A NEW SPECIES OF CATOCALA FROM THE SOUTHEAST UNITED STATES

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ABSTRACT. Catocala charlottae is described from Louisiana and Florida, the type series consisting of 100 males and 84 females. The new species is differentiated from its most similar ally, C. alabamae Grote, mainly by genitalia characters. Adults and genitalia of both sexes of both species are illustrated.

Additional key words: Noctuidae, Catocala charlottae, C. alabamae, taxonomy, underwings.

The small-bodied underwing described here, Catocala charlottae, closely resembles C. alabamae Grote both superficially and in male genitalia. Catocala charlottae has been taken at the type locality in Louisiana, and at several Florida localities.

Louisiana C. alabamae are similar to those occurring through most of its known range. A life-size color photo of the C. alabamae holotype in the British Museum (Natural History) was examined and it precisely matched Louisiana C. alabamae.

Catocala charlottae Bou, new species

(Figs. 1, 2, 5, 6)

Forewing length of males averaging 19.5 mm (18.5–21.2 mm, N = 54); of females, 20.0 mm (19.7–21.8 mm, N = 32). Forewing slate gray with distinct bold black antemedial line and anal dash. Most specimens have a bold medium brown broad line parallel with and often extending forward from the antemedial line, forming a partial subterminal line and occasionally noticeable as a distinct brown patch below antemedial line and anal dash. Brown spot at middle of costal margin above vein R1. Reniform and subreniform present, sometimes diffused and indistinct. Forewing underside exhibiting a pale yellow postmedial band bordered on both sides with dark brown bands. Fringe dark with darker brown bars. Basal half of forewing stronger orange-yellow than outer half with fine black line on Cu1. Hindwing above with black inner band and outer marginal band with connecting black-tipped off-white fringe. Underside with yellow postmedial band bordered on both sides with dark brown bands. Yellow on costal half of hindwing pale, while that half along inner margin is much darker orange-yellow.

Male genitalia (Fig. 5) (N = 12). Cucullus arms along costal margin of valva sicle-shaped, mid-costa edge minimally squared, terminal edge finely serrated. Uncus semi-circular and acuminate.

Female genitalia (Fig. 6) (N = 10). Papillae anales elongated, strongly sclerotized. Posterior edge of lamella antevaginalis straight, abruptly angled towardly to ostium bursae in a long narrow V-shape.

Flight period. At the type locality, specimens were taken at light and fermented bait from 1 April to 23 June, with peak occurrence on 22 May (N = 177). Specimens taken after the fourth week usually were worn and tattered.

Discussion. In Louisiana, C. charlottae appears on the wing about two weeks earlier than C. alabamae. In Louisiana, adult C. alabamae were taken from 15 May to 16 June (N = 38), with peak occurrence on 2 June. Both Louisiana and Florida populations of C. charlottae are consistent in maculation
and size, the only noticeable exterior difference is the slightly darker appearance of Florida specimens. Forewing lengths of male Louisiana C. charlottae (N = 108) average 7% larger than those of male Alabama specimens which average 18.2 mm (16.6-19.5 mm, N = 20). Forewing lengths of female Louisiana C. charlottae (N = 92) average 5% larger than those of female Alabama C. alabamae which average 16.1 mm (17.9-20.1 mm, N = 14). The upper forewings of C. charlottae lack the overall bluish green suffusion present on C. alabamae. Occasionally, fresh C. charlottae exhibit a few diffuse greenish scales around the neumera, but these are sometimes evident only with magnification.

Male genitalia of C. charlottae are similar to C. alabamae (N = 8) except that the midcostal margin is squared to a lesser degree in the former (Figs. 3, 7). Female genitalia of C. charlottae differ more noticeably from those of C. alabamae (N = 6). In the latter, the posterior edge of the lamella antevaginalis is angled caudally approaching the midline and abruptly angled inwardly to octomer bourre in a wide V-shape (Fig. 8).

Since C. charlottae has been collected with typical C. alabamae in both Louisiana and Florida localities, a distance of 660 miles (1062 km), it does not seem likely that the former is part of a phenotypic clade of the latter. Most of 36 Ceterotus species have been collected at the C. charlottae type locality. This habitat is a low-lying rice region, a gently rolling hilly area interspersed with flatwoods and sloughs. It is rich in diverse natural vegetation, the secondary growth being so dense that it is imperceptible except in slough areas. The C. charlottae larva may be a filmworm feeder. Four possible host species common at the type locality are Prunus serotina L., Melia azedarach L., Cotinus coggygria Scop. and Prunus serotina L. var. serotina var. intermedia Ferns. All four species were present at the type locality. The larva feeds on the finer, fibrous portions of the plant.
Caticula alabamica has the broader geographic range, occurring in Missouri, Texas, the southeastern States, the Gulf States, Tennessee, South Carolina, and Florida (Barren & McDonough 1918, Holland 1902:268, Sargent 1976:70, Covell 1984:315). Types. Holotype 1 (Fig. 1). 4.2 miles (6.7 km) NE Abita Springs, sec. 24 T60R12E, St. Tammany Parish, Louisiana, 7 May 1985. V. A. Bros Jr.; allotype 1 (Fig. 2) same data, 30 April 1985. Both in United States National Museum, Washington, D.C. Paratypes same locality, 36 f, 56 x, 30 April to 23 June 1983–87, Jacksonville, Duval Co., Florida.

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LITERATURE CITED


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