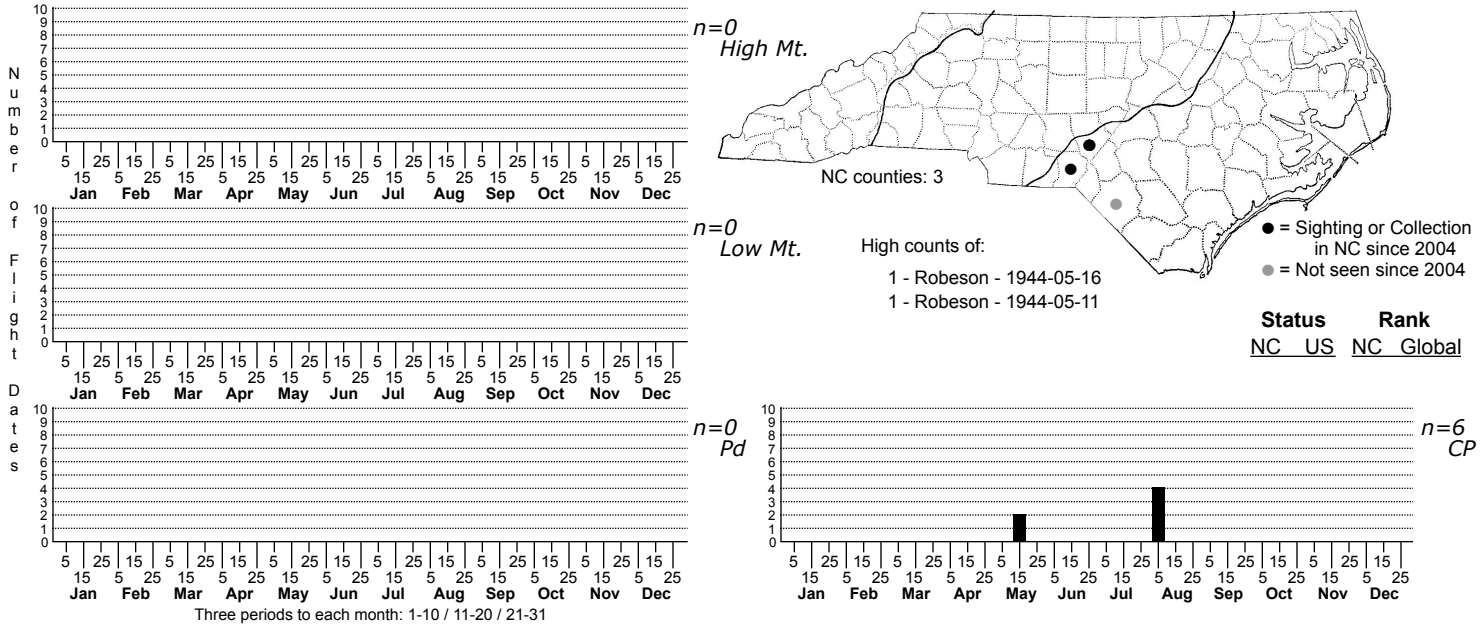
Cosmopterix magophila No common name



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:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Hodges, 1962, 1978; Koster, 2010.
TECHNICAL DESCRIPTION, IMMATURE STAGES:

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 and thorax region are dark brown with three white lines, including a white median line. The scape is white below and dark brown above with a white line. The antenna is dark brown with a white line that extends from the base to beyond one-half the length, and with the middle section interrupted (dotted). Moving from there towards the apex, there are five dark brown segments, two white segments, two dark brown segments, two white segments, ten dark brown segments, and eight white segments at the apex. The forewing is brown with five white lines in the basal area. These include 1) a short costal line from one-third the length of the wing to the transverse fascia, 2) a subcostal line from the base to one-quarter the length of the wing that bends from the costa in the distal half, 3) a short medial line above the fold that ends just beyond the subcostal, 4) a subdorsal line that is about as long as the medial but slightly further from the base, and 5) a dorsal line from the base to one-quarter of the wing length. A broad yellow transverse fascia is present beyond the middle that has a very small apical protrusion (point). The fascia is bordered at the inner edge by two silver metallic tubercular subcostal and subdorsal spots. The subcostal spot is edged by a small patch of blackish brown scales on the outside, while the subdorsal spot is slightly further from the base and a little larger than the subcostal spot. The transverse fascia is bordered at the outer edge by two similar colored costal and dorsal spots. The dorsal spot is three times as large as the costal and more towards the base. Both spots are partly lined with brown inwardly. A relatively broad white costal streak occurs from the outer costal spot to the costa. Finally, there is a narrow white apical line from or just beyond the apical protrusion that slightly widens in the apical cilia. The cilia are brown around the apex, but paler towards the dorsum. The hindwing is dark brownish gray.

This species cannot be reliably distinguished from C. nieukerkeni based on external features (Koster, 2010). C. nieukerkeni has only been found in South America to date, but could potentially be in the US given the wide range of many neotropical Cosmopterix.

DISTRIBUTION: Meyrick (1919) originally described C. magophila based on 12 specimens that were collected in 1918 from Southern Pines, and A. B. Klots collected two specimens from Maxton in 1944. We are unaware of any other specimens have been documented in North Carolina since then. Populations have also been found in Arkansas, Oklahoma, Michigan and the Dominican Republic (Koster, 2010).

FLIGHT COMMENT: The adults have been collected in May (North Carolina), August and September. Active mines have been found in Oklahoma from July to September, with adults emerging in August and September (Eiseman, 2019).

HABITAT: The larvae feed on crabgrass, which grows in a variety of disturbed habitats such as mowed roadsides, sandy fields, gardens and croplands.

FOOD: The only documented host to date is Southern Crabgrass (Digitaria ciliaris).

OBSERVATION_METHODS: Adults appear to only rarely visit lights. Perhaps the most productive way to obtains adults is by searching for mines on crabgrass and rearing the adults.

NATURAL HERITAGE PROGRAM RANKS: [GNR] S2S3

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

COMMENTS: For a species that feeds on such a common host plant, Cosmopterix magophila is very poorly known, with few records found throughout its range in eastern North America (Moth Photgraphers Group, accessed 2020).