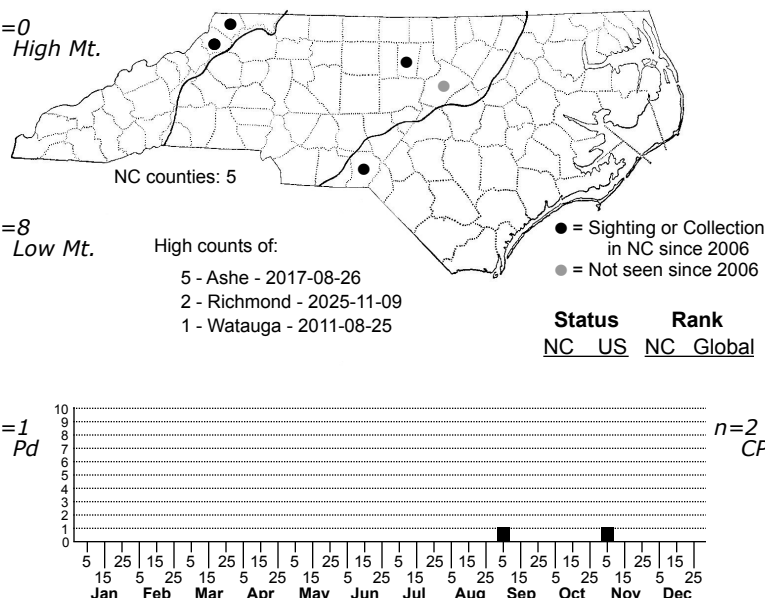
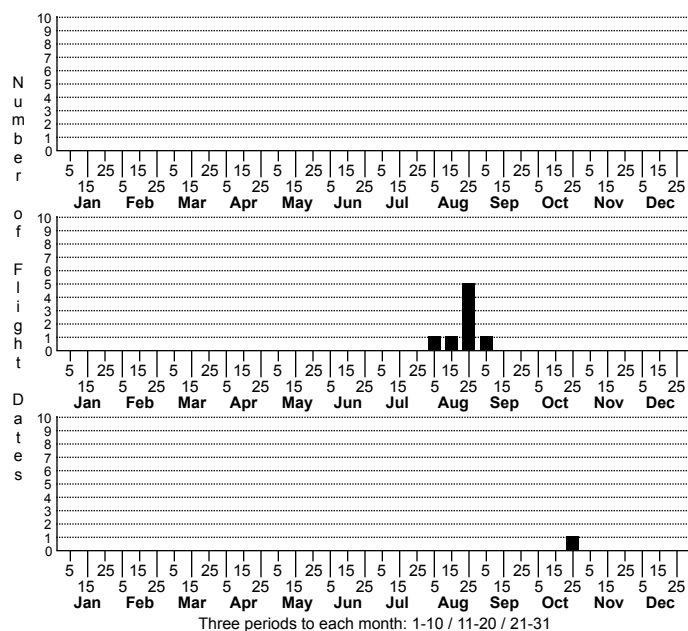


Gnorimoschema gallaeasterella None



FAMILY: Gelechiidae SUBFAMILY: Gelechiinae TRIBE:

TAXONOMIC_COMMENTS: The genus *Gnorimoschema* contains over 115 species of small moths. There are more than 80 species in North America, and most are found in the southwestern US. They appear to specialize on members of the Asteraceae and have a diverse array of feeding niches that includes leafminers and gall-makers.

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Kellicott (1878)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Kellicott (1878); Judd (1962)

ID COMMENTS: The following description is based in part on that of Kellicott (1878). The head is white. The thorax is also white, but often has faint brown streaking or spotting. The labial palp is mostly white with brown scales on the outside of the second joint. The terminal joint is white, with a black subterminal band and a tiny white tip. The antenna is white with thin, brown annulations. The forewing ground is white, and is overlain with black spots and larger reddish brown to dark brown dusting and marks. A large reddish brown to dark brown hemispheric patch begins along the costa at about one-third the wing length and extends rearward to one-half or more. The patch extends inward towards the inner margin to about two-thirds the wing depth. The anterior margin is oblique and relatively clean-cut, while the posterior region tends to be irregular and spreads posteriorly to varying degrees where there are often one or two smaller reddish-brown to dark brown patches. The inner margin usually has two blackish dashes or spots, one near the wing base and one just beyond one-half. The apical third is whitish, with varying levels are dark brown mottling. The basal third is also white, and often with a reddish brown diffuse costal patch, along with a small black patch at the base of the inner margin. The cilia are dull white with darker speckling. The hindwing is gray and the cilia lighter. The abdomen is gray and the first three segments are yellow above. The legs are blackish with narrow, white annulations.

DISTRIBUTION: *Gnorimoschema gallaeasterella* is found in western Canada (British Columbia; Alberta; Saskatchewan) and in eastern North America. In the East, the range extends from southern Canada (Ontario; Quebec; Nova Scotia) and the New England states southward to North Carolina and Tennessee, and westward to Oklahoma, Illinois, and Michigan. As of 2022, we have an historical record from the eastern Piedmont and several recent records from lower to mid-elevation sites in the northern mountains.

FLIGHT COMMENT: Populations are univoltine. The adults have been found in areas outside of North Carolina from June through October, with a seasonal peak in August and September. As of 2022 our limited records are all from August through early September.

HABITAT: The larvae feed on several species on asters and goldenrods that are found in both woodland settings and more open spaces. They occupy habitats that range from wet to mesic microhabitats. The two most common hosts appear to be White Wood-aster and Zigzag Goldenrod, which are both common in mesic forests and forest edge habitats.

FOOD: The larvae produce galls on several species of asters and goldenrods. The documented hosts include White Wood-aster (*Eurybia divaricata*), Tall Flat-top Aster (*Doellingeria umbellata*), Bluestem Goldenrod (*Solidago caesia*), Zigzag Goldenrod (*S. flexicaulis*), and Bog Goldenrod (*S. uliginosa*) (Forbes, 1923; Robinson et al., 2010). As of 2022, our only record is for a gall on White Wood-aster.

OBSERVATION_METHODS: The adults are attracted to lights, and the large galls are easy to spot on native asters and goldenrods.

NATURAL HERITAGE PROGRAM RANKS: GNR SU

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

COMMENTS: As of 2022, we have only seven recent site records for this species and all are from a Ashe and Watauga Counties. More information is needed on this species host use, distribution and abundance within the state before we can assess its conservation status.