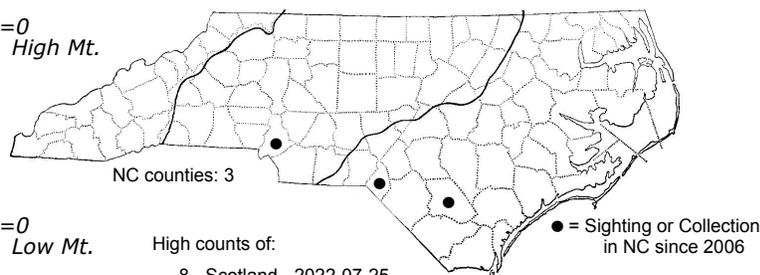
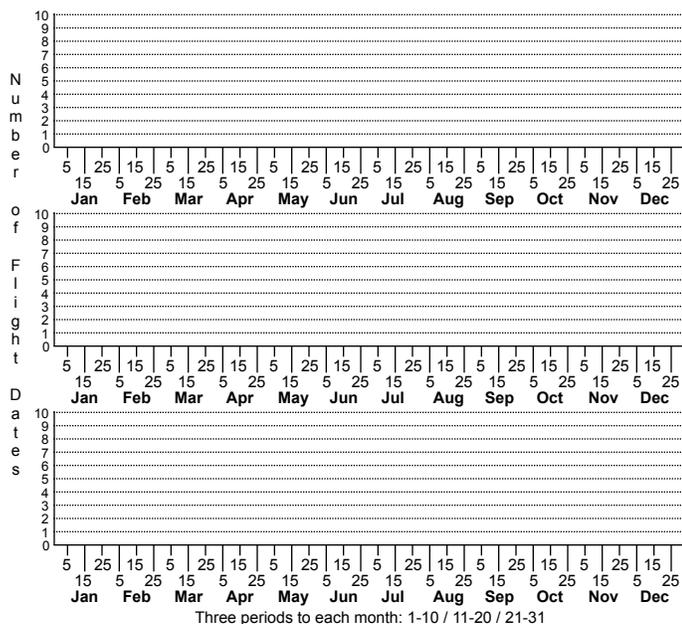
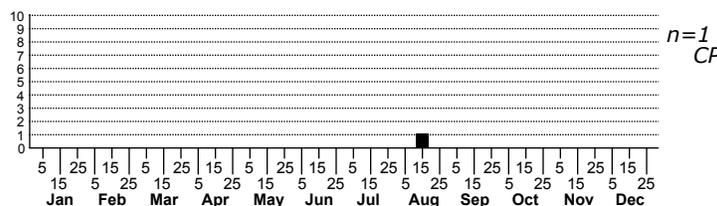


*Cosmopterix lespedezae* None



High counts of:  
 8 - Scotland - 2022-07-25  
 8 - Bladen - 2025-07-10  
 4 - Mecklenburg - 2021-09-19

Status		Rank	
NC	US	NC	Global



FAMILY: Cosmopterigidae SUBFAMILY: Cosmopteriginae TRIBE:  
 TAXONOMIC\_COMMENTS:

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Koster (2010)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun (1930)

ID COMMENTS: *Cosmopterix lespedezae* closely resembles several other *Cosmopterix* species (e.g., *C. teligera*) and cannot be identified with certainty using external characters (Koster, 2010). Accurate identification is best achieved by using genitalia or by rearing adults from host plants. The following description focuses on forewing and antenna patterning, and is based on a more detailed description presented by Koster (2010) that applies to both *C. lespedezae* and *C. teligera*.

The head and dorsal thorax region have three white lines (two lateral; one medial). The scape is white below and dark brown above with a white anterior line. The antenna is dark brown, with a short white line at the base that changes into an interrupted line that extends to beyond one-half the wing length. This is followed towards the apex by the following sequence: six dark brown segments, two or three white segments, two dark brown segments, two white segments, ten dark brown segments, and eight white segments at the apex. The forewing is dark brown with four narrow white lines in the basal area. These consist of 1) a subcostal line that extends from the base to one-quarter of the wing length and bends away from the costa in the distal half, 2) a short medial line that is above the fold in the center and under the apex of the subcostal, 3) a subdorsal line that is about twice as long as the medial, but slightly further from the base, and 4) a short and very narrow dorsal line from beyond the base to one-quarter the length of the wing. The white lines in the basal area can differ in length, especially the subcostal which starts from the base in the North American specimens and beyond the base in the Neotropical ones. An orange-yellow fascia is present just beyond the middle that narrows towards the dorsum. The fascia has a narrow apical protrusion, and is bordered at the inner edge by a tubercular silver to pale golden metallic fascia. There is a small subcostal patch of blackish brown scales on the outside. The outer edge of the orange-yellow fascia is bordered by two tubercular, silver or pale golden, metallic costal and dorsal spots. The dorsal spot is more than three times as large as the costal spot and more towards the base. Both spots are irregularly lined with dark brown on the inside. The transverse fascia, tubercular fascia, and spots are variable in width. There is a narrow white costal streak that extends from the costal spot to the costa. Finally, there is a white apical line that extends from or just beyond the apical protrusion to the cilia. This line is sometimes interrupted in the middle. The cilia are dark brown, but paler towards the dorsum. The hindwing is brownish gray and the cilia brown. Although *C. lespedezae* cannot be reliably distinguished from certain other *Cosmopterix* based on external morphology, the leaf mines are distinctive.

DISTRIBUTION: *Cosmopterix lespedezae* has been found at scattered localities in the eastern US, including Mississippi, North and South Carolina, Kentucky, Ohio, Arkansas and Texas. Ken Kneidel recently found the first North Carolina record based on leaf mines on a *Desmodium* and it has since been found at a few other sites in the Sandhills and vicinity.

FLIGHT COMMENT: Moths are on the wing from early July through mid-September (Hodges, 1978).

HABITAT: Populations are primary associated with early successional or open woodland habitats that support the host species.

FOOD: The hosts are poorly documented, but include several genera of legumes, including *Lespedeza* and *Desmodium* (Eiseman, 2022). In North Carolina, adults have been reared from *Desmodium*, including Velvet Tick-trefoil (*D. viridiflorum*).

OBSERVATION\_METHODS: We recommend searching for the rather distinctive leaf mines and rearing the adults.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S4

STATE PROTECTION:

COMMENTS: This species was only recently discovered in North Carolina and we currently do not have sufficient information to determine its conservation status.