

## A NEW SPECIES OF NEARCTIC *BOMOLOCHA* (NOCTUIDAE) FROM THE APPALACHIAN AREA

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**ABSTRACT.** *Bomolocha appalachiensis*, new species, is described from West Virginia, Kentucky and North and South Carolina. The type series consists of four males and seven females. The species is easily distinguished from known *Bomolocha* by forewing color pattern and male genitalia.

**Additional key word:** taxonomy.

Five specimens of a unique *Bomolocha* were taken in three West Virginia counties between 1977 and 1979. The species appears to be undescribed, and an additional six specimens were located in collections. Nothing is known of its life history.

### *Bomolocha appalachiensis*, new species

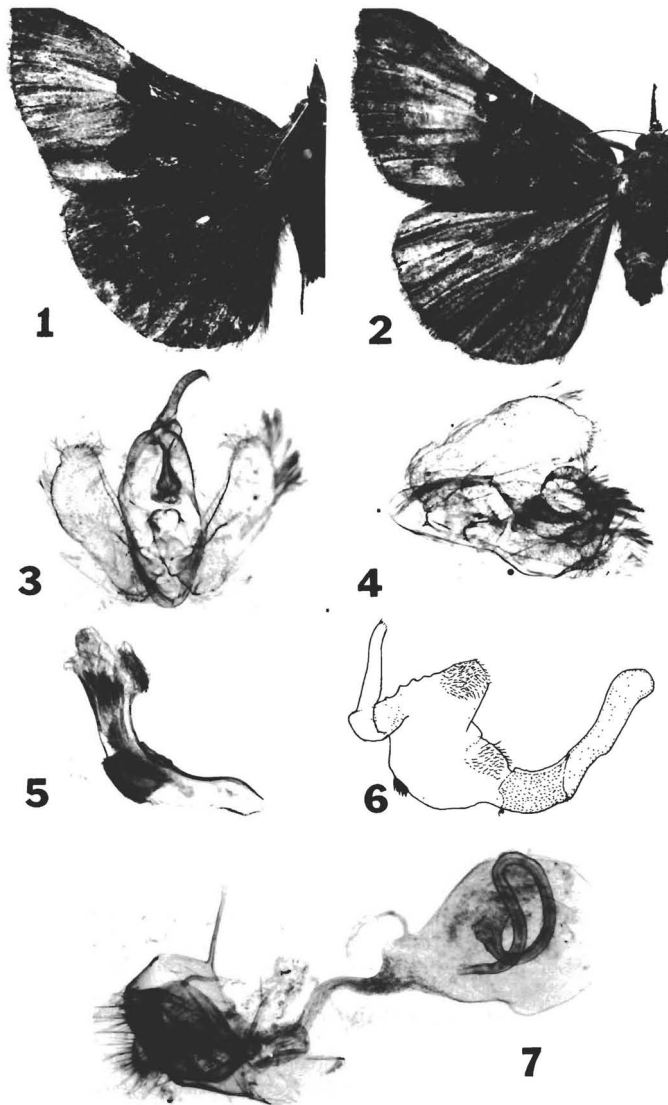
(Figs. 1-7)

**Description.** Male. Palpi twice length of head, strongly curving upward to horizontal above antennal bases; laterally compressed, heavily clothed with flat scales dorsally and laterally, scales tan, tipped with dark brown; palps clothed ventrally with flattened hairs, dark brown, flecked with tan; third palpal segment small and white tipped. Antennae filiform, with white scaling at pedicel and dorsally on all segments. Vestiture of head dark brown with some light brown scales; frontal tuft strong and conical.

Vestiture of thorax and abdomen consisting of chocolate brown hairs and long flattened hairs mixed with elongated scales, concolorous with median area of wings. Basal tuft of thorax extending upward and strongly truncate. Abdominal tufts on segments 2-5, best developed on segments 3 and 4. Antemedial line of wings dark but not strongly contrasting, sinuous and slightly excurved at top of cell and in fold (Fig. 1). Postmedian line sharply defined, margined apically with pale scales, with smoothly rounded bulges at cell and at fold, the latter bulge stronger. Median area of wing darker, richer brown than basal area. A series of dots between veins represents subterminal line; most specimens with obscure subterminal dots. Some specimens with faint row of terminal dots between veins. Wing beyond postmedian line sandy to grayish brown, darker apically; paler costal triangle above. Hindwings medium brown or grayish brown with more luteous fringe and dark brown terminal line. Forewing length: 15.5-16.5 mm (N = 4); holotype male 16 mm.

Genitalia (Figs. 3-6). Uncus (Figs. 3, 4) long, slender, strongly curved apically. Valve flattened, evenly elongate and simple (Fig. 3). Anellus of aedeagus (Fig. 5) well defined and heavily armed with spicules. The everted vesica (Fig. 6) consists of two divergent lobes, one the ductus ejaculatorius, and the other a broad, shallow, evenly rounded blind pouch. On the side of the vesica below the ductus ejaculatorius is a small but well developed multitoothed cornutus. The blind pouch is densely clothed terminally with small cornuti. Below this cluster at the end of aedeagus is a second cluster of stouter cornuti.

Female. Similar exteriorly to male but with the following differences. Palps porrect, about three times length of head. Body vestiture shorter, much less dense than that of male. Antemedial line more faint; less contrast in color of basal and medial areas. Subterminal dots more developed. Two paratype females paler and less contrasting, with grayish lavender scales overlying tan shade beyond postmedian line. Orbicular visible as



FIGS. 1-7. *Bomolocha appalachiensis*. 1, Holotype male. 2, Allotype female. 3-7. Genitalia. 3, Holotype male, ventral view (aedeagus removed); 4, Holotype male, lateral view (aedeagus removed); 5, Holotype aedeagus, vesica not everted; 6, Balsam Co., North Carolina, paratype, aedeagus, vesica everted; 7, Allotype female.

a black dot in some females. Forewing length: 15-16 mm (N = 7); allotype female 16 mm.

Genitalia as illustrated (Fig. 7).

**Diagnosis.** Male genitalia of *B. appalachiensis* were compared with those of *B. manalis* (Walker), *B. baltimoralis* (Guenée), *B. bijugalis* (Walker), *B. palparia* (Walker), *B. aba-*

*lienalis* (Walker), *B. deceptalis* (Walker), *B. madefactalis* (Guenée), *B. sordidula* (Grote) and *B. edictalis* (Walker), the other *Bomolocha* species from the Appalachian region. Features of uncus, basocostal margin of valve, and sclerotized structures of aedeagus are diagnostic. Uncus of *palparia*, *madefactalis* and *sordidula* most similar to that of *appalachiensis* in being relatively long, slender, and curved apically.

Valve of *appalachiensis* simple. The basocostal corner on the inner face of the valve is more strongly protuberant or actually toothed in most other *Bomolocha* species examined; most species also show a slightly more distal projection. In *bijugalis* the valve is nearly as simple as that of *appalachiensis*, but the basocostal area is stouter and more heavily ridged than in *appalachiensis*.

Aedeagus of compared species of *Bomolocha* differs from that of *appalachiensis* in having clustered cornuti either more or less developed, and in lacking the multitoothed cornutus or having it well developed with an expanded base.

In size and shape of wings, *appalachiensis* is similar to *palparia* and *madefactalis*. Shape of the postmedian line, and degree of contrast between the chocolate brown basal two-thirds and paler apical area easily distinguish *appalachiensis*.

**Types.** Holotype. Male, Greenbrier State Forest, Greenbrier Co., West Virginia, 9 July 1977 at UV, Linda Butler (Fig. 1). Allotype. Female, Triune, Monongalia Co., West Virginia, 22 July 1979 at UV, Linda Butler (Fig. 2). Paratypes. 2 females, same data as allotype except 16 and 17 June 1979; 1 female, Big Ugly Public Hunting Area, Lincoln Co., West Virginia, 28 June 1979, Linda Butler; 1 male, Balsam, Jackson Co., North Carolina, 17 July 1974, Douglas C. Ferguson, U.S. National Museum Slide No. 56126; 1 male, 1 female, Oconee State Park, Oconee Co., South Carolina, 24 May 1973, Eric Quinter; 1 female, data as above except 15 August 1973; 1 female, Clemson, South Carolina, 26 May 1976, R. S. Peigler and J. W. McCord; and 1 male, Kingdom Come State Park, Harlan, Kentucky, 13 July 1984, Loran D. Gibson.

Holotype and allotype in U.S. National Museum; paratypes in U.S. National Museum, West Virginia University Arthropod Collection, and collections of Eric L. Quinter, Bryant Mather, and Loran Gibson.

**Distribution.** The localities given for the types represent the known distribution. All specimens were taken in the Southern Appalachian Mountains from Monongalia Co., West Virginia in the north to Oconee Co., South Carolina in the south.

**Comments.** Fifteen species of *Bomolocha* were previously known from North America (Hodges 1983). Besides the nine species found in the Appalachian region (Forbes 1954) and compared with *B. appalachiensis*, other species are *B. ramstadtii* (Wyatt) described from Florida (Wyatt 1967), *B. henloa* Smith described from Arizona (Smith 1905), *B. atomaria* Smith described from South Dakota (Smith 1903), *B. vega* Smith described from New Mexico (Smith 1900), *B. umbralis* Smith described from Florida (Smith 1884), and *B. variabilis* (Druce) described from Central America (Druce 1890). Woodruff (1913) discussed his collection of four specimens of *B. atomaria* from Connecticut.

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