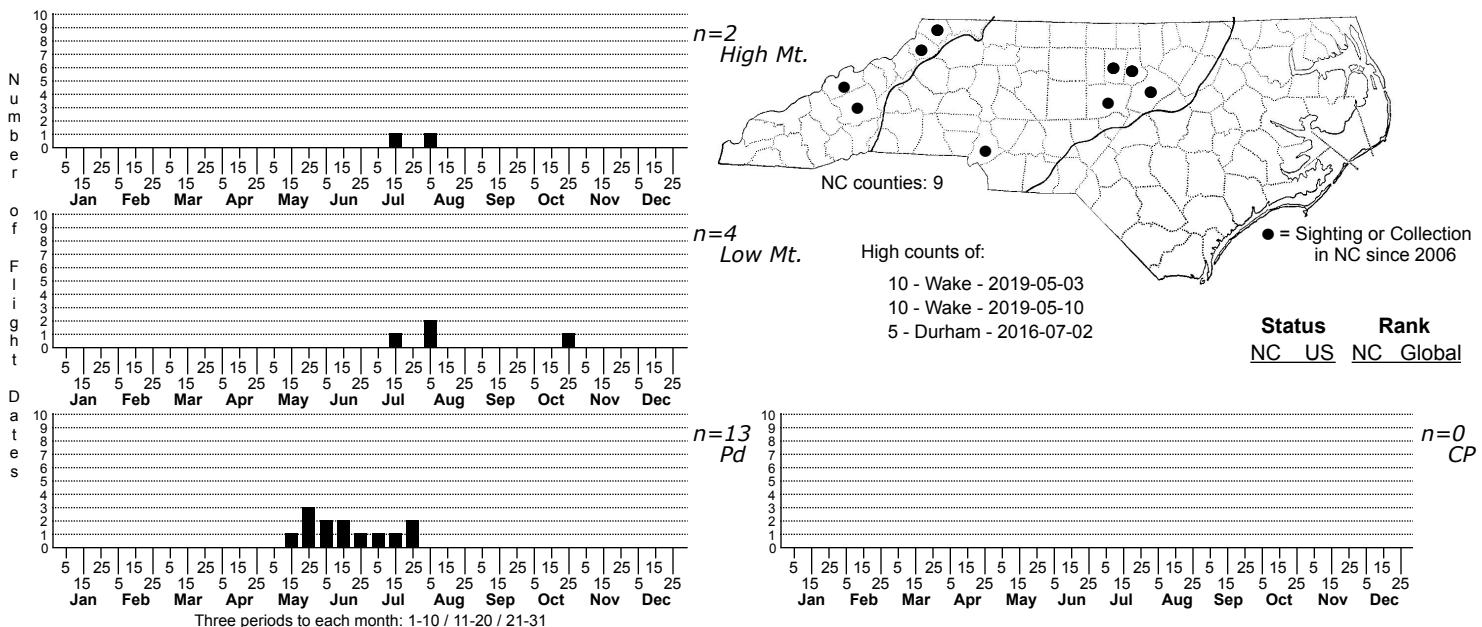


Caloptilia ostryaeella Ironwood Leafcone Moth



FAMILY: Gracillariidae SUBFAMILY: Gracillariinae TRIBE: [Gracillariini]

TAXONOMIC COMMENTS: *Caloptilia* is a large genus with nearly 300 described species; 64 species have been described in North America north of Mexico. The larvae begin as leaf-mining sap-feeders, but the latter instars usually exit the mines and feed within a conical roll that begins at the leaf apex or at the tip of a leaf lobe.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Braun, 1912.

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun, 1912; Eiseman, 2019.

ID COMMENTS: This species is unusual among our *Caloptilia* in showing seasonal dimorphism that involves summer and autumn color morphs that differ markedly in patterning and coloration (Braun, 1912). In the summer form, the forewing is suffused with purplish bronze and has a pale golden region at the base that is broadest on the dorsum. A rounded costal triangle (costal patch) is present that is pale golden and extends outward as a band along the costa to the costal cilia. The pale patch typically has two or more tiny brown dots on the costa. The hindwings are fuscous and the cilia reddish. The antennae are ochreous, become darker toward the tip, and are broadly annulate with dark brown. The face, head and thorax are pale golden, with the vertex somewhat bronze. The front and middle legs are dark purplish brown except the tarsi, which are white and sometimes faintly tipped with black. The hind legs are pale yellowish.

The autumn form is drab relative to the summer form. The forewings are suffused with purplish brown and speckled with patches of darker brown scales. The base of the wing has a narrow edge of golden color instead of the broad golden patch at the base in the summer form. In darker specimens the golden edge is often missing. The costal triangle is pale and has a fine margin of dark scales along the costa. The costal triangle is separated from the pale patch beyond (with which it is continuous in the summer form) by a patch of dark brown scales on the costa. The golden yellow color of the costal triangle deepens into purplish brown toward the costa, where there are two or three small brown spots. The pale costal patch beyond is sometimes almost obsolete because of the darkening of the color and the large admixture of dark brown scales. The hindwings and cilia are fuscous, and the antennae are grayish and annulate with dark brown. The face is golden below, and the head and thorax bronzy gray. The legs resemble those of the summer form, except that the tibiae of the hind legs and the tarsi are more deeply shaded with brown.

Caloptilia negundella closely resembles the summer form of *C. ostryaeella* and is most easily distinguished by the presence of a dark band on the upper tarsi of the front and middle legs. The band is missing on *C. ostryaeella*.

DISTRIBUTION: *Caloptilia ostryaeella* is wide-ranging in eastern North America, with populations occurring from southern Canada and the northeastern US, southward to northern Florida. The species occurs westward to Louisiana and southeastern Texas in the south, and to the Great Lakes region to the north. Populations appear to be uncommon or absent in many areas of the Piedmont and Coastal Plain in the Southeast. As of 2019, we have only three county records for North Carolina.

FLIGHT COMMENT: This species appears to be bivoltine, with adults emerging in early August and in autumn (Eiseman, 2019)

HABITAT: This species is restricted to habitats that support *Ostrya* and *Carpinus*. These small, deciduous trees generally prefer alluvial forests and stream bank habitats (*Carpinus*) or rich, mesic woods with slightly acidic to circumneutral soils. Collectively, they occur across the state.

FOOD: American Hop-hornbeam (*Ostrya virginiana*) and American Hornbeam (*Carpinus caroliniana*) are the only known host plants (Eiseman, 2022), and we have recorded mines on both species in North Carolina.

OBSERVATION_METHODS:

NATURAL HERITAGE PROGRAM RANKS: GNR S3S4

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

COMMENTS: