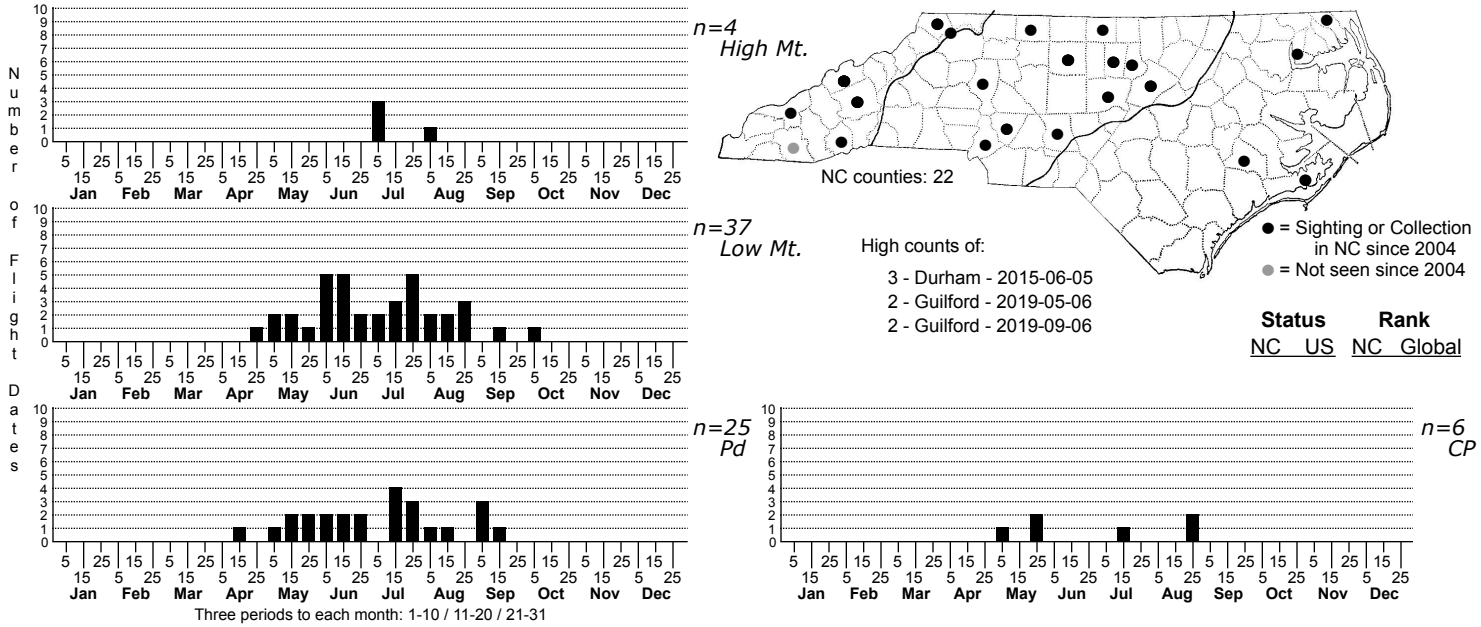
Psilocorsis quercicella Oak Leaftier Moth



FAMILY: Depressariidae SUBFAMILY: [Amphisbatinae] TRIBE: [Amphisbatini]
TAXONOMIC_COMMENTS: Psilocorsis is a small genus with around 15 described species and several undescribed forms. They range from southeastern Canada to northern South America, but appear to be absent from the West Coast (Hodges, 1974). Seven species occur in North America north of Mexico (Pohl et al., 2016), three of which have been recorded in North Carolina.

FIELD GUIDE DESCRIPTIONS: Covell (1984); Leckie and Beadle (2018)
ONLINE PHOTOS:
TECHNICAL DESCRIPTION, ADULTS: Forbes (1923); Clarke (1941); Hodges (1974)
TECHNICAL DESCRIPTION, IMMATURE STAGES: Clemens (1860); Forbes (1923)

ID COMMENTS: The following is primarily based on descriptions in Forbes (1923) and Clarke (1941). The head and thorax are dark yellowish brown and the labial palp is slender, strongly recurved, and pointed. The second segment of the labial palp is ochreous with a dark fuscous longitudinal stripe beneath, while the third segment is fuscous with a median and lateral longitudinal whitish stripe. The basal segment of the antenna is dark yellowish brown above with fuscous and white longitudinal stripes beneath. The antenna is yellowish brown above with darker annulations. The ground color of the forewing is also yellowish brown, but mottled with irregular, short, dark brown to blackish striae and elongated blotches. A dark reniform spot is present, and there is usually a more diffuse dark shading that extends from the middle of the wing to the inner margin. In some specimens the shading may extends beyond the middle, but it is less developed on the costal half. A distinctive adterminal line is composed of dark spots that nearly fuse (rarely fusing completely to form a complete line). The cilia are fuscous with a darker sub-basal band, while the hindwing and cilia are pale ochreous-fuscous. The legs are whitish ochreous with the fore tibiae and tarsi shaded with fuscous. The abdomen is yellowish brown above and whitish ochreous beneath. Psilocorsis quercicella and P. cryptolechiella are superficially similar, but P. quercicella lacks the narrow, elongated striations found in P. cryptolechiella. The transverse dark markings of P. quercicella are broken and mostly in the form of small, diffuse, and somewhat elongated blotches of dark scales that dust the forewing. The dark suffusion of the forewing at two-thirds is usually in the form of a diffuse blotch that extends from the middle of the wing to the inner margin. In P. cryptolechiella the region typically extends as a dark, diffuse band or dark dusting across the entire wing. Psilocorsis quercicella is much smaller than P. reflexella and has a darker fringe and more complete set of dark adterminal spots.

DISTRIBUTION: Psilocorsis quercicella is found throughout much of the eastern US. and in adjoining areas of southern Canada (Manitoba; Ontario; Quebec; Nova Scotia). In the US, the range extends westward to eastern Minnesota, eastern Oklahoma, and eastern Texas, and southward to the Gulf Coast and Florida. As of 2020, our records extend from coastal forests to lower elevations in the mountains. Populations appear to be far less prevalent in the Coastal Plain than elsewhere in the state.

FLIGHT COMMENT: Adults have been collected from January through October in different areas of the range, with a seasonal peak from April through August. As of 2020, our records are from early May through early October. Most local populations appear to be bivoltine, with the first brood in May and June, and a second in July-September (Hodges, 1974).

HABITAT: This species is dependent on hardwoods for successful reproduction, and appears to rely more on oaks than any other group of hardwoods (Marquis et al., 2019). Most of our records are from the Piedmont and lower elevations of the mountains in oak-hickory forests, mixed conifer-hardwood forests or in wooded residential areas.

FOOD: Oaks appear to be the primary hosts (Clarke, 1941; Hodges, 1974, Robinson et al. 2010; Marquis et al., 2019), but the larvae also feed on American Chestnut (Castanea dentata) and American Beech (Fagus grandifolia). Oaks that are used include White Oak (Quercus alba), Scarlet Oak (Q. coccinea), Shingle Oak (Q. imbricaria), Bur Oak (Q. macrocarpa), Blackjack Oak (Q. marilandica), Chinquapin Oak (Q. muehlenbergii), Water Oak (Q. nigra), Northern Red Oak (Q. rubra), Post Oak (Q. stellata), Black Oak (Q. velutina) and Live Oak (Q. virginiana).

OBSERVATION_METHODS: The adults are attracted to lights, and the larvae can be found beneath the tied leaves of oaks, American Beech and other host plants.

NATURAL HERITAGE PROGRAM RANKS: GNR S3S5

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

COMMENTS: Populations appear to be widespread and somewhat common in the Piedmont and lower mountains despite the fact that many hardwood forests have been timbered and replaced with agricultural lands or stands of pines.