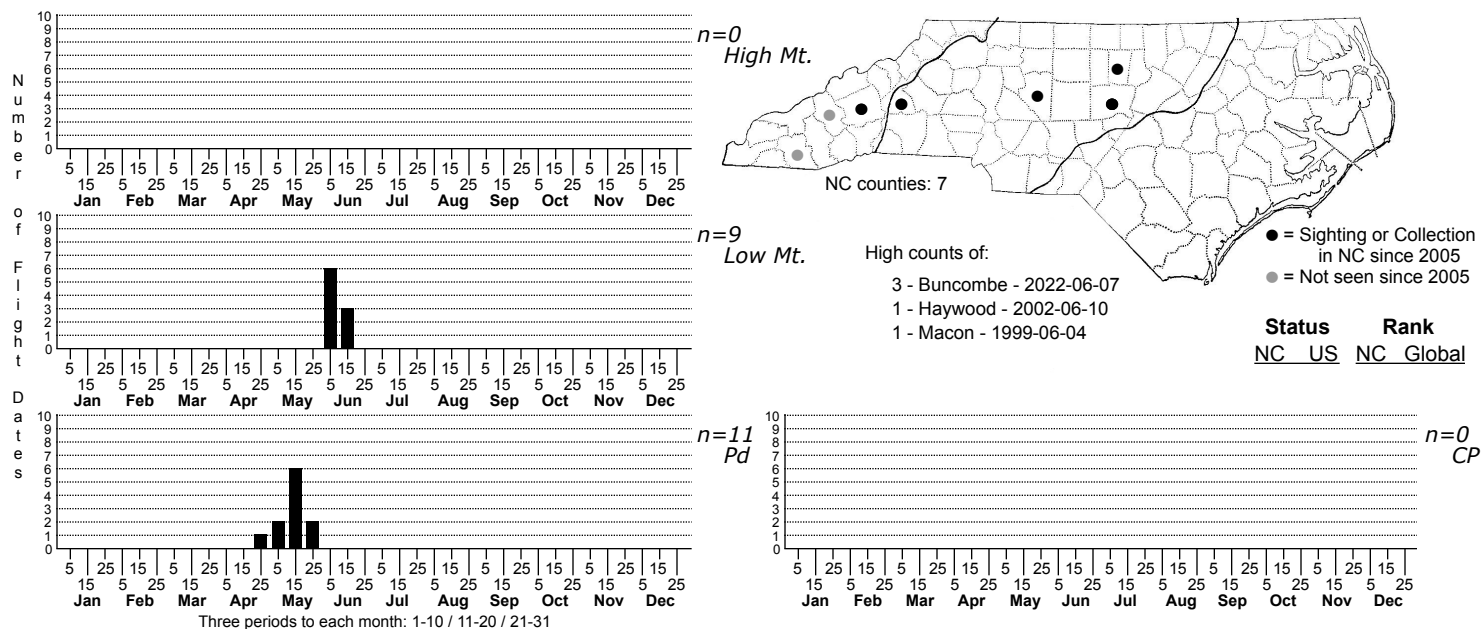


## *Lytrosis permagnaria* Charcoal Lytrosis



FAMILY: Geometridae SUBFAMILY: Ennominae TRIBE: Angeronini

TAXONOMIC\_COMMENTS: This strictly North American genus contains four species, all of which occur in North Carolina.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Rindge (1971); Schweitzer et al. (2011)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Wagner et al. (2003); Schweitzer et al. (2011)

ID COMMENTS: Along with the other members of this genus, *L. permagnaria* is one of our largest Geometrids, with only *Epimecis hortaria* being slightly larger. Unlike the other species of *Lytrosis*, all of which have a strong pattern of parallel lines and black, brown, white, and yellow shades, *permagnaria* is nearly uniformly gray with only the postmedian line usually conspicuous; the only other mark typically present on the forewings is a dark spot at the costa where the antemedian normally terminates. The hindwings have a similar pattern. The outer margins of both set of wings are strongly scalloped.

DISTRIBUTION: Records exist for the Mountains (to 3000') and Piedmont in North Carolina.

FLIGHT COMMENT: This genus of moths has a short flight period from early May to mid June, with slightly later dates at higher altitudes.

HABITAT: Habitats recorded over most of the range of this species appear to be ordinary mixed hardwood/pine forests, offering no real clues as to why the moth is so rare (Rindge, 1971; Wagner et al., 2003; Schweitzer et al., 2011). At one of the sites where this species has been recorded in the Piedmont, five specimens have been collected over a two year period in a Piedmont Monadnock Forest, a somewhat restricted community type with similarities to natural communities in the Blue Ridge. The dominant tree species at that site is Rock Chestnut Oak (*Quercus montana*), which also occurs in the vicinity of two new sites where this species was recorded in 2017.

FOOD: The host plants are apparently unknown, but larvae in captivity have accepted oak and hickory (Wagner et al., 2003; Schweitzer et al. 2011).

OBSERVATION\_METHODS: At known population sites, adults of both sexes come readily to blacklights, suggesting that their scarcity elsewhere is not simply due to problems with detectability. They do not come to bait.

NATURAL HERITAGE PROGRAM RANKS: G3G4 S2S3

STATE PROTECTION: Listed as Significantly Rare by the Natural Heritage Program. That designation, however, does not confer any legal protection, although permits are required to collect it on state parks and other public lands.

COMMENTS: This species appears to occur in highly localized populations, but associated with habitats that occur vastly more widely. The reasons for this sparsity are unknown, but known host plants do not appear to be limiting factors. Until larvae are found feeding in the wild, however, the ecological relationships of this species remain obscure.