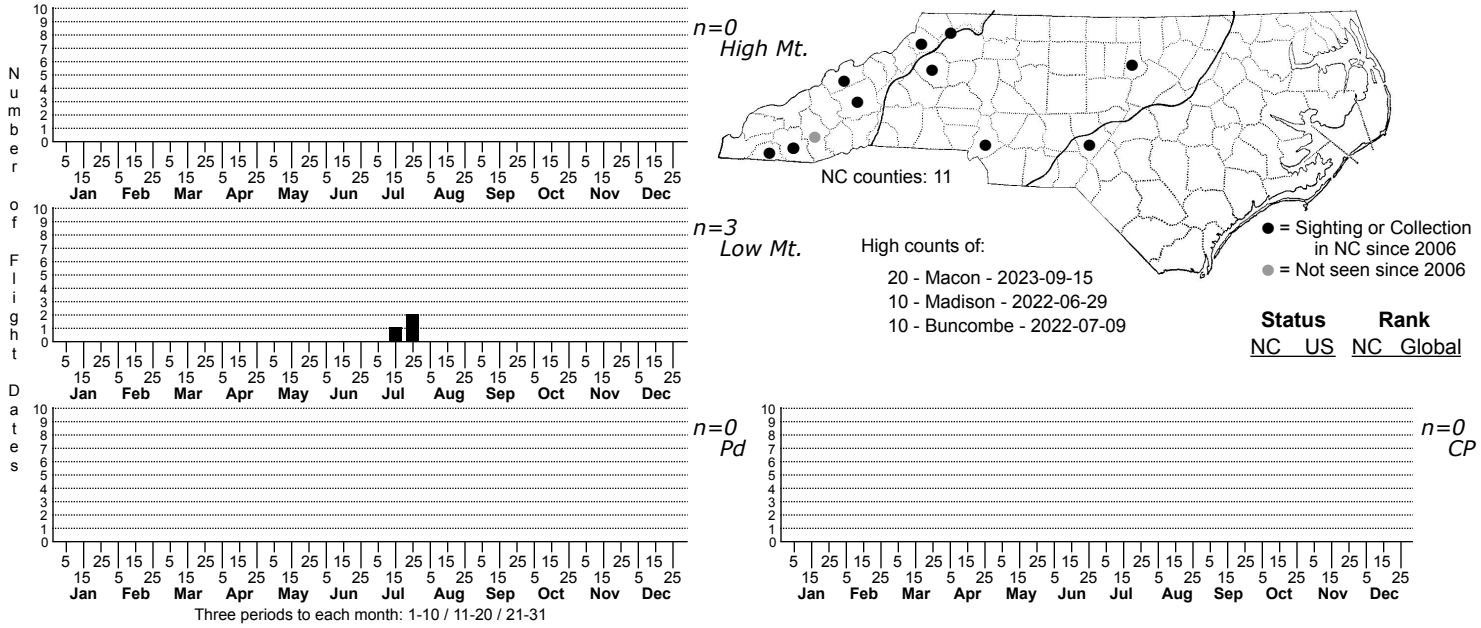
Cosmopterix clandestinella None



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, 1978; Koster, 2010.
TECHNICAL DESCRIPTION, IMMATURE STAGES: Eiseman, 2019.

ID COMMENTS: The following description focuses on forewing and antenna patterning, and is based on a more detailed description presented by Koster (2010). The head and thorax lack the white, median lines that are present in some Cosmopterix species. The vertex has two lateral lines, but these are absent from the thoracic region. The antenna is brown with an interrupted (dotted) white line from the base to beyond one-half the length, with a short uninterrupted section distally. When moving towards the apex, the interrupted section is followed by the following segment sequence: six brown segments, six white segments, eight brown segments, six white segments, and one brownish segment at the apex. The forewing is dark brown and has three short silver metallic streaks of equal length at one-fifth the wing length. These include a subcostal and a medial streak just above the fold, and a slightly wider subdorsal streak just below the fold. Just beyond one-half the length, there is a dark yellow transverse fascia that narrows towards the dorsum. This is bordered on the inner edge by a slightly inwardly oblique tubercular silver metallic fascia, and bordered at the outer edge by elongated costal and dorsal spots. The dorsal spot is three times the size of the costal spot, and more towards the base. The dark yellow transverse fascia is separated from the silver fascia and the two spots by the dark brown ground color. The costal spot is outwardly edged by a narrow white costal streak that extends to the costa. The apical line occurs as a silver metallic spot with bluish reflection in the middle of the apical area, and a broad white streak in the cilia at the apex. The cilia are dark brown, but paler on the dorsum towards the base. The hindwing is dark grayish brown.

DISTRIBUTION: Cosmopterix clandestinella is widely distributed throughout the eastern US. Populations occur from Michigan, Ohio, and Massachusetts southward to Kentucky, Virginia, and North Carolina. As of 2022, we have only a few site records for North Carolina, including historical records by A. F. Braun from Jackson County. This species is presumably more common in the Blue Ridge and Piedmont where the host species is most common. It has likely been overlooked due to the small size of the leaf mines.

FLIGHT COMMENT: Local populations appears to be bivoltine (Eiseman, 2019). In populations farther north, the adults emerge from late May to early June and again in late July and August (Hodges, 1978; Koster, 2010). As of 2022, we have records of occupied mines from late June through mid-July, along with two adult records from July.

HABITAT: Local populations are most likely to be encountered in shaded to partially shaded woods, and along ditches and low areas where the host species occurs.

FOOD: Larvae feed on witchgrass (Dichanthelium sp.) (Eiseman, 2022). As of 2024, we have records for Bosc's Witchgrass (D. boscii), Deer-tongue Witchgrass (D. clandestinum), and Many-flowered Witchgrass (D. polyanthes).

OBSERVATION_METHODS: The adults occasionally visit lights. We recommend searching Dichanthelium leaves for the mines and rearing the adults. The mines should be evident by late April or May, and again later in the summer. Look for the presence of black frass protruding from the ends of elongated mines that are on the undersides of the host grass.

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: