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Mecidea longula Stål (Heteroptera: Pentatomidae: Pentatominae:
Mecideini) is established in south Florida

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Abstract. A Caribbean species of *Mecidea* Dallas, *M. longula* Stål, apparently established in south Florida, is reported from the United States for the first time. Specimens were first collected in February 2008 in a light trap operated in Miami-Dade County, Florida. Collections in that trap have continued through the present. Searches near the trap location resulted in several specimens being taken from smutgrass, *Sporobolus indicus* (L.), an exotic grass now established throughout much of the southeastern United States. The three North American species of *Mecidea* are keyed and illustrated. In addition to the Florida locality, *M. longula* is reported for the first time from the British Virgin Islands, St. Kitts, St. Martin, and the Turks and Caicos Islands.

Key Words. Stink bug, first record, Florida, new host record, distribution.

Introduction

The genus *Mecidea* Dallas currently contains 19 species and was revised by Sailer (1952). It is the only New World genus in the tribe Mecideini and can be recognized within the Pentatomidae by the presence on the abdominal venter of a longitudinal band of striations on the basal 3 or more segments (Rolston and McDonald 1979). Species of *Mecidea* are found in all arid tropical and adjacent temperate regions of the world with the exception of the Australasian Region. There are four species in the New World, *M. major* Sailer, *M. minor* Ruckes, *M. pampeana* Sailer, and *M. longula* Stål. Until 1946, *M. longula* was the only species recognized from the New World. Records of *M. longula* from the United States refer to *M. major*, *M. minor* or both (Sailer 1952). Froeschner (1988) reports *M. major* from the following US states: AZ, AR, IL, KS, MO, OK and TX. Brailovsky (1986) reported it from Mexico. *Mecidea minor* was reported from AZ, AR, CA, IA, MO, NM, OK, SD, TX and northern Mexico (Froeschner 1988). *Mecidea pampeana* was described from the arid regions of Argentina (Sailer 1952). Distribution of *M. longula* was given by Sailer (1952) as St. Bartholomew Island, Antigua, and Puerto Rico. Perez-Gelabert and Thomas (2005) also reported it from Hispaniola and Rider (2007) listed it from Montserrat.

There are no endemic species of *Mecidea* in Florida. Mead (1988) reported finding a single specimen of *M. major* on a car hood in St. Petersburg Beach, FL. Tropical Storm Keith had made landfall near St. Petersburg just two days before his finding and the single specimen may have been blown in by the storm. Subsequent collecting trips to the same area by the author JEE did not reveal any additional specimens and we have not seen other specimens from Florida since that time. So *M. major* apparently did not establish in Central Florida at that time.

Light traps have proven useful for detecting certain insect fauna in various habitats (e.g. Frost 1964, Thomas and Thomas 1994). They have been successfully deployed in monitoring programs initiated by various governmental agencies, resulting in new detections and/or range extensions of many heteropterous insects (e.g. Dobbs 2003, Dobbs and Henry 2008, Henry and Smith 1979, Henry et al. 2005, Hribar and Henry 2007, Wheeler et al. 1983). With these facts in mind, USDA-APHIS-PPQ in October 2007



Figure 1-3. *Mecidea* spp. **1)** Habitus, dorsal view, *Mecidea longula*. Dimensional line equals 1.0 mm. **2-3)** Male genital cup, lateral view, t = tubercle. Dimensional lines equal 0.5 mm. **2)** *Mecidea longula*. **3)** *Mecidea minor*.

began operating and monitoring an ultraviolet light trap in the vicinity of Miami International Airport. The author TTD collected a number of specimens of *M. longula* in south Florida during 2008-2009 in such a trap, suggesting that it is now established in the state. This paper provides a key and illustrations for species of *Mecidea* found in the United States to facilitate recognition of the introduced species, and reports a new host record for *M. longula*. In addition, new distribution records from the Caribbean are given.

Materials and Methods

A 22 watt Universal black light trap (BioQuip Products, California) was operated twice weekly in Miami-Dade County, Florida, beginning in October 2007. The trap was located in the immediate vicinity of Miami International Airport, just north-east of the intersection of NW 25th Street and Perimeter Road (N 25° 47.98' W 80° 18.44'). The trap was placed on a 3 foot platform on the margin of a paved surface that is bordered by a disturbed area containing a mixture of weeds and shrubs. The light was turned on in the afternoon and operated throughout the night with the resultant captures being collected the following morning.

Specimens were removed from a jar containing isopropyl alcohol, mounted, labeled and set aside for later identification. Voucher specimens were deposited in the Florida State Collection of Arthropods (Gainesville, FL) and the National Museum of Natural History (Washington, DC).

Key to species of *Mecidea* occurring in the United States.

- 1. Abdomen with midventral dark line, this frequently discontinuous and missing on some segments but usually present on at least one segment (Fig. 5); males with small tubercle on posterior ventral margin of genital cup (Fig. 3) *M. minor* Ruckes
- Abdomen with midventral area usually unmarked (Fig. 4); males lacking tubercle on posterior ventral margin of genital cup (Fig. 2) **2**
- 2(1). Abdominal venter with large black macules just mesad of trichobothria, diameter of macules usually 2 times or more that of spiracle on same segment, especially on basal segments (Fig. 7); length of males > 9.5 mm, females > 10.0 mm *M. major* Sailer
- Abdominal venter with black macules just mesad of trichobothria smaller, diameter of macules usually not much more than diameter of spiracle on same segment (Fig. 6); smaller species, length of males < 9.5 mm, females < 10.0 mm *M. longula* Stål

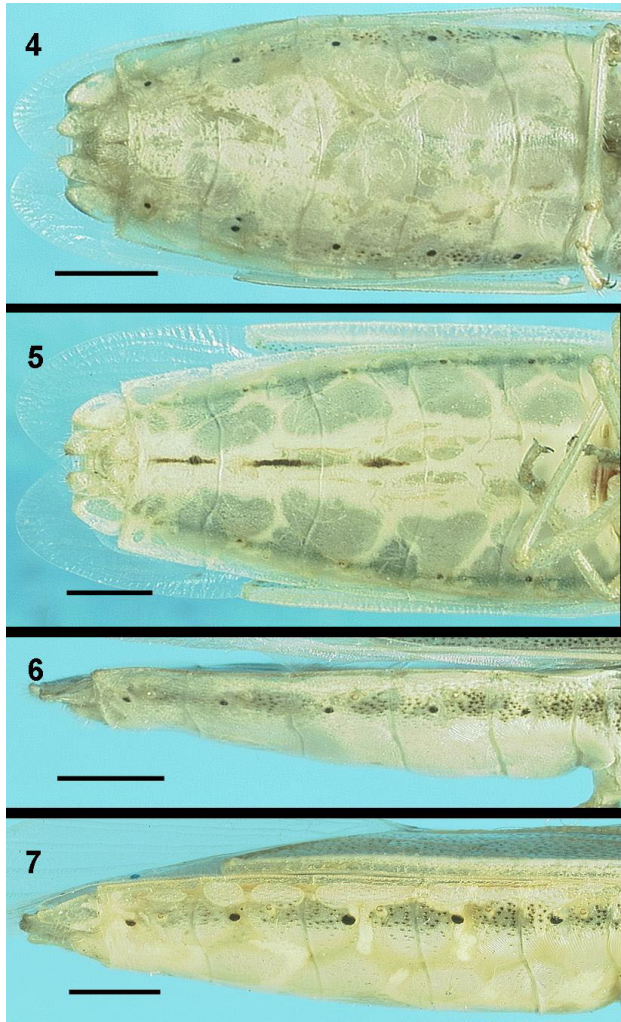


Figure 4-7. Abdomen of *Mecidea* spp. 4-5) Ventral view. 6-7) Lateral view. 4) *Mecidea longula*. 5) *Mecidea minor*. 6) *Mecidea longula*. 7) *Mecidea major*. Dimensional lines equal 1.0 mm.

***Mecidea longula* Stål 1854**
 Fig. 1, 2, 4, 6

Mecidea longula Stål, 1854: 233; Sailer, 1952: 484-485, pl. 47, figs. 7-9, pl. 48, figs. 35, 36, 54, 58.

Diagnosis Medium size, elongate, dull stramineous above and below, with dark to concolorous punctations. Pronotum strongly constricted anterior to humeri. Abdominal venter lacking midventral dark line;

diameter of black macules mesad of trichobothria usually not much more than diameter of spiracle on same segment. Posterior ventral margin of male genital cup smooth, lacking distinct tubercle.

The specimens of *M. longula* in our collections look very much like *M. major* and *M. minor*. They tend to be smaller than the other two species and the dorsal coloration has more of a grayish tint. Sailer (1952) states that the pronotum is more strongly constricted anterior to the humeri in *M. longula* than in the other two species. This is true of many specimens, but appears to be somewhat variable.

Material examined. **ANTIGUA:** Shirley Heights, 4-VII-92, H. V. & R. M. Baranowski (1 M, 1 F). **BRITISH VIRGIN ISLANDS:** Beef Island, nr airport, 15-IX-90, H. V. & R. M. Baranowski (5 M, 4 F); Tortola, 5 mi W Road Town, 16-IX-90, H. V. & R. M. Baranowski (1 F). **DOMINICAN REPUBLIC:** Prov. Pedernales, Cabo Rojo, Alcoa, 11-VI-98, R. E. Woodruff & P. E. Freytag, black light trap (1 M); Ibid, 12-VI-98, Ibid (1 M); Ibid, 13-VI-98, (1 M, 1 F); Ibid, 3-VII-1998, R. Woodruff and R. Baranowski, black light trap (1 M, 1 F); Prov. Pedernales, 10.2 km N Cabo Rojo, 9-VII-1996, M. C. Thomas (1 M); Prov. Pedernales, Cabo Rojo, Alcoa Headquarters, 20-24-VI-1999, Woodruff and Baranowski, black light trap (1 F). **ST. KITTS:** George Parish, nr Great Salt Pond, 16-VIII-92, H. V. & R. M. Baranowski (2 M, 3 F); 1 mi E of Basseterre, 22-IX-90, H. V. & R. M. Baranowski (4 M, 6 F). **ST. MARTIN:** 2 mi N Orleans, 12-I-90, R. M. Baranowski (1 M, 3 F), Ibid, 13-I-90 (1 M, 5 F); N. of Great Salt Pond, 13-I-90, R. M. Baranowski (1 F); Philipsburg, 0-100 m, July 1979, N. L. H. Krauss (1 M). **TURKS & CAICOS:** Providenciales Isl., Grace Bay, 19-X-93, R. M. & H. V. Baranowski, black light trap (1 F). **USA-FLORIDA:** Miami-Dade Co. Airport Fumigation Site, Light Trap, N25°47.98', W80°18.44', 20-II-2008, T. Dobbs (1 F); Ibid, 27-VII-2008 (1 M); Ibid 2-IX-2008 (1 F); Ibid 4-IX-2008 (1 M); Ibid 16-IX-2008 (1 M, 2 F); Ibid 18-IX-2008 (1 F); Ibid 23-IX-2008 (2 M, 1 F); Ibid 25-IX-2008 (1 M, 2 F); Ibid 21-X-2008 (2 M); Ibid 23-X-2008 (1 M); Ibid 6-XI-2008 (1 M); Ibid 26-XI-2008 (1 F); Ibid 17-XII-2008 (1 F); Ibid 29-XII-2008 (1 M, 1 F); Ibid 12-I-2009 (1 F); Ibid 22-II-2009 (1 M); Ibid 10-IV-2009 (1 F); Miami-Dade Co., 9-XII-2008, *Sporobolus indicus* (L.) R. Br. Airport Fumigation Site, N25°47.98', W80°18.44', T. Dobbs and D. Lahanas (2 M, 1 F). Specimens are deposited in the Florida State Collection of Arthropods (FSCA), the United States National Museum (USNM) and the collection of the two authors. In addition to Florida, this is the first report of *M. longula* from the British Virgin Islands, St. Kitts, St. Martin, and the Turks and Caicos Islands.

Biology. Stoner (1925) reported finding large numbers of *M. longula* on radiate fingergrass, *Chloris radiata* (Linnaeus), on the island of Antigua. The author TTD collected three adults on smutgrass, *Sporobolus indicus* (Linnaeus) R. Br., growing in an area adjacent to the light trap in Miami-Dade County. Smutgrass is an exotic grass native to Asia (Wunderlin and Hansen 2003), but now established widely in the southeastern United States. Little is known about the specific biology of *Mecidea* spp. aside from the fact that host plants are generally considered to be grasses (Bundy 2004). The appearance of specimens in the Miami-Dade light trap and the surrounding environs from February through December demonstrates that *M. longula* is capable of surviving year-round in south Florida. We have not seen any reports of these bugs as pests although Ruckes (1938) states that 'in time *M. longula* [of authors, not Stål] may become a pest of major proportions'. Additional study is needed to better understand the current distribution of this bug in Florida and its potential as an economic pest.

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