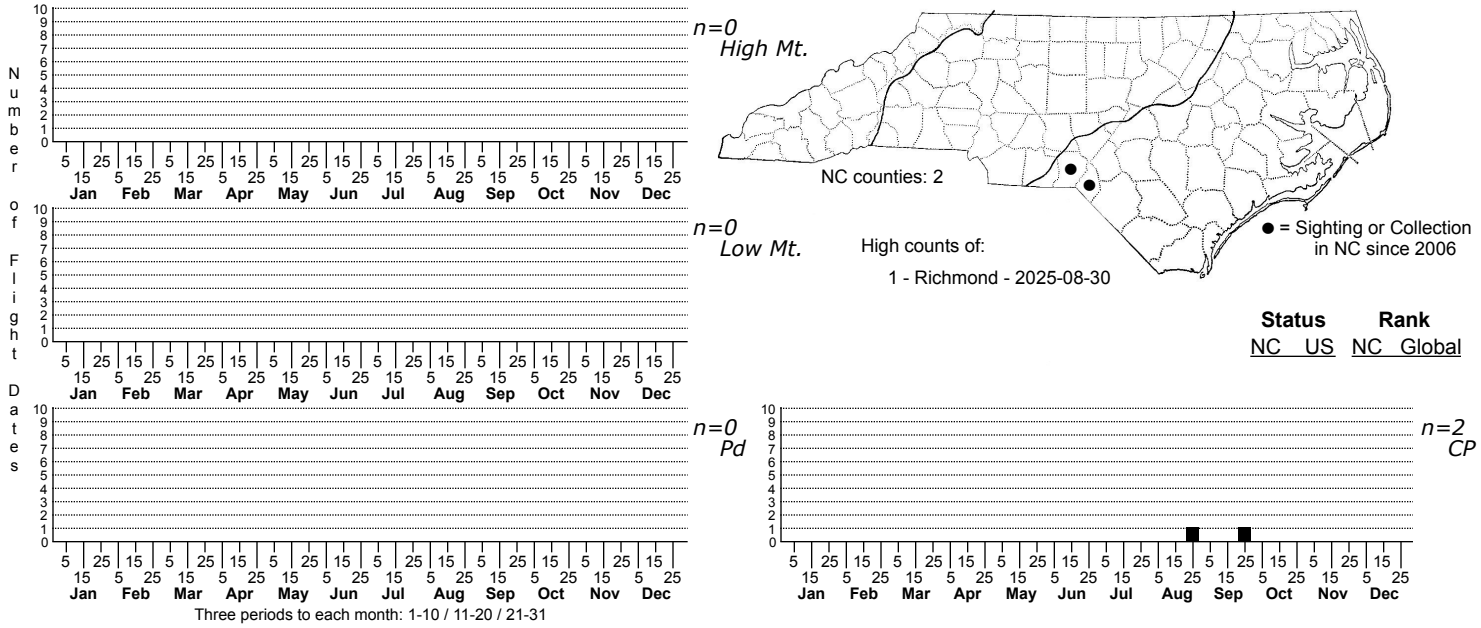
Isophrictis rudbeckiella None



FAMILY: Gelechiidae SUBFAMILY: Anomologinae TRIBE:
TAXONOMIC_COMMENTS: As currently recognized, Isophrictis rudbeckiella is widely distributed across North America and likely is a species complex. BOLD currently showing five BINS, with several northern and western groups possibly representing undescribed species. Here, we only cover populations that occur in eastern North America.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Bottimer (1926)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Bottimer (1926)

ID COMMENTS: Isophrictis rudbeckiella is a small moth with an overall grayish-brown color and a recurved labial palp that has long, rough, spreading hairs beneath the second segment. The following detailed description is based mostly on that of Bottimer (1926).

The antenna has alternating light-tan and dark-brown to blackish annulations, except for the basal joints that are lighter. The labial palp has a whitish to light-brown third segment, with the third segment being about as long as, or slightly shorter than, the second segment. The second segment is medium-brown and has a conspicuous tuft of long, spreading, brown hairs that ascend forward. The face is white, and the head and thorax are covered with white-tipped dark scales that produce a grainy appearance.

The forewing has patches and lines of white-tipped dark scales that produce a fine-grained, salt-and-peppery ground color. The ground is often overlain with two narrow longitudinal light tan to golden stripes with a black spot on the apical third of each. The first is centrally located and extends from the sub-basal region to around one-half the wing length, while the second is between it and the costa, and positioned slightly more apically. Additional shorter lines of similar color are sometimes evident, especially on the apical third where they tend to project towards the apex and are surrounded by a <-shaped group of grainy scales. Individuals vary in the degree of development of the light-colored lines, and in some specimens the primary and secondary lines may be faint or absent. The fringe is light-fuscous with two dark transverse lines, and the hindwing is dark silvery fuscous with light-fuscous cilia. The legs are silvery white and heavily overlaid with fuscous on the outside.

Isophrictis anteliella is very similar to A. rudbeckiella, but has an oblique white line at around three-fourths that extends to the outer margin, and a rich fawn-brown color due to the absence of white-tipped, dark scales on the head, thorax and forewing as seen in A. rudbeckiella. A third species is present in the Sandhills that appears to be undescribed based on the genitalia, so we recommend dissecting all specimens from this region of the state.

DISTRIBUTION: Populations that are currently assigned to I. rudbeckiella occur in both eastern and western North America and likely constitute a species complex. Only populations in the East are covered here, where they occur in Ontario and Quebec, and in the US from Maine, Massachusetts and New York westward to Ohio, Illinois, Wisconsin and Missouri. The range extends southwestward mostly through the Appalachian Region to eastern Tennessee and North Carolina, then onward to Alabama, Mississippi, Louisiana and eastern and central Texas. As of 2025, we have two records from the Sandhills that we have assigned to this species. The taxonomic status of these populations is not fully understood due to the presence of an apparently undescribed species that occurs in the same region.

FLIGHT COMMENT: Adults in eastern North America have been found from April through October. As of 2025, our two records are from August and September.

HABITAT: As of 2025, both of our records come from bean dips in the Fall-line Sandhills.

FOOD: As of 2025, the larvae are only known to feed on coneflowers (Rudbeckia spp.; Braun, 1921; Bottimer, 1926). The reported hosts include Black-eyed Susan (R. hirta) and Giant Coneflower (R. maxima).

OBSERVATION_METHODS: The adults are occasionally found at lights and the larvae can be found in developing heads of coneflowers.

NATURAL HERITAGE PROGRAM RANKS: GNR SNR [S1S2]

STATE PROTECTION:

COMMENTS: As of 2025, we have two records from the Sandhills that we have assigned to this species. The taxonomic status of the Sandhills populations is not fully understood due to the presence of an apparently undescribed species that occurs there.