

TAXONOMIC\_COMMENTS: <i>Acleris maccana</i> occurs in North American and Eurasia, and BOLD sequencing data indicate that specimens from North America (Canada and the United States) and Europe (Austria, Czech Republic, Finland, Norway) constitute a single, holarctic species (Gilligan et al., 2020).

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

ID COMMENTS: <i>Acleris maccana</i> varies substantially in its dorsal patterning, with specimens commonly having a narrow, oblique band that helps to cleanly separate a predominantly light gray or otherwise lighter region before the band from a predominantly darker region posteriorly. The palps, head and thorax vary from light rusty red to light rusty brown or tan. The thorax has a thin, incurved dark-brown line anteriorly and tends to be lighter near the posterior tip.

The forewing has an oblique, narrow band that extends from the costa at around one-third the wing length before fading out before reaching the inner margin at around one-half the length of the inner margin. The band commonly consists of a thin, white, anterior line that is paralleled by a dark reddish posterior line that has groups of embedded blackish scales. The band separates a relatively light region anteriorly (often grayish or light reddish-tan) from a predominantly dark reddish region beyond the band. The light region is often sprinkled more or less with dark brown scales, and is suffused with reddish brown along the costa. A darker basal patch is also present on many specimens. The area behind the oblique band typically has a large, diffuse, grayish-red to reddish-brown mark that extends posteriorly from the terminus of the oblique band towards the costa to about three-fourths the wing length. It then broadens again to extend to the tornal or pretornal region. The remainder of the wing beyond the oblique band is similar in color to the light region on the dorsal third, but somewhat duller and often with a darker reddish shade. Specimens often deviate from this general description, and in some cases the entire wing may be almost entirely brownish-red, gray, or brownish-black. Some specimens may require genitalia for identification.

DISTRIBUTION: <i>Acleris maccana</i> is found in both eastern and western North America in areas with cool climates. Populations in the West have been found in northern California, Oregon, Washington, Montana, Alaska, the Yukon, the Northwest Territories, British Columbia, Alberta, and Saskatchewan. In the East, it occurs in southern Canada (Ontario; Quebec; Newfoundland; New Brunswick; Nova Scotia) and in the U.S. from Wisconsin and Michigan eastward to the New England states, and southward along the Appalachian region to Tennessee and North Carolina. As of 2024, all of our records are from middle to higher-elevation sites in the Blue Ridge.

FLIGHT COMMENT: The adults have been observed during every month of the year in different areas of the range, with many populations appearing to have one generation per year. As of 2024, our very limited records are from mid-May and October.

HABITAT: This species is generally associated with boreal forests and forest openings, including bog habitats. Our few records as of 2024 are from middle to higher-elevations sites, and typically with hardwood forest and associated forest openings.

FOOD: The larvae are polyphagous and feed mostly on deciduous shrubs and trees (McDunnough 1934; Meyrick, 1938; Bradley et al., 1973; MacKay, 1962a; Prentice 1966; Emmet, 1992; Spitzer et al. 2003; Brown et al., 2008; Robinson et al., 2010; Wheatall et al., 2013). The reported hosts include Gray Alder (<i>Alnus incana</i>), Red Alder (<i>A. rubra</i>), Sweet Birch (<i>Betula lenta</i>), Paper Birch (<i>B. papyrifera</i>), <i>Rhododendron</i>, European Blueberry (<i>Vaccinium myrtillus</i>), Bog Blueberry (<i>V. uliginosum</i>), Lingonberry (<i>V. vitis-idaea</i>), a gooseberry (<i>Rubus lasciniatus</i>), Sweet-gale (<i>Malus</i>), apples (<i>Malus</i>), Quaking Aspen (<i>Populus tremuloides</i>), Cutleaf Blackberry (<i>Rubus lasciniatus</i>), and a willow (<i>Salix</i>). As of 2024, we do not have any feeding records for North Carolina.

OBSERVATION\_METHODS: The adults are attracted to lights.

## NATURAL HERITAGE PROGRAM RANKS: GNR[S2S3]

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

COMMENTS: This mostly circumboreal species reaches its southernmost limits in the southern Appalachians in eastern Tennessee and western North Carolina where it appears to be rare. More information is needed on its hosts, distribution and abundance before we can accurately assess is conservation status within North Carolina.