

# New Species of Lady Beetles in the Genera *Scymnus* and *Mulsantina* (Coleoptera: Coccinellidae)<sup>1</sup>

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## ABSTRACT

Five new species of Coccinellidae are described: *Scymnus* (*Scymnus*) *apicanus*, n. sp., and *S. (S.) paracanus*, n. sp., from Louisiana and Missouri; *S. (Pullus) louisianae*, n. sp., from Florida, Louisiana, Tennessee, Texas,

and Virginia; *S. (P.) securus*, n. sp., from Louisiana and Massachusetts; and *Mulsantina luteodorsa*, n. sp., from Louisiana, Mississippi, and Virginia. The male genitalia of all species are figured.

During a survey of the Coccinellidae of Louisiana, 5 new species were identified, 4 in the genus *Scymnus* and 1 in the genus *Mulsantina*. This material, along with additional specimens from the Florida State Collection of Arthropods, Texas A&M University, and the U.S. National Museum of Natural History, is described. The holotypes have been deposited in the U.S. National Museum, and the paratypes, unless otherwise indicated, are in the collection of the author.

### *Scymnus (Scymnus) apicanus*, n. sp.

*Holotype male*.—Head, mouthparts, and antennae reddish yellow. Pronotum reddish yellow with median arcuate black spot at base which extends anteriorly for 4/5 length. Elytra black, narrowly reddish yellow apically. Prosternum black at middle, reddish yellow laterally; prosternal carinae convergent, disappearing before anterior margin. Mesosternum and metasternum black. Abdomen with first 3 sterna black medially, pale laterally, remainder reddish yellow; 5th sternum emarginate at apex. Legs reddish yellow. Genitalia (Fig. 1, 2) with basal lobe a little longer than parameres, broad at base, gradually rounding to a point at apex; each paramere oblong-oval, scarcely broader at base than apex, fringed with hair except at basal half of dorsal edge; siphon with fishhooklike projection near tip. Length 2.6 mm; width 1.9 mm.

*Variation*.—Length 2.1–2.6 mm; width 1.6–1.9 mm. There is some variation in the size of the pronotal spot, the width of the yellow band at the apical edge of the elytra, and the extent of black on the abdominal sterna.

*Holotype*.—Ascension Parish, La., V-27-1969, J. B. Chapin.

*Paratypes*.—15 ♂. LOUISIANA: 7, same data as holotype; 3, Ascension Parish, V-27-1969, B. T. Chapin; 1, Donaldsonville, VI-26-1967, L. D. Newsom; 2, Ollie, Apr. 11–15, issued Apr. 15–27, T. H. Jones (U.S. National Museum). MISSOURI: 2, Nevada, Mo., VIII-30-1971, J. B. Chapin.

*Discussion*.—*S. apicanus* closely resembles *S. indianensis* Weise, a species thought to be *S. americanus* Mulsant until recent work by R. D. Gordon

separated the two.<sup>2</sup> *S. apicanus* differs in the following characters: it is larger; the 5th abdominal sternum of males is more deeply emarginate; the male genitalia are larger with the basal lobe a pointed oval instead of a narrow triangle; and the siphon has a fishhooklike projection near the tip.

### *Scymnus (Scymnus) paracanus*, n. sp.

*Holotype male*.—Head, mouthparts, and antennae reddish yellow. Pronotum reddish yellow with median arcuate black spot at base which extends anteriorly 3/4 the length. Elytra black, apical edge broadly reddish yellow. Prosternum reddish yellow, darker between coxae; prosternal carinae convergent, fading out toward anterior margin. Mesosternum and metasternum black. Abdominal sterna reddish brown, 1st sternum darker; 5th sternum emarginate at apex. Legs reddish yellow. Genitalia (Fig. 3, 4) with basal lobe longer than parameres, parallel sided for basal 2/3, narrowing to a blunt point; each paramere triangular, broader at base than apex, fringed with hair except along basal half of dorsal edge; siphon with fishhooklike projection near apex. Length 2.6 mm; width 1.9 mm.

*Variation*.—Length 2.4–2.8 mm; width 1.8–1.9 mm. There is some variation in the width of the yellow band at the apex of the elytra.

*Holotype*.—Shongaloo, La., VII-25-1964, L. D. Newsom.

*Paratypes*.—3 ♂. LOUISIANA: 1, same data as holotype; 1 Homer, V-6-12, A. Rutherford, larva feeding on cotton aphids (U.S. National Museum). MISSOURI: 1, Nevada, Mo., VIII-30-1971, J. B. Chapin.

*Discussion*.—This species differs from *S. indianensis* and *S. apicanus* in the shape of the parameres and the basal lobe of the male genitalia.

### *Scymnus (Pullus) louisianae*, n. sp.

*Holotype male*.—Oval, convex. Head, mouthparts, and antennae reddish yellow. Pronotum reddish yellow with median arcuate black spot at base which reaches anteriorly for 5/8 of length. Elytra black with slightly arcuate apical pale area on each elytron which occupies about 1/2 length of elytra. Posternum reddish yellow, darker between coxae; prosternal carinae complete to anterior margin, converging slightly.

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<sup>2</sup>Personal communication, R. D. Gordon, Systematic Entomology Laboratory, Agric. Res. Serv., USDA, c/o U.S. National Museum of Natural History, Washington, D. C. 20560.

Mesosternum and metasternum black. Abdomen with first 2 abdominal sterna black, 2nd pale laterally; remainder of sterna reddish yellow. First abdominal sternum depressed at middle, with minute glabrous area at posterior margin; 5th sternum apically impressed with 6th to form a shallow fovea; 6th emarginate apically. Legs reddish yellow. Genitalia (Fig. 5, 6) with basal lobe longer than parameres. Basal lobe asymmetrical with a dorsally curved point at apex; right side with 2 ventral lobes, upper very large and bearing a downward projecting hook; left side lobed at basal half; dorsal surface with a projection from apex to middle; base with 2 laterally curved processes at middle. Each paramere narrow at base and apex, tip bluntly rounded with 2 tufts of hair, a few short fine hairs on dorsal side, a longer tuft on ventral side. Ventral alae absent. Length 2.3 mm; width 1.8 mm.

*Variation*.—Length 2.1–2.4 mm; width 1.4–1.8 mm. There is a little variation in the size of the black spot on the pronotum and in the extent of the apical pale area of the elytra.

*Holotype*.—Baton Rouge, La., VI-4-1969, J. B. Chapin.

*Paratypes*.—83♂. LOUISIANA: 7, Shreveport, 2-VI-1969, B. T. Chapin; 2, Ferriday, VIII-20-1968, V-17-1969, J. B. Chapin; 13, Mansfield, 2-VI-1969, J. B. Chapin; 1, East Feliciana Parish, V-26-1969, B. T. Chapin; 1, Winnsboro, V-22-1969, J. B. Chapin; 1, Maringouin, V-27-1969, B. T. Chapin; 3, Natchitoches, 1-VI-1969, J. B. Chapin; 1, Natchitoches, VII-25-1969, L. D. Newsom; 2, Monroe, 18-V-1969, B. T. Chapin; 4, Monroe, 18-V-1969, 22-V-1969, J. B. Chapin; 5, Alexandria, 21-V-1969, J. B. Chapin; 4, Many, La., 2-VI-1969, B. T. Chapin; 1, Breaux Bridge, VI-5-1968, J. B. Chapin; 2, Hammond, V-29-1969, J. B. Chapin; 2, Shongaloo, VII-25-1964, VII-3-1966, L. D. Newsom; 1, Baton Rouge, VII-16-1964, A. D. Oliver; 1, Baton Rouge, 25-V-1969, B. T. Chapin; 21, Baton Rouge, IX-26-1968, 1-X-1968, X-11-1968, 4-VI-1969, 5-VI-1969, J. B. Chapin. FLORIDA: 1, LaCross, 27-IV-30, G. B. Merrill; 1, Alachua County, 1942; 2, Gainesville, VIII-8-64, VIII-16-64, R. E. White. TENNESSEE: 1, Burrville, 10-IX-59, B. Benesh. The Florida and Tennessee specimens are in the Florida State Collection of Arthropods. TEXAS: 1, Taylor, 6-1-27, J. C. Gaines; 1, Hidalgo County, 6-1-1931; 1, Pleasanton, 3-13-33; 1, College Station, 4-1-30, J. C. Gaines; 1, College Station, Sept. 13, 1931, H. J. Reinhard. VIRGINIA: 1, Mountain NE of Roanoke, VII-1928. The Texas and Virginia specimens are in the collection of Texas A&M University.

*Discussion*.—Specimens were collected on *Lactuca canadensis* L. infested with *Dactynotus pseudoambrosiae* Oliver and *Lagerstroemia indica* L., and on *Pyracantha coccinea* Roem. infested with aphids.

This species is very similar to *S. fraternus* LeConte. The basal lobes of the male genitalia of both species are asymmetrical, but in *S. fraternus* the large ventral lobe on the right side ends in a blunt point, and the 2 processes at the base on the dorsal surface are

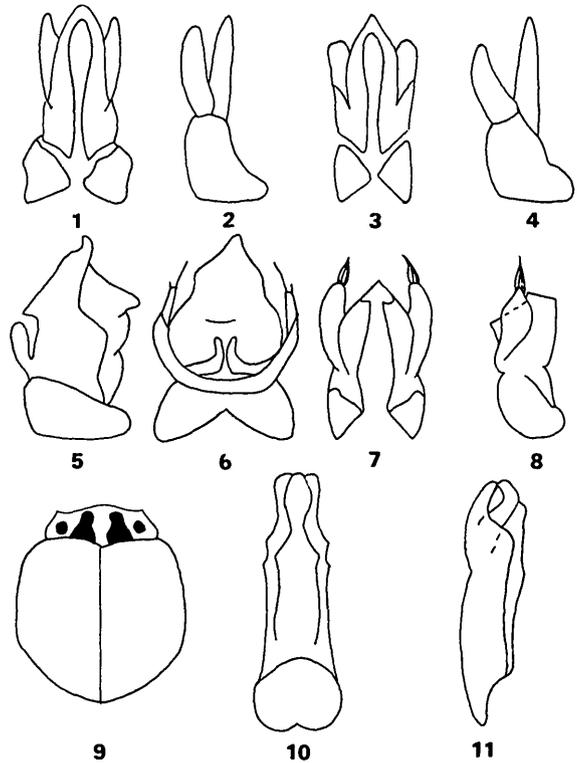


FIG. 1, 2.—*S. apicanus*: 1, phallobase, ventral view without hair tufts on parameres; 2, same, lateral view. FIG. 3, 4.—*S. paracanus*: 3, phallobase, ventral view without hair tufts on parameres; 4, same, lateral view. FIG. 5, 6.—*S. louisianae*: 5, phallobase, lateral view without parameres; 6, same, dorsal view with parameres. FIG. 7, 8.—*S. securus*: 7, phallobase, ventral view; 8, same, lateral view. FIG. 9–11.—*M. luteodorsa*: 9, dorsal view; 10, phallobase, ventral view without hair tufts on parameres; 11, same, lateral view.

situated laterally and slightly curved medially. Specimens of *S. fraternus* were examined from New York, New Jersey, North Carolina, Tennessee, and West Feliciana Parish, Louisiana, indicating that the distributions of the 2 species overlap.

#### *Scymnus (Pullus) securus*, n. sp.

*Holotype malc*.—Elongate-oval, convex. Head, mouthparts and antennae reddish yellow. Pronotum reddish yellow with median arcuate black spot at base extending anteriorly for most of length. Elytra black; each elytron with arcuate apical pale area occupying  $\frac{1}{4}$  length. Prosternum reddish brown, lateral margins reddish yellow; prosternal carinae complete to anterior margin, convergent. Mesosternum and metasternum black. Abdomen with first 2 abdominal sterna black, pale laterally; remainder reddish yellow. First abdominal sternum with minute median glabrous area surrounded by a large patch of dense punctures and pubescence; 5th widely emarginate at apex and impressed with 6th to form a shallow fovea; 6th narrowly emarginate at apex. Legs reddish yellow. Genitalia (Fig. 7, 8) with basal lobe and parameres subequal in length; basal lobe broad at base and pointed at apex with broad lobes ventrally; parameres with

pointed tufts of hair at apices; ventral alae absent. Length 2.1 mm; width 1.4 mm.

*Femalc.*—Similar to male except in sexual characters.

*Variation.*—Length 1.9–2.3 mm; width 1.3–1.6 mm. The pronotum may be black with anterior margins, anterior angles or lateral margins reddish yellow. The prosternum may be black with lateral margins reddish yellow.

*Holotype.*—Cameron Parish, La., X-23-1970, J. D. Newsom.

*Paratypes.*—31 specimens. LOUISIANA: 9 ♂, 19 ♀, Cameron Parish, VIII-28-1970, IX-18-1970, X-2-1970, X-9-1970, X-23-1970, VI-24-1971, VII-8-1971, VIII-21-1971, IX-9-1971, X-14-1971, J. D. Newsom; 1 ♂, St. Tammany Parish, VIII-18-1968, R. L. Jensen; 1 ♂, Hammond, V-29-1969, J. B. Chapin. MASSACHUSETTS: 1 ♂, Framingham, X-10-47, C. A. Frost (Florida State Collection of Arthropods).

*Discussion.*—This species resembles *S. rubricaudus* Casey. The male of *S. securus* has a median patch of dense punctures and pubescence on the 1st abdominal sternum and lacks the ventrally produced hooks of the 6th sternum. The specimens from Cameron Parish were collected in a grassy coastal marsh.

#### *Mulsantina luteodorsa*, n. sp.

*Holotype male.*—Form oval. Head white, vertex black; mouthparts and antennae white. Pronotum white with a slightly curved black stripe each side of middle, extending from base almost to apex, an isolated black spot in each lateral pale area. Scutellum pale. Elytra yellowish orange, immaculate (Fig. 9). Prosternal lobe without carinae. Mesosternum convex, anterior margin slightly sinuate medially. Postcoxal lines incomplete, curving toward lateral margins parallel to 1st abdominal suture; oblique lines of postcoxal plates absent. Ventral surface black; prosternum, mesosternum, anterior medial margin of metasternum, epimera, and epipleura pale. First 2 pairs of legs pale; metathoracic legs with trochanters pale, femora black, paler at bases and apices, tibiae and tarsi pale, tibiae streaked with black externally. Each tarsal claw with large basal tooth. Male genitalia (Fig. 10, 11) with basal lobe as long as parameres, curved dorsally near tip, its apex between tips of parameres; apex of basal lobe bluntly pointed; each paramere curved inward at tip which is pointed and more heavily sclerotized with short hairs subapically; siphon abruptly narrowed at tip. Length 3.8 mm; width 3.1 mm.

*Female.*—Similar to male except as follows: head white, black anteriorly and posteriorly, labrum dark. Ventral surface black, except lateral margins of prosternum, epimera, epipleura, and lateral margins of 1st abdominal sternum pale. Legs with femora black, pale apically, tibiae and tarsi pale.

*Variation.*—Length 3.8–4.6 mm; width 3.1–3.4 mm. The black stripes on the pronotum may be joined basally or the lateral black spots on the pronotum may be joined to the median stripes basally. The pale areas on the ventral surface of the female may in-

clude the median areas of the prosternum and mesosternum and the median anterior margin of the metasternum. The legs may have the femora of males and the tibiae of both males and females streaked with black externally.

*Holotype.*—Baton Rouge, La., IV-11-1969, J. B. Chapin.

*Paratypes.*—16 specimens. LOUISIANA: 2 ♂, 5 ♀, same data as holotype; 1 ♂, Baton Rouge, IV-24-1970, J. B. Chapin; 1 ♀, Shreveport, VI-2-1969, J. B. Chapin; 1 ♂, 2 ♀, Many, La., VI-2-1969, J. B. Chapin. MISSISSIPPI: 1 ♀, Starkville, IV-27-1969, B. T. Chapin. VIRGINIA: 1 ♂, 2 ♀, Vienna, V-5-11, VI-20-11, and VII-19-11, C. W. Hooker (U.S. National Museum).

*Discussion.*—The Baton Rouge specimens were collected on basket oak. The genitalia of this species are very similar to *M. picta* (Randall), but are distinctly shorter. The basal lobe is shaped differently when viewed ventrally and the tip is narrower. The tips of the parameres are narrowly pointed and the hairs are shorter. The narrow portion at the tip of the siphon is considerably shorter than it is in *M. picta*.

The pronotal pattern of *M. luteodorsa* differs from that of other members of the genus, but the male genitalia are of the same type.

Blackwelder (1945) listed 5 species in the genus from North and Central America and the West Indies. The genitalia of this species are different from those of *M. picta*, *M. cyathigera* (Gorham), and *M. mirifica* (Mulsant). Timberlake (1943) reported that *M. lynx* (Mulsant) had genitalia identical to *M. mirifica* and agreed with Crotch that it was only a variety of the latter. Sicard (1929) stated that *M. labyrinthica* is similar to *M. lynx*. No specimens were examined, but the pronotal and elytral patterns are different according to the original description. A female of *M. concolor* (Crotch) was examined, and it did not agree with females of *M. luteodorsa*.

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