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Pyromorpha dimidiata Orange-patched Smoky Moth

TAXONOMIC_COMMENTS:

FIELD GUIDE DESCRIPTIONS: Covell (1984); Beadle and Leckie (2012) ONLINE PHOTOS: TECHNICAL DESCRIPTION, ADULTS: TECHNICAL DESCRIPTION, IMMATURE STAGES: Dyar (1897)

ID COMMENTS: This species is readily identified by its bold, two-toned orangish and black forewings. All body parts are black except for the basal two-fifths to one-half of the forewing that is orangish, with the exception of a streak of black along the inner margin. The orangish color become diffuse near the middle of the wing and grades into the black coloration on the distal half. The adults are toxic and are most commonly seen during the day, where the bright orange coloration serves as warning coloration to potential predators. This species resembles <i>Lycomorpha pholus</i>, but the latter lacks the black streak along the inner margin on the basal half of the forewing and flies later in the year. These two species and at least one lycid beetle (<i>Lyconotus lateralis</i>) are thought to be members of a Mullerian mimicry complex in the eastern US (Linsley et al., 1961).

DISTRIBUTION: <i>Pyromorpha dimidiata</i> is found in southern Canada (Manitoba; Ontario) and the eastern US from New Hampshire and Vermont southward to central Georgia and central Alabama, and westward to northern Mississippi, northern Arkansas, eastern Oklahoma, Missouri, and western Kentucky, with scattered populations occurring from New York westward through the Great Lakes region to Wisconsin. This species is generally absent from or rare in most of the southeastern Coastal Plain south of Virginia and North Carolina. <i>Pyromorpha dimidiata</i> is widespread and common in the Blue Ridge and Piedmont, and uncommon in the Coastal Plain.

FLIGHT COMMENT: The adults have been observed from March through August in different areas of the range, with a seasonal peak typically in May and June. Populations in North Carolina are univoltine, which appears to be the case throughout the range. As of 2023, our records extend from mid-April through mid-June.

HABITAT: Local populations are generally associated with hardwood forests or forest edges. Our records are mostly from hardwood forests or mixed pine-hardwood forests and wooded residential neighborhood. We havd records from bottomland, mesic, and more xeric forest communities.

FOOD: The hosts are rather poorly documented, but dead and decaying oak leaves appear to be the most important source of food (Dyar, 1897). Other reported hosts are poplars (<i>Populus</i>) and willows (<i>Salix</i>) (Heppner, 2007; Robinson et al., 2010; Beadle and Leckie, 2012). In North Carolina, our only larval record was a caterpillar that climbed onto a moth sheet from the leaf litter.

OBSERVATION_METHODS: The adults are most commonly seen resting on vegetation during the day or nectaring on flowers. They occasionally appear at lights.

NATURAL HERITAGE PROGRAM RANKS: GNR S4S5

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

COMMENTS: Populations are common and widespread in the Piedmont and Blue Ridge and appear to be secure.

March 2025

The Moths of North Carolina - Early Draft