

NOTES ON IDENTIFICATION AND ECOLOGY OF TUMBLING  
FLOWER BEETLES (MORDELLIDAE) FROM OSSABAW  
ISLAND, GEORGIA

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A unique opportunity on April 25, 1995, to intensively search for mordellid beetles resulted in finding four species on Ossabaw Island, Chatham County, Georgia. This is the first report of their host plant associations and the sympatry of *Mordellistena trifasciata* and *M. minuta*. Historically, there has been confusion between these two species (Liljeblad 1945, Khalaf 1971) because their elytral color patterns are practically identical. I provide some overlooked distinctions between them.

*Mordellistena pubescens* (Fabricius) (Fig. 1): 6 specimens on black cherry *Prunus serotina* (Rosaceae), sparkleberry *Vaccinium arboreum* (Ericaceae), and wax myrtle *Myrica cerifera* (Myricaceae).

According to Liljeblad (1945), the color patterns of this species are quite variable. The dermal color of the Ossabaw specimens varies from reddish brown to black. There are three (sometimes four) dark spots surrounded by cinereous pubescence on the basal half (posterior) of the pronotum. Cinereous pubescence totally covers the anterior portion of the pronotum.

The elytral markings of golden pubescence in the Ossabaw specimens are inconsistent with those illustrated by Liljeblad (1945). Because both base and apex are covered with golden pubescence, there appear four golden crossbands on the elytron. The lateral margins are heavily covered with golden pubescence that encloses three dark spots on the elytron. The middle dark spot is usually more or less a crossband. In one specimen, the apical dark spot is so heavily encroached by the apical and penultimate golden crossbands that it is almost obliterated.

The short oblique ridges on the posterior tibia vary from 2-6 with the apical two obvious and the basal remainder rudimentary; the basitarsus has 2-4 ridges, again only the apical two are obvious; the second tarsal segment has only one ridge with a rudimentary second barely visible. These counts by Liljeblad (1945) are 3-4, 3, and 2, respectively. Determination of the number of ridges on the posterior leg is therefore highly subjective.

*Mordellistena andreae andreae* Leconte (Fig. 2): 10 specimens on black cherry *Prunus serotina* (Rosaceae), sparkleberry *Vaccinium arboreum* (Ericaceae), wax myrtle *Myrica cerifera* (Myricaceae).

Liljeblad (1945) named three varieties of this species. The form *M. ancilla*, regarded as a variety of *M. andreae* (Liljeblad 1945, Bright 1986), was said by Khalaf (1971) to have the penultimate segments of the anterior and middle tarsi truncated at apex. These segments on all Ossabaw specimens are slightly emarginate or notched at apex. This may be why Khalaf called *ancilla* a full species.

Head and thorax are yellow in the male and black in the female of *M. andreae andreae*. However, one female from Ossabaw has a totally ferruginous head. Liljeblad (1945) also reported "female with black head except a space in front of antennae which is yellowish." Apparently female head color is variable in this form.

*Mordellistena trifasciata* (Say) (Fig. 3 & Table 1): 2 specimens on red buckeye *Aesculus pavia* (Hippocastanaceae) and sparkleberry *Vaccinium arboreum* (Ericaceae).

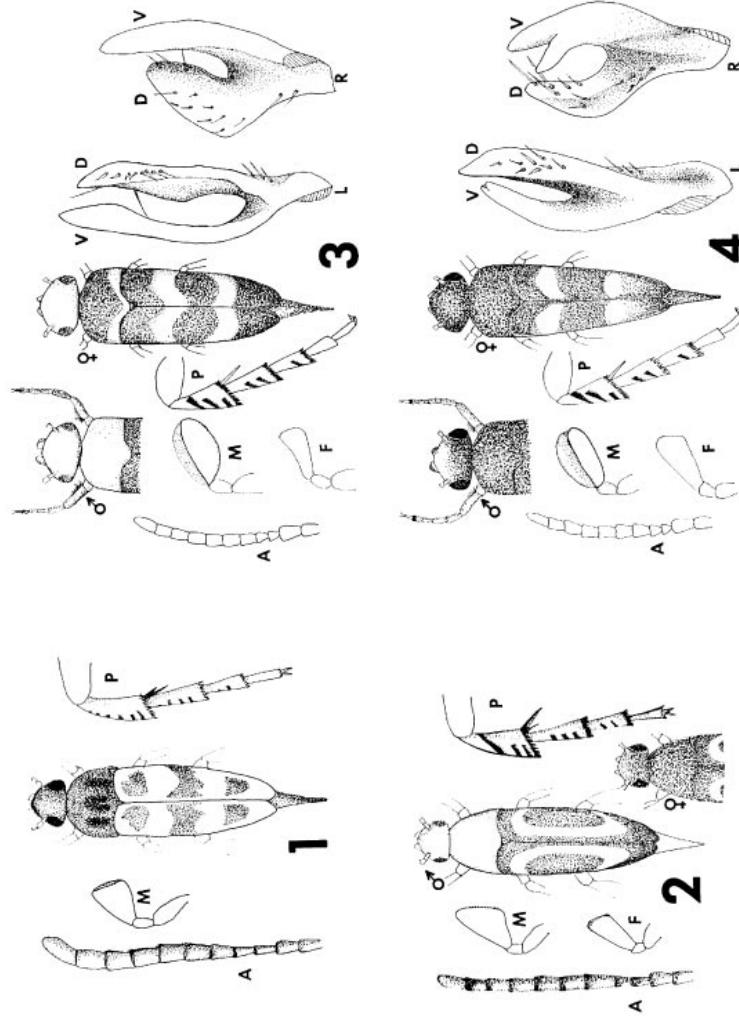


Fig. 1-4. *Mordellistena pubescens*, *M. andreae*, *M. trifasciata*, and *M. minuta*, respectively. A, antenna; M, male maxillary palp; F, female maxillary palp; P, posterior leg; L, left parameron; R, right parameron; D, dorsal branch; V, ventral branch. For paramera, top is apex.

TABLE 1. SOME DIFFERENCES BETWEEN *MORDELLISTENA TRIFASCIATA* AND *M. MINUTA*.

Difference	<i>M. trifasciata</i>	<i>M. minuta</i>
Head	Male yellow	Male black with yellow frons
Pronotum	Female yellow	Female black
	Male yellow	Male black
Male right parameron	Female black with yellow basal edge	Female black
	Ventral branch simple	Ventral branch with bifurcation
Male left parameron	Deeply branched from base	Apical half branched
Habitat	Shrubs	Low weeds

Liljeblad (1945) stated that there were long seta-like hairs on the anterior femur in males. These hairs are in fact located on the inner side of the anterior tibia, from the joint with the femur to halfway down the tibia.

The left parameron has no basal prominence (Franciscolo 1957) on its dorsal branch, and is deeply branched from base on. The dorsal branch of the left parameron has three setae at outer base facing the inner surface of the right paramera. The dorsal branch of the right parameron is wider and much shorter than the ventral branch.

*Mordellistena minuta* Smith (Fig. 4 & Table 1): 4 specimens on a broadleaf roadside weed (Compositae?).

Khalaf (1971) correctly pointed out that as in *M. trifasciata*, the last segment of the male maxillary palp is boat-shaped or malleiform and that there is only one posterior tibial spur. Liljeblad (1945) overlooked these two characters. Both Liljeblad (1945) and Khalaf (1971) overlooked the seta-like hairs on the anterior tibia in males, which are located as in *M. trifasciata*, but fewer.

The left parameron has no basal prominence on its dorsal branch, and is only branched on the apical half. The dorsal branch of the left parameron has also three setae at outer base facing the inner surface of the right paramera. Its ventral branch has a small dent at tip, and is shorter than the dorsal branch. The ventral branch of the right parameron is strongly bifurcated, very atypical of male genitalia of *Mordellistenini* (Franciscolo 1957).

Liljeblad (1945) claimed that the basal (upper) ridge of the posterior tibia of *M. minuta* was longer than that of *M. trifasciata*, "extending nearly across the outer face." He primarily separated the two species in keys using the length of this basal ridge. However, he described great variation of the ridge length in *M. trifasciata*. In all Ossabaw specimens the length and form of this basal ridge of *M. minuta* is the same as in *M. trifasciata*. This will not separate the two species. Some major differences between the two are shown in Table 1.

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## SUMMARY

*Mordellistena pubescens*, *M. andreae*, *M. trifasciata*, and *M. minuta* and their host plants are first recorded from Ossabaw Island, Georgia. For the latter two closely re-

lated species, sympatry and morphological, genitalic, and ecological distinctions are first reported here.

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