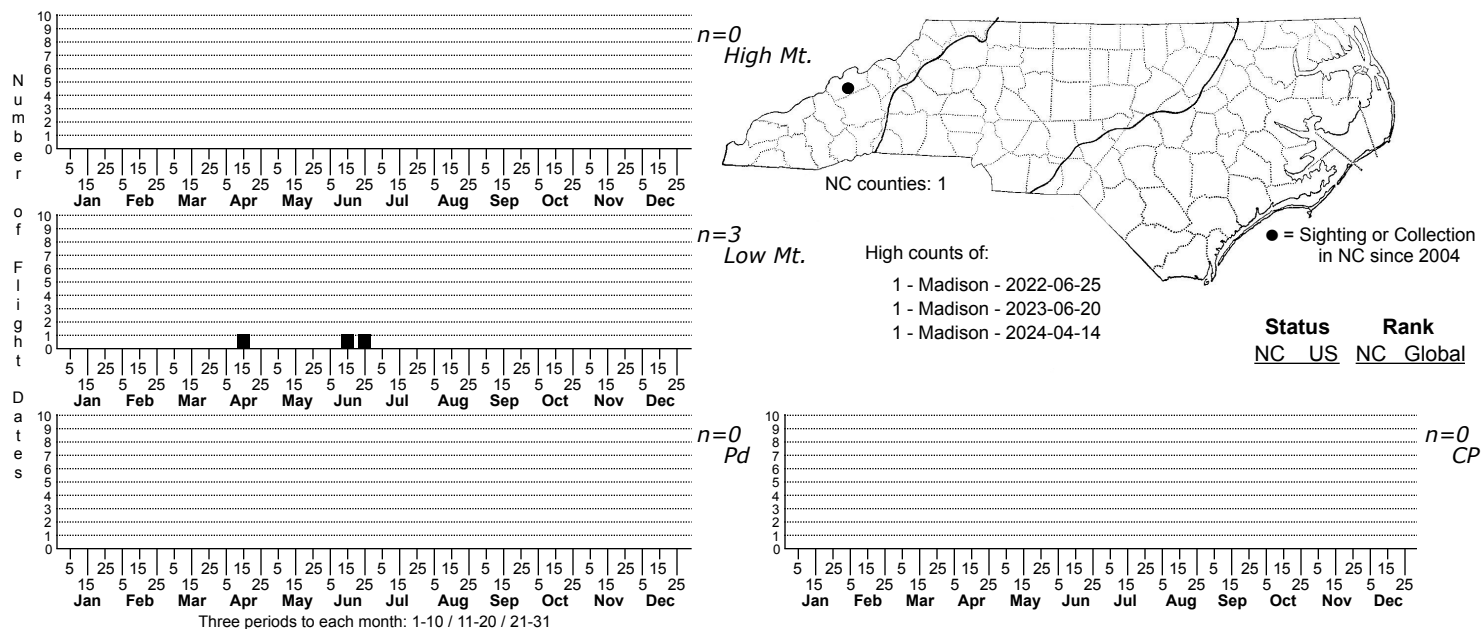


Cosmopterix pulchrimella Beautiful Cosmopterix Moth



FAMILY: Cosmopterigidae SUBFAMILY: Cosmopteriginae TRIBE: [Cosmopterigini]

TAXONOMIC_COMMENTS: *Cosmopterix* is a very large genus of small, colorful moths that are found on every continent except Antarctica. There are 31 species that are currently recognized in North America, and all are leafminers.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Hodges (1978); Koster (2010)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Koster (2010)

ID COMMENTS: The following description focuses on forewing and antenna patterning, and is based on a more detailed description presented by Koster (2010). The vertex has two lateral white lines and a medial line on a dark brown ground color, while the dorsum of the thorax only has the medial line. The scape is white below and brown above with a medial white line. The antenna is dark brown with a white line near the base that continues on the shaft as a series of dots to beyond one-half the length. This is followed by the following color sequence: five dark brown segments, one white segment, one dark brown segment, one white segment, three dark brown segments, one white segment, approximately twelve dark brown segments, three white segments, and then five dark brown segments at the apex (Koster, 2010). The forewings are dark brown basally and distally, and there are three silvery white lines in the basal area that sometimes have a golden gloss. These include a subcostal line that is nearest to the base and bends away from the costa distally, a shorter medial line that is underneath the distal end of the subcostal, and a subdorsal line that is as long as the subcostal, but further from the base. A bright orange to orange-brown fascia that narrows towards the dorsum occurs beyond the middle of the wing. It is bordered internally and externally by a silvery fascia with internal black borders (Koster, 2010; Hodges, 1962). There is also a broad white streak that extends from just beyond the orange-brown fascia to the costa. There is a white streak or spot at the apex of the wing, and a bluish white spot in the middle of the outer margin. The hindwings are fuscous-brown. Two specimens that were collected at a site in Madison County had the orange to orange-brown fascia greatly subdued or missing, but otherwise conformed to this species.

DISTRIBUTION: *Cosmopterix pulchrimella* occurs in southern Canada, from Massachusetts to southern Florida, and further west from southern Wyoming to southern Arizona and New Mexico. It also has been introduced into Europe, the Azores, the Canary Islands and Madeira. As of 2022, we have only one record for North Carolina.

FLIGHT COMMENT: This species appears to be bivoltine in the northern portion of the range, but in the southernmost portions of the range it is thought to breed year-round.

HABITAT: All of our records as of 2024 are from a single site in Madison County that has extensive stands of Greenfruit Clearweed in an open, bottomland site.

FOOD: Larvae feed on members of the Urticaceae. The known host plants include Pennsylvania Pellitory (*Parietaria pensylvanica*) and Greenfruit Clearweed (*Pilea pumila*; Koster, 2010).

OBSERVATION_METHODS: Adults are attracted to UV lights, and can be reared from the host plants.

NATURAL HERITAGE PROGRAM RANKS: GNR S1S3

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

COMMENTS: