rings et al., 1992).

DISTRIBUTION: Probably follows the distribution of Scrub Pine in North Carolina, which is absent over the Coastal Plain but widespread in the Piedmont and Mountains.

FLIGHT COMMENT: Has at least two broods and a partial third in North Carolina (Wagner et al., 2011); largely overlapping with *Z. metata*, which also feeds on Scrub Pine

HABITAT: Scrub Pine grows typically on dry upland sites, including old fields (Weakley, 2012); it is also common on badly eroded sites or other areas with severe soil disturbance. Our records come primarily from dry, upland slopes in the Piedmont and Mountains.

FOOD: Monophagous, feeding only on Scrub Pine (*Pinus virginiana*) (Forbes, 1954; Wagner et al., 2011)

OBSERVATION_METHODS: May come poorly to lights, which could explain the scarcity of records for what should be a fairly common species. Probably comes well to bait, like other members of this genus.

NATURAL HERITAGE PROGRAM RANKS: G5 S3S5

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

COMMENTS: Although seemingly an uncommon species in North Carolina, too little is known about the distribution and habitat affinities of *bethunei* to estimate its conservation needs.