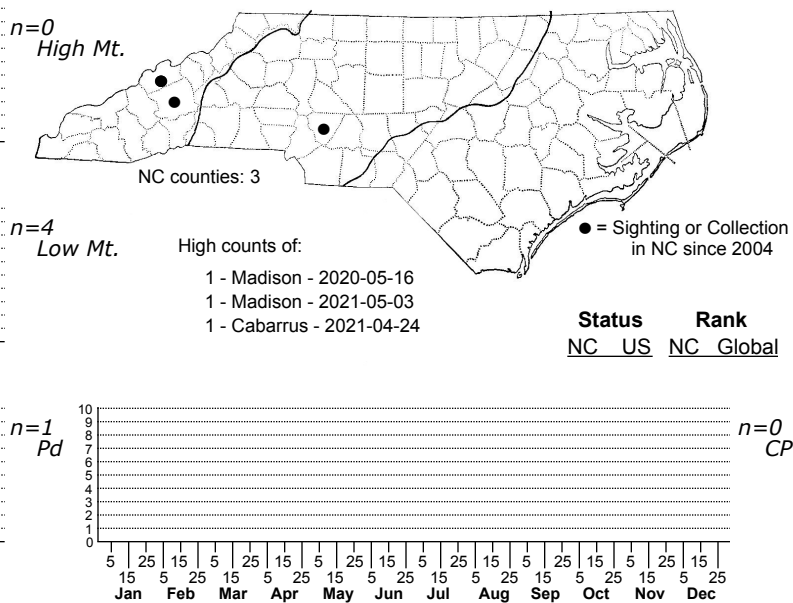
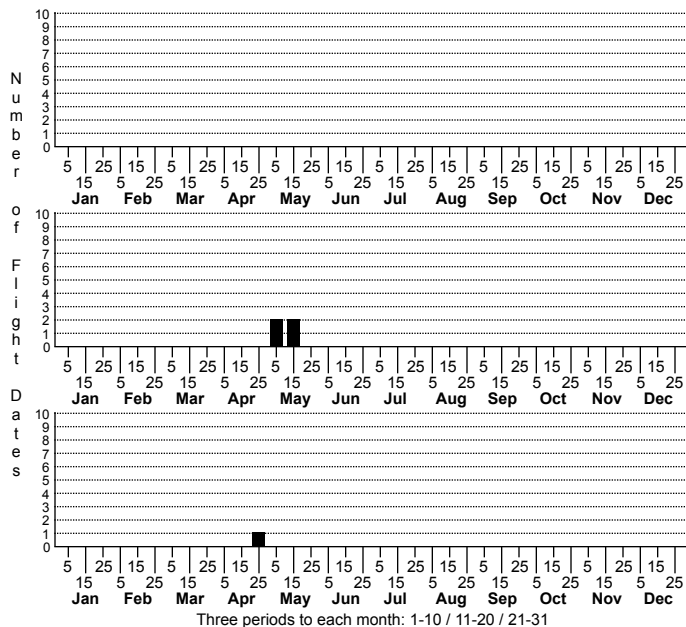


Eucopeia monitorana Red Pinecone Borer Moth



FAMILY: Tortricidae SUBFAMILY: Olethreutinae TRIBE: Eucosmini

TAXONOMIC_COMMENTS: *Eucopeia* is a genus of tortricid moths with 12 North American species that were previously placed in the genus *Eucosma* (Gilligan and Wright, 2013). Members of this genus feed on conifers (Pinaceae), and the majority feed on the maturing cones of pines.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Powell (1968)

TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS: The following is based primarily on the original description by Heinrich (1920). The palp is white with black dusting and has a terminal segment that is white with a broad black band. The head and face are cream yellow, while the thorax is rusty red. The extremities of the patagia and the posterior region of the thorax are tipped with black scales. The ground color of the forewing is rusty red and is darkest on the basal fourth, which is faintly marked by ill-defined streaks of black and silvery scales. A broad irregular fascia of cream yellow and white scales extends from just before the middle of the costa to the middle of the dorsal margin. Beyond this is a narrower band of similar coloration (often broken into two large blotches) that extends from the outer one-third of the costa to the tornus. Two small spots of the red ground color are present along the costa at the base of the band, and one or two small whitish marks may be present between the band and the apex. The cilia are smoky gray with a narrow black line at the base. The hindwing is smoky gray brown and becomes darker at the apex, while the cilia are pale with a dark sub-basal line.

DISTRIBUTION: This species has northern affinities and is found in eastern North America from southern Canada (Ontario; Quebec) westward to northern Indiana, Wisconsin and Minnesota, then southward mostly through the Appalachian region to central and eastern Kentucky, western Virginia, eastern Tennessee, and North Carolina. As of 2022, we have only three site records that include two lower-elevation sites in the Blue Ridge and one in the Piedmont.

FLIGHT COMMENT: Local populations are univoltine, with the adults flying between April and July depending on the latitude. Most records are from May, as are all of ours as of 2022.

HABITAT: This species relies rather heavily on Red Pine at northern latitudes where it is commonly found on level or gently rolling sand plains, on low ridges adjacent to lakes and swamps, and on mountain slopes and hilltops. The hosts are poorly documented in the southern portion of the range, but Virginia Pine is one of the known host (Powell, 1968). Virginia Pine is common at sites that have moderate to dry soils, and often becomes established at high densities following fires, clearcutting, or other landscape disturbances.

FOOD: Red Pinecone Borer Moth appears to rely heavily on Red Pine (*Pinus resinosa*) at northern latitudes and has been documented using Virginia Pine (*P. virginiana*) at one site in Virginia (Powell, 1968). More information is needed on host use in the southern Appalachians.

OBSERVATION_METHODS: The adults are attracted to lights and the larvae can be found in cones during the summer months.

NATURAL HERITAGE PROGRAM RANKS: GNR S2-S3.

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

COMMENTS: Populations in North Carolina are at the southern limit of the range. This species appears to be uncommon to rare in the western half of the state.