THE FEMALE OF *OXYBLEPTES MERIDIONALIS* (COLEOPTERA: STAPHYLINIDAE: STAPHYLININAE) AND RANGE EXTENSION FOR *OXYBLEPTES*

J. H. FRANK, J. L. FOLTZ AND D. T. ALMQUIST
Entomology and Nematology Department, University of Florida, Gainesville, FL 32611-0630

Smetana (1982) described a new genus (*Oxybleptes*) to include four species of Xantholinini from America north of Mexico. One species, *O. davisi* (Notman), was previously known from the District of Columbia, New Jersey, and New York. The remaining three species (*O. kiteleyi* Smetana, *O. hatchi* Smetana, and *O. pusio* Smetana) were described as new. None of these species was reported to occur farther south than North Carolina.

In 1984, J. H. Frank submitted to Ales Smetana (Canadian National Collection, Ottawa, Ontario) North American specimens of Xantholininae that either could not be identified using Smetana's (1982) keys, or gave evidence of range extensions. Thereafter, Smetana (1988) described a new species (*O. meridionalis* Smetana) based upon five specimens. One paratype was retained by the Canadian National Collection (CNC), the holotype and one paratype were in 1987 deposited in the Florida State Collection of Arthropods (FSCA), and two paratypes were retained in the collection of J. H. Frank. All were from the grounds of what is now called Florida Medical Entomology Laboratory (of the University of Florida), at Vero Beach, Indian River County, Florida, a location a few hundred meters west of the Indian River (intracoastal waterway) on Florida's Atlantic coast, and at ≈27°36'N. Four were collected in August 1973 and one in May 1976, in oak-palm hammock. The collection method was unusual: Frank had been operating 5-gallon (≈20-liter) green plastic water-filled tubs to attract ovipositing *Culex* mosquitoes. Four *Oxybleptes* specimens were collected drowned or drowning from the surface of the water in the tubs, and one alive from the conical lid with which half of the tubs at any time were fitted. This lid was of light-reflecting sheet aluminum. The attractant (if there really was an attractant) for the beetles may have been the reflectance of the water surface or the aluminum. Although Frank routinely ran an ultraviolet light trap, and later a Malaise trap, at this and other nearby locations, no specimens of *Oxybleptes* were caught in those traps. The habitat and behavior of these curious little beetles remained unresolved. All five specimens collected were males. Smetana (1988), therefore, was able to describe only the male of this species, and he found it to be bicolored, like that of *O. davisi* and contrasting with males of the three other known species.

In 2002, J. L. Foltz and D. T. Almquist operated various kinds of traps for insects at Bee Island in the Myakka River State Park, 27°15.12'N, 82°15.09'W. Most of the park is in Sarasota County, Florida, but Bee Island is in Manatee County. This park is within 25 km of Florida's Gulf of Mexico coast. In November 2002, Almquist asked Frank to identify staphylinid specimens collected in pine flatwoods at Bee Island. Frank recognized some of them as being *O. meridionalis*, explained their apparent rarity, and urged Almquist to collect more, alive if possible for behavioral study. The initial collection in the park was on 16 October, and included eight specimens (7 male, 1 female). The second collection was on 18 December and included 18 specimens (13 male, 5 female).

Again, the collection method was curious. All specimens were collected in water, with the October 2002 collection from the water-filled, white plastic top of a Lindgren funnel trap (Phero Tech, Inc., Delta, BC, Canada), and the December collection from plastic shoe boxes with a few cm of soapy water. The collections again suggested attraction to a reflective surface. All collections yielded a preponderance of males (for 1973-1976, 5:0 males: females, October 2002, 7:1, December 2002, 13:5) but the significance of this imbalance in sex ratio is unclear. Adult activity is known to occur in May, August, October, and December. Eggs and larvae were not obtained, nor was any behavioral information obtained except that Foltz remembers that the specimens collected on 18 December were trapped in the early afternoon, thus in daylight.

The female (Fig. 1), similar in size and coloration to male, is "bicolored", testaceous to rufotestaceous; the head and elytra are piceous to piceous black, and the abdominal apex darkened. The antenna of female with less swollen apical antennomere and with antennomere III distinctly shorter than II (Fig. 2a) cf. as long as II in male (Fig. 2b). The maxillary palpus of the female (Fig. 2c) has all palpomeres shorter and therefore relatively broader than in male (Fig. 2d). The meso- and metatarsus are shorter than the respective tibia (cf. as long in male), and tarsomeres II-IV are relatively shorter than in male. Such sexual dimorphism occurs also in other species of the genus (Smetana 1982). Female specimens will be deposited in FSCA and CNC together with additional male specimens.

Heretofore there is no record of any species of *Oxybleptes* other than *O. meridionalis* in Florida. Among staphylinids collected by C. W. O'Brien was one female specimen of *Oxybleptes* labeled USA, Florida, Franklin Co., 3 mi NW of Alligator Point, 17-IV-1974, Berlese funnel extract of pine litter, O'Brien and Marshall. This specimen is not

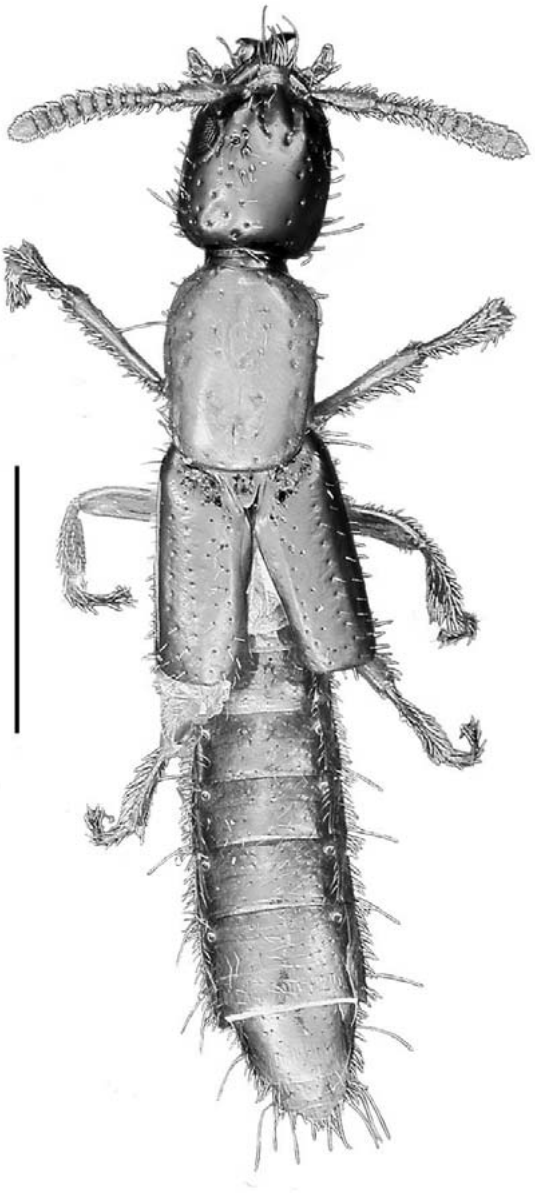

Fig. 1. Habitus of female *Oxybleptes meridionalis*. The scale line represents 1.0 mm.

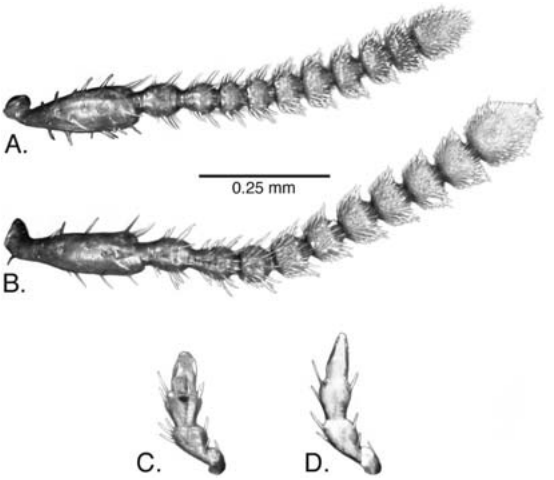

Fig. 2. *Oxybleptes meridionalis*, 2a. Antenna of female, 2b of male, 2c maxillary palpus of female, 2d of male. The scale line represents 0.25 mm.

distinctly bicolored, is considerably larger than the diminutive *O. meridionalis*, and most closely matches the description of *O. kiteleyi* by Smetana (1982). Thus, in the northwest of Florida, distant by about 380 km from the nearest known location for *O. meridionalis* and in a harsher climatic zone, seems to exist a population perhaps of *O. kiteleyi*. If this identification is correct, it would represent the southernmost record for *O. kiteleyi*, which until now had not been known south of North Carolina. Smetana (1982) noted the difficulty of distinguishing females of *O. kiteleyi* from those of *O. davisi*, so there is doubt in this determination, and it would be advantageous to examine male specimens from northwestern Florida.

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Summary

Oxybleptes meridionalis Smetana (Staphylinidae: Staphylininae: Xantholinini) was previously known only from five males collected in 1973-1976 from Indian River County, Florida, at 27°36'N. It is here reported from Manatee County, on the other side of the Florida Peninsula, at 27°15'N. The new collections include six females together with 20 males. The female is colored similarly to the male, but differs in the structure of antennomeres III and XI, the maxillary palpi, and the meso- and metatarsi, which are here described. One female specimen of another species of *Oxybleptes*, of uncertain identity, was collected in Franklin County, Florida, some 380 km farther north.

References Cited

SMETANA, A. 1982. Revision of the subfamily Xantholininae of America north of Mexico (Coleoptera: Staphylinidae). Mem. Entomol. Soc. Canada 120: i-viii, 1-389.

SMETANA, A. 1988. Revision of the subfamily Xantholininae of America north of Mexico (Coleoptera: Staphylinidae) Supplementum 1. Canadian Entomol. 120: 525-558.