REDISCOVERY OF LIGYROCORIS SLOSSONI (HEMIPTERA: LYGAEOIDEA: RHYPAROCHROMIDAE), A RARELY COLLECTED SEED BUG CONSIDERED PRECINCTIVE IN FLORIDA

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Since its original description nearly 90 years ago, *Ligyrocoris slossonae* Barber has remained a rarely collected lygaeoid bug whose habits are unknown. Only the unique holotype and three additional specimens have been recorded (Sweet 1986; Slater & Baranowski 1990), and information on its habitat is limited to Blatchley’s (1926) comment that he collected a female at Dunedin, Florida, “by beating dead leaves of oak near the bay beach.”

Barber (1914) described *L. slossoni* from a male taken at Lake Worth, Florida, but in his revision of *Ligyrocoris*, he omitted *slossonae* from his keys, noting that his description of this now “doubtful species” had been based on a damaged and apparently teneral specimen (Barber 1921). When a fully sclerotized specimen became available for study (the female from Dunedin), Barber (1924) was able to reinstate *L. slossoni* as a valid species and to redescribe it.

Barber subsequently identified this seed bug from other southeastern states and from as far north as southern Illinois (Sweet 1986). In a list of the Lygaeidae of Iowa and Illinois, Slater (1952) recorded it from Washington County, Illinois, based on Barber’s determination. Sweet (1986), however, found that material identified as *L. barberi* was a valid species and to redescribe it.

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Of the 115 lygaeoid species recorded from Florida, 10 are known only from that state (Barnowski 1995) and are considered precocious—that is, confined to that area (see Frank & McCoy 1990). Ligyroris slossoni is one of those lygaeoids known only from Florida (Slater & Barnowski 1990), yet its recent collection in Hamilton County, which borders on Georgia, suggests that it also might be found in southern Georgia. Its distribution, though, apparently is more restricted than that of the widespread and morphologically similar L. barberi (Sweet 1986).

I collected L. slossoni in the eastern panhandle of Florida (Hamilton Co.) in a ruderal site along Rt. 129 in an area of mesic flatwoods (see Wheeler [2001] for more information on the habitat). Collections in Lake County also were made in a field-type habitat (sensu Sweet 1964) along Rt. 27 and about 10 meters inside a fence on adjoining property of Lake Louisa State Park. This disturbed site near the northern end of the Lake Wales Ridge has scattered weeping lovegrass plants, prickly pear (Opuntia humifusa [Raf.] Raf.; Cactaceae), plus camphorweed (H. subaxillaris), ragweed (Ambrosia artemisiifolia L.; Asteraceae), and other rank forbs. Myodochine rhyparochromids beaten from crowns of grasses with L. slossoni at both sites were Paromius longulus (Dallas) and Perigenes similis Barber. The presence of L. slossoni in ruderal habitats contrasts with those of L. barberi in Texas: prairies rather than roadsides and early successional stages (Sweet 1986).

My experience with L. slossoni in Hamilton County is consistent with that of all previous collectors—that is, only a single adult was found. At this site on 2-3 June and 29 November 2000, I was unable to collect additional adults from crowns of broomsedge or to sweep adults from several species of Asteraceae.

In southeastern Lake County, I collected 40 adults in late March 2002; 35 were beaten from crowns of weeping lovegrass, mainly from dead plants or those with some dead stems. At the same time, seven mid- to late instars of presumably L. slossoni were beaten from lovegrass crowds and one fifth instar was beaten from vegetative growth of camphorweed. In further observations at this site on 13 April 2002, 10 adults, three late instars, and an apparent cast skin of L. slossoni were beaten from weeping lovegrass; 10 adults, two late instars, and a cast skin were beaten from camphorweed. The adults and nymphs observed on 13 April were replaced on plants and are not listed above under material examined. My sampling of camphorweed and weeping lovegrass at the Lake County site on 2 June and 10 August 2002 did not yield additional nymphs or adults of L. slossoni. I did not sample the litter layer where this seed bug, like L. dif fusus Uhler and many other ground-inhabiting rhyparochromids (Sweet 1964), might feed more on fallen seeds than on the seed heads of plants. At this same site in early and late November 2002, third through fifth instars and adults again were found in crowns of weeping lovegrass.

The mid- to late instars and adults collected in late March and observed in mid-April in Lake County likely are those of a first generation. It is not known if L. slossoni overwinters as diapausing eggs, as does L. barberi in Texas (Sweet 1986). If eggs of L. slossoni overwinter, then the adult collected by Blatchley at Dunedin in mid-February also would be that of a first generation. The nymphs and adults found in November likely are those of at least a second generation. Populations of L. slossoni might be only bivoltine, as are those of L. barberi in Texas despite the long, warm season (Sweet 1986).

It is unknown if nymphs of L. slossoni develop mainly on a particular plant species. Sweet (1986) determined that L. barberi feeds on ripe seeds of the composite Rudbeckia hirta L. and that the bug’s seasonality closely parallels host phenology. Even though nymphs and an apparent exuviae of L. slossoni were beaten from lovegrass, nymphs are unlikely to complete development on this plant. During the day, adults and nymphs might use crowns of weeping lovegrass for shelter or to conserve water under xeric conditions and at night forage in the litter layer for seeds of composites. Nymphs might also feed on seeds of other plants that lodge or accumulate in the extensive crowns of this African bunchgrass (see Wheeler 1999). The collection of smaller numbers of adults, a late instar, and a cast skin from H. subaxillaris suggests an association with this composite, but its role in the bug’s population dynamics remains unknown. Nymphs fed on ripe seeds of H. subaxillaris in the laboratory.

The collections of L. slossoni reported here appear to be the first for this species since at least the 1940s. Only one of the four previously known specimens bears a label giving year of collection (1923, Alachua Co.). In addition to the holotype (Barber 1914), the adult that Blatchley (1926) collected in February at Dunedin must have been taken between 1913 and 1926 (see Blatchley 1930). The specimen from Gainesville labeled “JRW 5413” likely was collected by J. R. Watson. He joined the Department of Entomology at the University of Florida, Gainesville, in 1911, was a thysanopterist and avid collector of other insect groups, and died in 1946 (Tissot 1946).

The rediscovery of this myodochine rhyparochromid in Florida, though increasing the number of known museum specimens from four to 51 (including four reared from fifth instars), does not explain its rarity in collections. Is this seed bug restricted to certain habitats because of competition with other rhyparochromid seed predators? Is its life cycle closely associated with seed pro-
duction of one or a few host plants? Data that might help answer these and other questions about its bionomics must await field and laboratory studies comparable to those on *L. barberi* in Texas (Sweet 1986) or on *L. diffusus* and other rhyparochromids in Connecticut (Sweet 1964).

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**SUMMARY**

Described in 1914 and apparently not collected since at least the 1940s, *Ligyrocoris slossoni* was found recently at two sites in Florida. In Lake County, 38 adults and 18 mid- to late instars were beaten from crowns of weeping lovegrass (*Eragrostis curvula*; Poaceae) in March and November 2002; at the same site, five adults and a fifth instar were taken on camphorweed (*Heterotheca subaxillaris*; Asteraceae). One adult was beaten from the crown of a broomsedge (*Andropogon tenuispatheus*; Poaceae) in Hamilton County. These collections increase the number of known museum specimens from four to 51 (including four reared from fifth instars).

**REFERENCES CITED**


