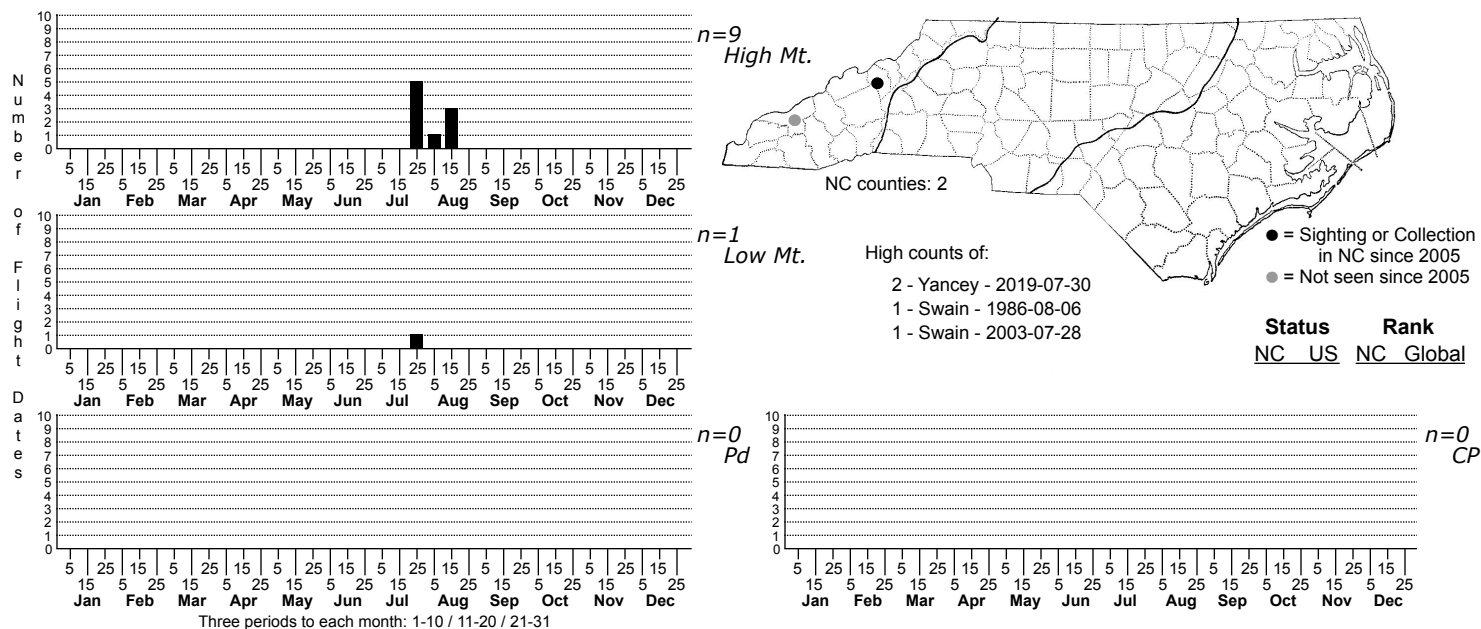


Xestia perquiritata Boomerang Dart



FAMILY: Noctuidae SUBFAMILY: Noctuinae TRIBE: Noctuini

TAXONOMIC COMMENTS: One of fifty species in this genus that occurs in North America north of Mexico (Lafontaine and Schmidt, 2010), nine of which have been recorded in North Carolina. *Xestia perquiritata* was placed in the *Sincera* Species Group of Subgenus *Pachnobia* by Lafontaine (2004). This group includes only two species in North America, both of which are primarily boreal. *X. perquiritata* itself comprises two subspecies, with only the nominate form occurring in the East.

FIELD GUIDE DESCRIPTIONS:

ONLINE PHOTOS:

TECHNICAL DESCRIPTION, ADULTS: Forbes (1954, as *Noctua perquiritata*); Lafontaine (2004); Pogue (2006)

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

ID COMMENTS: *Xestia perquiritata* is a medium-sized Noctuid, with forewings mottled in pale and dark gray, and hindwings usually a somewhat contrastingly paler gray. The antemedian and postmedian lines are black and dentate, edged with white or pale gray. Both the orbicular and reniform spots are pale gray or white; the orbicular is small and circular and the reniform has a distinctive boomerang shape (Forbes, 1954; Lafontaine, 2004). A North Carolina specimen illustrated in Pogue (2006) has a blackish median area, with contrastingly pale basal, subterminal and terminal areas.

DISTRIBUTION: Known in North Carolina only from the highest elevations in the Great Smoky Mountains.

FLIGHT COMMENT: Univoltine, flying in July and early August (Pogue, 2006).

HABITAT: All of our records come from Spruce-Fir Forests at the highest elevations in the Mountains.

FOOD: Larvae are oligophagous, feeding on spruce (*Picea*), fir (*Abies*), and larch (*Larix*) (Wagner et al., 2011).

OBSERVATION_METHODS: Comes to blacklights but we have no records from bait or from flowers.

NATURAL HERITAGE PROGRAM RANKS: G5 S1

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

COMMENTS: This species, along with *Plactarctia parthenos* and *Eilema bicolor*, appears to have one of the most restricted ranges in North Carolina, occurring as a Pleistocene relict only at the highest elevations of the Great Smoky Mountains. It is also an extreme habitat specialist, occurring only in Spruce-Fir Forests, one of our most endangered types of habitats. In addition to the currently ongoing declines due to the depredations by the introduced Balsam Woolly Adelgid and the adverse effects of acidic precipitation, this habitat is one of the most likely to be affected by global climate change. Once gone -- with the next nearest populations in New England and northern New York State -- this species is unlikely to ever return to the Southern Appalachians.