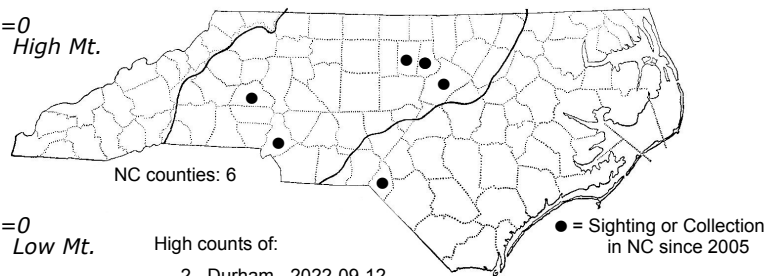
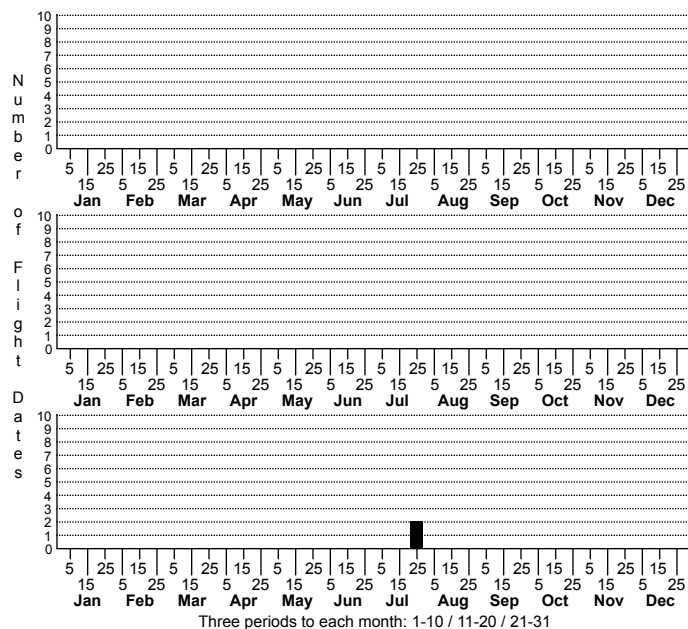


Phyllonorycter celtisella None

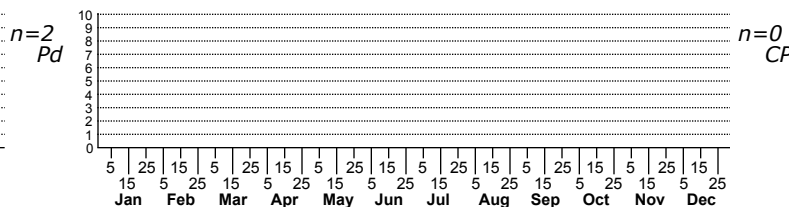


High counts of:

- 2 - Durham - 2022-09-12
- 1 - Durham - 2017-07-05
- 1 - Scotland - 2019-05-08

● = Sighting or Collection in NC since 2005

Status Rank
NC US NC Global



FAMILY: Gracillariidae SUBFAMILY: Lithocolletinae TRIBE:

TAXONOMIC COMMENTS: *Phyllonorycter* is a genus of small and often colorful moths, with 79 described species in North America. The larvae of most form underside tentiform mines on woody plants and pupate within the mines.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Braun, 1908.

TECHNICAL DESCRIPTION, IMMATURE STAGES: Braun, 1908; Eiseman, 2019.

ID COMMENTS: The following is primarily based on descriptions in Chambers (1871a) and Braun (1908). The face and palpi are silvery white, and the antenna is silvery and annulated above with dark brown. The tuft, thorax, and ground color of the forewing are different shades of saffron. There is a white patch in the center of the saffron tuft, and a white line across the anterior margin and sides of the upper thorax. The white line on each side of the thorax is sometimes absent. When present, it is confluent with a rather long, narrow, median basal white streak on the forewing. The streak extends from the wing base to about two-fifths of the wing length, and is faintly edged with dark scales on the costal margin. Just before the middle of the forewing, there is a white chevron-shaped fascia with a tip that projects apically. The fascia is rather boldly marked with dark scales on the anterior (basal) margin. Just before the base of the dorsal cilia, there is a second fascia or partial fascia that is less well-defined. This may consist of either a white streak with a dark anterior margin, or a fragmented and reduced version of this. Instead of a complete fascia, specimens may have a dorsal and costal streak with many dark brown scales interspersed to obscure the white, or merely two or three patches of dark scales with most of the white obscured. The dorsal margin of the wing has a narrow white line that is margined with scattered dark scales. It extends from the base to the first fascia, and sometimes is faintly evident all the way to the base of the cilia. The apex is dusted with dark brown scales on a white ground that is often sufficiently dense to form a patch. There is a short, oblique white costal streak that abuts the dark scale patch on the anterior side. Sometimes the dusting is not thick, and the whole apical portion of the wing is sparsely flecked with dark brown scales. The legs are whitish with darker marks along their length. Characters that are helpful in identifying this species include the saffron ground color, the long, narrow, median basal white streak on the forewing, and the first fascia that is boldly marked with dark scales on the basal margin. *Phyllonorycter basistrigella* is somewhat similar, but has an incomplete fascia that consists of a dorsal and costal streak, and that lack a bold dark margin.

DISTRIBUTION: *Phyllonorycter celtisella* is widely distributed in eastern North America where the host plants occur locally. Populations occur from Ontario and Connecticut southward and westward to Kentucky, North Carolina, Iowa, Oklahoma, and Texas (Eiseman and Davis, 2020). As of 2021, all of our records are from the east-central portion on the state.

FLIGHT COMMENT: The adults appear shortly after the spring leaf-out. Our earliest record for mines is early May, which suggest that the adults emerge in April in North Carolina. Local populations probably produce at least two broods through the late spring and summer months.

HABITAT: The larvae only feed on hackberries (*Celtis* spp.). The hosts include *C. laevigata*, which is found on riverbanks, natural levees, and forested floodplains, and *C. occidentalis*, which prefers nutrient-rich forests with high soil pH.

FOOD: The known hosts are Sugarberry (*Celtis laevigata*) and Common Hackberry (*C. occidentalis*). In North Carolina, nearly all of our records are from Sugarberry. Common Hackberry is uncommon in North Carolina, and is mostly confined to the mountains and upper Piedmont where mafic or calcareous bedrocks occur. Although we have no records for the mountains, *Phyllonorycter celtisella* could be present where scattered, local populations of Common Hackberry occur.

OBSERVATION_METHODS: The adults are attracted to UV lights, but are most easily obtained by rearing them from mines on hackberries. Braun (1908) noted that the mines are often abundant on hackberries, and they can be easily identified by the conspicuous crease that occurs on the upper surface of the mine. *Phyllonorycter celtifoliella* also mines hackberries, but produces a crease on the underside of the leaf.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S3

STATE PROTECTION:

COMMENTS: We currently do not have sufficient data on the distribution and abundance of populations in North Carolina to assess the conservation status of this species.