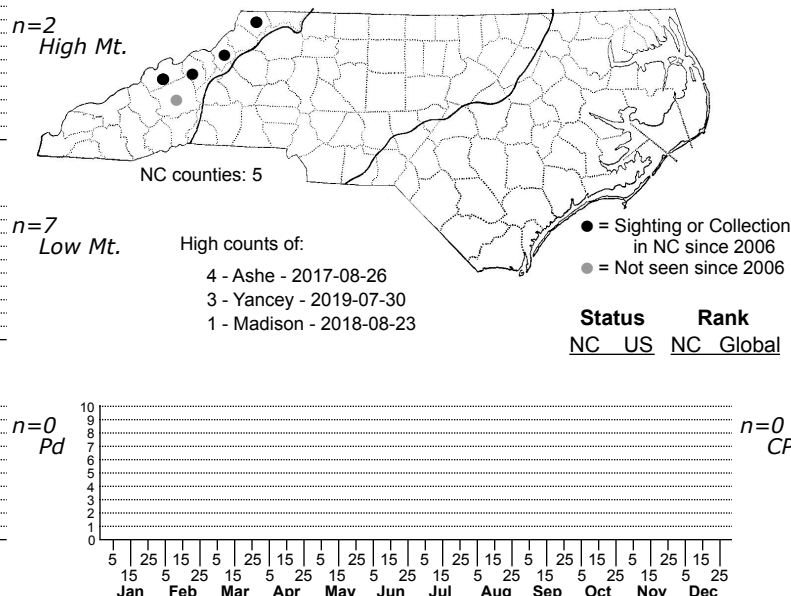
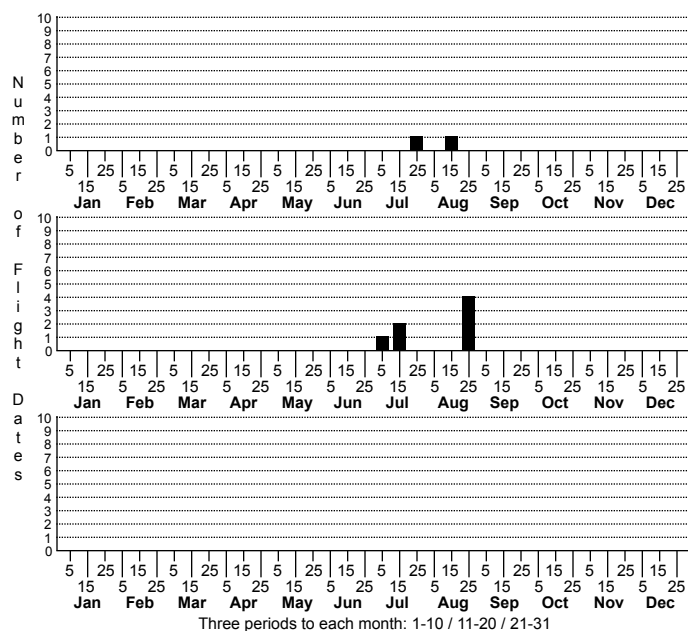


Agonopterix lythrella Red Agonopterix



FAMILY: Depressariidae SUBFAMILY: Depressariinae TRIBE: [Depressariini]

TAXONOMIC_COMMENTS: *Agonopterix* is a large holarctic genus with more than 125 species, with most occurring in the Palearctic Region. Currently, there are 47 recognized species in North America. Our species are largely confined to the western mountains.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie, 2012

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Hodges, 1974

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following is based on the descriptions by Ely (1910), Clarke (1941), and Hodges (1974). The head, antenna, and thorax are light brown, and the thorax has a lateral dark streak that is usually evident. The labial palp is yellowish and mottled exteriorly with purplish fuscous. The third segment has an indistinct fuscous annulus at the base and just below the tip. Fresh specimens are intense reddish brown with a heavy reddish brown overlay on parts of the wing, particularly away from the costal margin where there are a series of faint lighter strigulae. Older specimens are grayish brown. A dark, curved streak is present on the cell beginning at about one-third the wing length, with a small white dot just beyond it that is often faint or missing. Varying levels of cream to whitish dusting is often present just posteriorly and laterally from the streak. Additional whitish dusting occurs in the post-median region, along the costa, and at the base of the wing where the scales are better organized and form a narrow transverse band that is preceded at the inner angle by a distinct black spot. The cilia are purplish gray with a narrow blackish fuscous line at the base. The tarsi usually have a distinctive color pattern with the first segment dark with a pale apex, the second, third, and base of the fourth segments dark brown, and the apex of the fourth and all of the fifth segment pale (Hodges, 1974). In some individuals the first segment may be nearly unicolorous, and the bases of the scales on the second and third segments may be pale. *Agonopterix hyperella* is similar but the forewing is gray to grayish brown and has a longer and broader curved streak. *Agonopterix walsinghamella* is also similar, but has grayish scales on the top of the thorax and head (versus light brown in *A. lythrella*). In addition, the curved streak is typically reduced to two spots.

DISTRIBUTION: *Agonopterix lythrella* is found in eastern North America, including much of southern Canada from Nova Scotia and New Brunswick westward to Ontario. In the US it occurs in the northeastern states westward to Illinois and Wisconsin, then southward along the Appalachian Mountains to western NC. As of 2020, all of our records are from the mountains, and from sites that range from the low valleys to the highest peak.

FLIGHT COMMENT: Adults have been taken from May through December, with a peak in July and August. As of 2020, our North Carolina records are all from July and August.

HABITAT: We know little about the specific habitat requirements. This species may be monophagous on St. John's-worts (*Hypericum* spp.) in North Carolina. These species inhabit mesic to dry forested slopes as well as open, disturbed habitats such as roadsides, fields, and woodland borders.

FOOD: Hodges (1974) reported that the larvae feed on Winged Loosestrife (*Lythrum alatum*) and several species of *Hypericum*, including Spotted St. John's-wort (*H. punctatum*) and Virginia Marsh St. John's-wort (*H. virginianum*). Winged Loosestrife and Virginia Marsh St. John's-wort do not occur in western North Carolina where we have records, which suggests that Spotted St. John's-wort or other *Hypericum* species are the primary hosts. We have records from Mt. Mitchell where Mountain St. John's-wort (*H. graveolans*) and Blue Ridge St. John's-wort (*H. mitchellianum*) are suspected hosts.

OBSERVATION_METHODS: The adults occasionally visit lights. We recommend searching for the larvae and documenting the larval host and life history.

NATURAL HERITAGE PROGRAM RANKS: GNR S2S4

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

COMMENTS: As of 2020 we have only five site records, suggesting that this species is uncommon in North Carolina. More data on its distribution and abundance is needed before its conservation status can be accurately assessed.