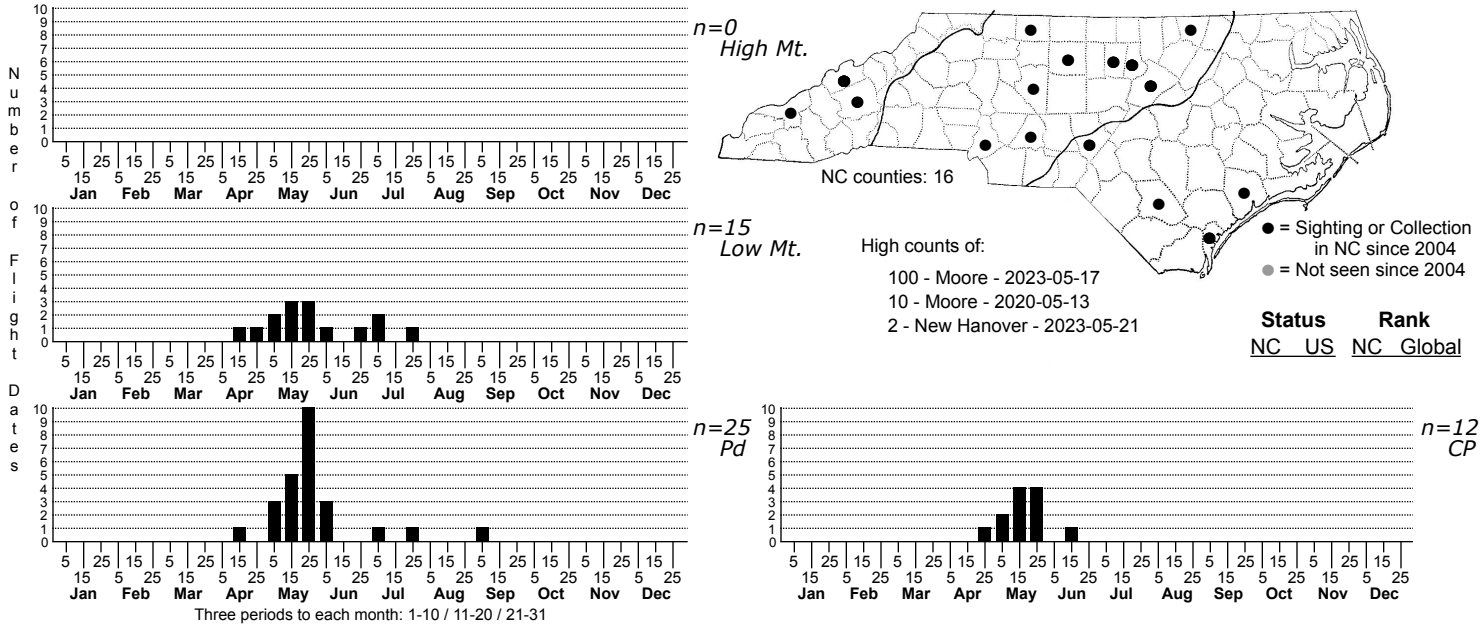
Exoteleia pinifoliella complex Pine Needleminer Moth Complex



FAMILY: Gelechiidae SUBFAMILY: Gelechiinae TRIBE:
TAXONOMIC_COMMENTS: The genus Exoteleia contains a group of micromoths that feed on pine needles. Issues concerning the actual number of Exoteleia species that occur in eastern North America have been particularly challenging for taxonomists to resolve. Hodges (1985) was the first to seriously tackle this issue, and after going through the described species concluded that it was not possible to resolve the question of separation of species in Nearctic Exoteleia. Adamski et al. (2010) barcoded specimens from the eastern North America and found four rather weakly differentiated genetic groups. Genetic distances ranged from 0.04 - 3.03%, and support for the groups was only moderate. They entertained two hypotheses: either that these are four weakly differentiated species, or they represent a single variable species with different haplotypes that reflect the species' phylogeographic history through ancestral polymorphism, host races, or some other biological pattern. They concluded that the available evidence was insufficient to make a convincing argument either way. They also found that all other attributes that have been reported in the literature (i.e., adult coloration, genitalia, larval hosts, immatures, geographic distribution) are either insufficient or not congruent with each other, and do not support species separation. Adamski et al. (2010) suggested that members of the four clusters be referred to as the 'Exoteleia pinifoliella complex’ until additional studies are completed. Here we include records of species that were previously treated as E. chillcotti, E. pinifoliella, E. anomala and perhaps other related eastern North American forms that fall into the Exoteleia pinifoliella complex. These forms currently cannot be readily distinguished by external morphology, genitalia, or DNA markers.

FIELD GUIDE DESCRIPTIONS:
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS:
TECHNICAL DESCRIPTION, IMMATURE STAGES:

ID COMMENTS:

DISTRIBUTION: Please refer to the dot map.

FLIGHT COMMENT: Please refer to the flight charts.

HABITAT:

FOOD: The larvae of this complex are pine specialists.

OBSERVATION_METHODS:

NATURAL HERITAGE PROGRAM RANKS:

STATE PROTECTION:

COMMENTS: