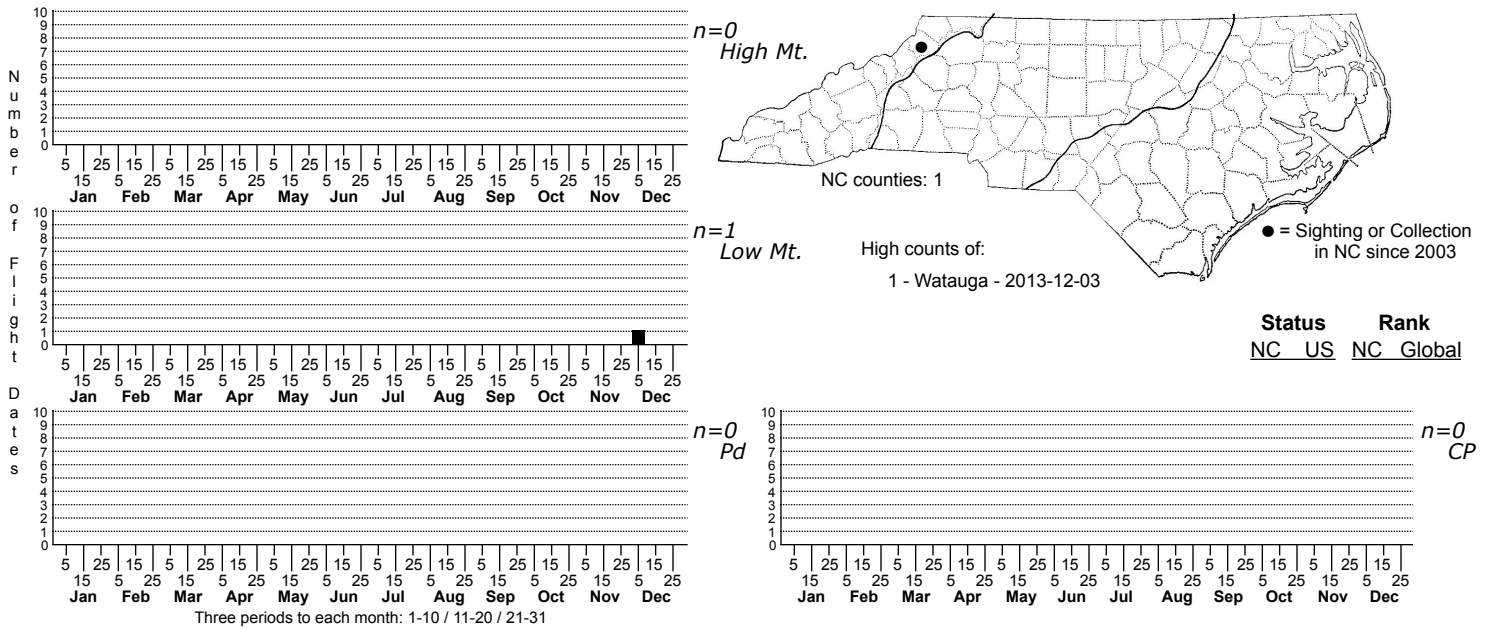


Operophtera bruceata Bruce Spanworm Moth



FAMILY: Geometridae SUBFAMILY: Larentiinae TRIBE: Operophterini

TAXONOMIC COMMENTS: One of three species in this genus recorded in North America north of Mexico (Troubridge and Fitzpatrick, 1993), and the only one recorded in North Carolina

FIELD GUIDE DESCRIPTIONS: Beadle and Leckie (2012)

ONLINE PHOTOS: MPG, BugGuide, BAMONA, BOLD

TECHNICAL DESCRIPTION, ADULTS: Forbes (1948); Troubridge and Fitzpatrick (1993)

TECHNICAL DESCRIPTION, IMMATURE STAGES: Forbes (1948); Wagner et al. (2001)

ID COMMENTS: A medium-sized, sexually dimorphic Wave. Females have greatly reduced wings and are flightless; males have fairly broad wings with rounded apices. The ground color of the forewings is pale brown in the East (gray in the West), with multiple dark brown lines that are usually sharply-defined and deeply scalloped (Troubridge and Fitzpatrick, 1993). Hindwings are also brown and crossed by multiple scalloped lines and a distinct discal spot is usually present. The abdomen is brown to golden brown. *Operophtera brumata* is similar in size and appearance but males usually have a reddish-brown ground color; have faint or more diffuse transverse lines that are only slightly scalloped; lacks a discal spot on the hindwings; and has a dark brown abdomen (Troubridge and Fitzpatrick, 1993). According to Troubridge and Fitzpatrick, all but badly worn specimens can be distinguished by wing markings and worn specimens can be identified by dissection.

DISTRIBUTION: Our sole record comes from the northern mountains

FLIGHT COMMENT: Forbes (1948) reports that adults fly in the fall and early winter. Our one record corresponds with this range.

HABITAT: Our record comes from a stand of rich cove forest at about 3,400 (with higher peaks located close by)

FOOD: Polyphagous, feeding on many species of hardwood shrubs and trees, including a number that are associated with mesic montane forests. Wagner et al. (2001) specifically list alder, beech, birch, cherry, elms, hazelnut, maple, oak, serviceberry, willow, and witch hazel.

OBSERVATION METHODS: As described by J.M. Lynch: "After over a week of no moths I had a big surprise waiting on the porch this morning--my first ever 7437 *Operophtera bruceata* (Bruce Spanworm)... It came to my regular porch light on a cold, rainy night (temp 37) after a week of snow and temps as low as 8. It pays to leave the porch light on!"

NATURAL HERITAGE PROGRAM RANKS: GNR SU

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

COMMENTS: As appears to be the case for several other of our montane species, *bruceata* may reach its southern range limit within the New River Valley of our northern mountains. Although it is likely a specialist on rich cove forests and northern hardwoods, it does not appear to be restricted in terms of its host plants and may be undersampled due to its extremely late flight period. Currently, not enough is known about its habitats, host plants, and other aspects of its distribution and ecology in North Carolina to make an accurate assessment of its conservation status. More surveys need to be conducted for adults in early winter and for larvae in the early spring.