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**The Genus *Sphyrocoris* Mayr
(Heteroptera: Scutelleridae: Pachycorinae)**

J. E. Eger, Jr.^{1,2}

Abstract

The genus *Sphyrocoris* is reviewed and found to contain a single species, *S. obliquus* (Germar, 1839). The following taxa are new junior synonyms of *S. obliquus*: *Homaemus punctellus* Stål, 1862; *Sphyrocoris elongatus* Distant, 1880; *Sphyrocoris punctellus nigricans* Kirkaldy, 1909; *Sphyrocoris punctellus pallidomaculata* Kirkaldy, 1909; and *Sphyrocoris punctellus sanguineoconspersa* Kirkaldy, 1909. Lectotypes are designated for *H. punctellus*, *S. punctellus nigricans*, *S. punctellus pallidomaculata*, and *S. punctellus sanguineoconspersa*.

The genus *Sphyrocoris* Mayr (1864) can be recognized among New World scutellerid genera by their small to medium size, generally cryptic brown to black mottled coloration, and an elongate ostiolar canal that is greatly expanded apically (Fig. 1). Schouteden (1904) provided a key to genera of Pachycorinae and Lattin (1964) keyed genera of scutellerids in America north of Mexico. Prior to this work, three species of *Sphyrocoris* were recognized: *S. obliquus* (Germar 1839), *S. punctellus* (Stål 1862) and *S. elongatus* Distant 1880. *S. obliquus* was described from Martinique and has been reported from Florida, the Caribbean, northern South America, Central America and the southwestern U.S. (Kirkaldy 1909). *S. punctellus* and *S. elongatus* were described from Mexico. Kirkaldy (1909) reported the former from Mexico, the latter from Mexico and Panama. Lattin (1964) considered the southwestern U.S. specimens to be exclusively *S. punctellus* and southeastern U.S. specimens to be *S. obliquus*, but because his work dealt exclusively with the Scutelleridae of America north of Mexico he did not treat material from Central America, South America, or the Caribbean.

Lattin (1964) separated *S. obliquus* and *S. punctellus* using several characters as follows: *S. obliquus* - smaller, coloration relatively uniform, head narrowly rounded and convex, tylus prominent, rostrum surpassing hind coxae, scutellum narrowly rounded apically, parameres with thick, short shank; *S. punctellus* - larger, coloration more variable, head broadly rounded and flattened, tylus not prominent, rostrum not surpassing hind coxae, scutellum broadly rounded apically, parameres with long narrow shank. *S. elongatus* was not treated by Lattin because his work dealt only with taxa from America north of Mexico. Specimens of from the southwestern U.S. and the southeastern U.S. are easily separated using characters given by Lattin. However, specimens from other areas, particularly southern Central America, northern South America and the Lesser Antilles appeared to be intermediate between the two species. This study was undertaken to clarify the relationships of these species, particularly in areas south of the United States.

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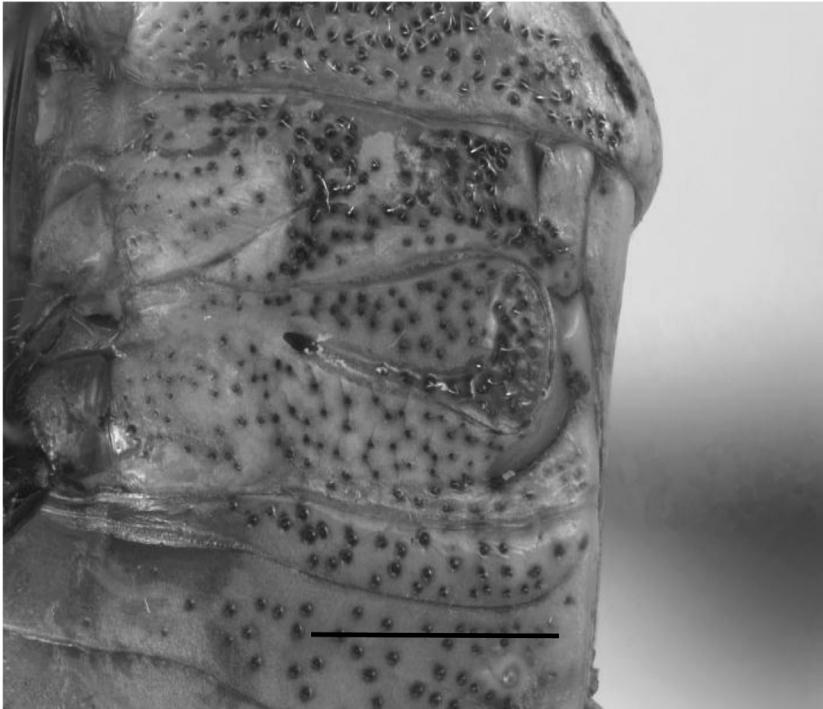


Figure 1. *Sphyrocoris obliquus* metapleuron and ostiolar canal.

It is a pleasure to dedicate this paper to J. E. McPherson on the occasion of his 70th birthday in recognition of his many contributions to our knowledge of the biology and systematics of Hemiptera.

Materials and Methods

Over 5,000 specimens were examined from numerous individuals and institutions. These are listed in the acknowledgments section. Specimens from various localities were evaluated based on characters used by Lattin (1964). My observations indicated that the mesosternal carinae of specimens from Mexico and the southwestern U.S. were more acutely developed and elevated posteriorly than in specimens from the southeastern U.S. (Figs. 2-3). This character was also evaluated.

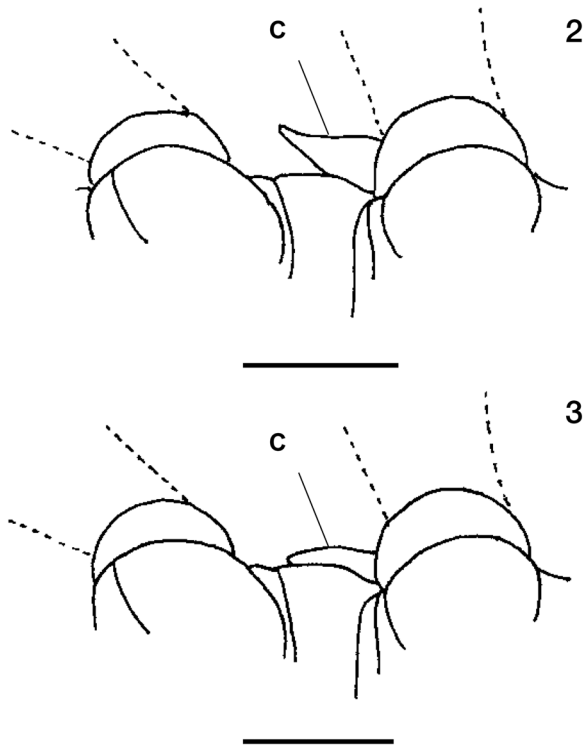
Approximately 175 specimens representing all geographic areas were measured and other characters evaluated. Characters evaluated and methods used are as follows:

Size. overall body length and width of pronotum measurements are compared although numerous measurements were made (Table 1).

Coloration. Color patterns were evaluated on a 1-5 scale as follows:

1 = Color pattern distinct and relatively sharp as in females of southeastern U.S. specimens, generally characterized by alternating bands of dark and light coloration in a vague, inverted 'U'-shaped pattern (Fig.4).

2 = Color pattern somewhat faded, but still distinct.



Figs. 2-3. *Sphyrocoris obliquus*. 2, prosternal carina, southwestern US; 3, Same, southeastern US. Abbreviation: C = prosternal carina. Scales = 0.5 mm.

3 = Color pattern vague, but discernible (Fig. 5).

4 = No pattern, uniformly colored.

5 = Color pattern distinct, but different from the southeastern U.S. population, characterized by 2 large black macules on the scutellum as found in some Arizona and Mexico specimens.

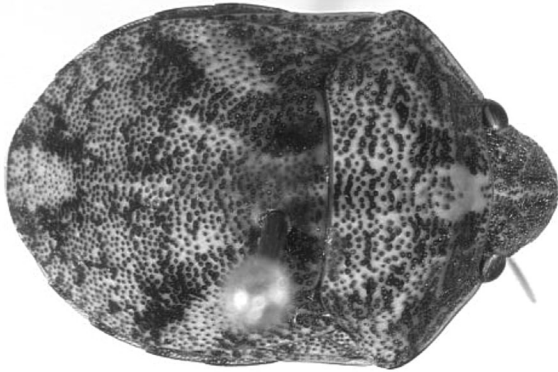
Head shape and convexity. total head length, length before the eyes, head width immediately before the eyes, and width halfway between the eyes and the apex of the head were measured for representative specimens from the southeastern and southwestern U.S. All ratios of width vs. length were computed and analyzed to determine which best described the differences in head shape. The ratio of width immediately before the eyes to length before the eyes (anteocular ratio) showed the greatest differences between the two populations with no overlap. This ratio was then calculated for representative specimens from all geographic areas. In addition, head convexity was evaluated by measuring the width of the head immediately before the eyes and the height of the head at the same point. A ratio of width to height was calculated (convexity ratio).

Length of rostrum. a ratio of rostrum length to overall body length was computed.

Male genitalia. Genitalia were removed by immersing specimens in nearly boiling water for 10-15 minutes or until the pygophores of males could be

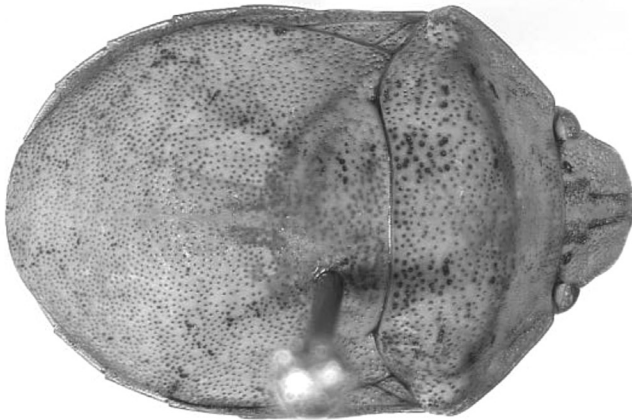
Table 1. *Sphyrocoris obliquus*, diagnostic measurements in mm.

	Males		Females	
	Mean	Range	Mean	Range
Antennal Segment 1	0.50	0.4 - 0.6	0.54	0.4 - 0.6
Antennal Segment 2	0.51	0.4 - 0.6	0.56	0.4 - 0.7
Antennal Segment 3	0.54	0.4 - 0.7	0.59	0.4 - 0.8
Antennal Segment 4	0.80	0.6 - 1.0	0.88	0.6 - 1.2
Antennal Segment 5	0.88	0.7 - 1.1	0.94	0.8 - 1.2
Interocular Distance	1.77	1.5 - 2.2	2.01	1.7 - 2.9
Interocellar Distance	0.95	0.7 - 1.2	1.10	0.9 - 1.4
Distance from Ocelli to Eyes	0.33	0.3 - 0.4	0.37	0.3 - 0.4
Total Body Length	7.50	6.2 - 10.0	8.66	7.5 - 10.2
Head Length	1.99	1.6 - 2.4	2.17	1.8 - 2.4
Head Width	2.62	2.0 - 3.2	2.93	2.5 - 3.4
Pronotum Length	2.38	1.9 - 3.0	2.67	2.2 - 3.4
Pronotum Width	4.85	4.1 - 6.2	5.49	4.9 - 6.6
Abdomen Width	4.79	4.1 - 6.3	5.54	4.7 - 6.7
Rostral Segment 1	1.27	1.0 - 1.6	1.44	1.2 - 1.7
Rostral Segment 2	1.42	1.2 - 1.7	1.55	1.3 - 1.8
Rostral Segment 3	0.59	0.4 - 0.7	0.64	0.5 - 0.8
Rostral Segment 4	0.65	0.4 - 0.8	0.73	0.6 - 0.9
Mid-ventral Length of 2 nd Abdominal Sternite	0.13	0.1 - 0.2	0.14	0.1 - 0.3
Mid-ventral Length of 3 rd Abdominal Sternite	0.47	0.3 - 0.6	0.55	0.4 - 0.7
Mid-ventral Length of 4 th Abdominal Sternite	0.52	0.4 - 0.7	0.61	0.5 - 0.7
Mid-ventral Length of 5 th Abdominal Sternite	0.57	0.4 - 0.8	0.63	0.5 - 0.8
Mid-ventral Length of 6 th Abdominal Sternite	0.56	0.4 - 0.8	0.61	0.5 - 0.8
Mid-ventral Length of 7 th Abdominal Sternite	0.97	0.8 - 1.3	1.15	0.9 - 1.4
Distance from Ostiole to Legs	0.71	0.6 - 0.9	0.75	0.6 - 0.9
Distance from Ostiole to Lateral Pleural Margin	1.30	1.1 - 1.6	1.44	1.2 - 1.7
Length of Ostiolar Ruga	1.07	0.9 - 1.4	1.18	1.0 - 1.4



4

I



5

Figures 4-5. *Sphyrocoris obliquus* habitus. 4) southeastern US; 5) southwestern US. Scales = 0.5 mm.

easily removed. Soft tissues were removed by immersion in hot 10% potassium hydroxide. Relative length of the shank of parameres was evaluated by measuring the length of the shank and the width of the head of the parameres. The ratios of shank length to paramere head length and body length were evaluated.

Due to the availability of only a few specimens from many countries and to simplify analyses, data were grouped by larger geographical areas as follows: southwestern U.S. (California, Arizona and Texas); Mexico; Central America (Panama to the southern border of Mexico); northern South America (Colombia and Venezuela); Lesser Antilles (all Caribbean countries except those listed below under Greater Antilles); Greater Antilles (Haiti, Dominican Republic, Cuba, Puerto Rico, Jamaica and the Bahamas); southeastern U.S. (Florida, Georgia, Alabama).

Measurement data and ratios across all geographic areas were analyzed using a Kruskal-Wallis test and means separated using Tukey-Kramer HSD ($P = 0.05$). Paired data were analyzed using a Wilcoxon test. Body coloration measurements were analyzed using ordinal logistic regression. Analytical software was JMP® Pro 9.0.3 (SAS Institute, Cary, NC). Illustrations were made using an AutoMontage® system (Syncroscopy, Cambridge, UK) through a Leica Z16 APO microscope.

All measurements are given in mm. Dimensional lines in illustrations equal 0.5 mm. Label information, as it appears on the label, is presented for type specimens. When multiple labels are present, the position of the label is indicated by letters a), b), etc., with a) indicating the uppermost label.

Results and Discussion

Size. The typical difference in size between females from Florida and Arizona is shown in Figs. 4-5. Relative length of males and females from different geographic areas is presented in Fig. 6. There were significant differences for both sexes (males $\chi^2 = 14.0$, $df = 6$, $P = 0.030$; females $\chi^2 = 22.3$, $df = 6$, $P = 0.001$). Males from the southwestern U.S. were significantly longer than those from the Greater Antilles with all other geographic areas being intermediate. Females from Mexico were significantly longer than those from Central America, the Greater Antilles, and southeastern U.S. Females from the Greater Antilles were shorter than those from the southwest U.S. and Mexico. When both sexes were combined, there were significant differences between areas ($\chi^2 = 20.8$, $df = 6$, $P = 0.002$) (Table 2). Longest specimens were from the southwestern US and the smallest from the Greater Antilles. Specimens from the southwestern U.S. were significantly longer than those from the southeastern U.S. and the Greater Antilles. Width of the pronotum showed similar trends (Table 2) with significant differences between areas ($\chi^2 = 19.6$, $df = 6$, $P = 0.003$). Specimens from the southwestern U.S. were significantly wider across the pronotum than were specimens from the southeastern U.S. and the Greater Antilles. There was a clear clinal trend toward decreased length and width as collection locality progressed from the southwestern U.S. through Mexico and Central America to South America and north through the Caribbean into the southeastern U.S. However, there was overlap in body size among most geographic areas and no significant differences between adjacent areas except that females from Mexico were longer than those from Central America.

Coloration. Males and females showed differences in coloration, thus the two were analyzed separately. Analyses indicated significant differences in color rating between geographic areas (males $F = 5.8$, $df = 6$, $P < 0.0001$; females $F = 12.8$, $df = 6$, $P < 0.0001$) (Table 3). Males tended to be less strongly colored and did not show as strong a clinal trend, ranges for all geographical areas overlapping. Males from the southwest U.S. were significantly different from males collected in all areas except Mexico and Northern South America. Males from the Lesser Antilles had the lowest rating for coloration and these

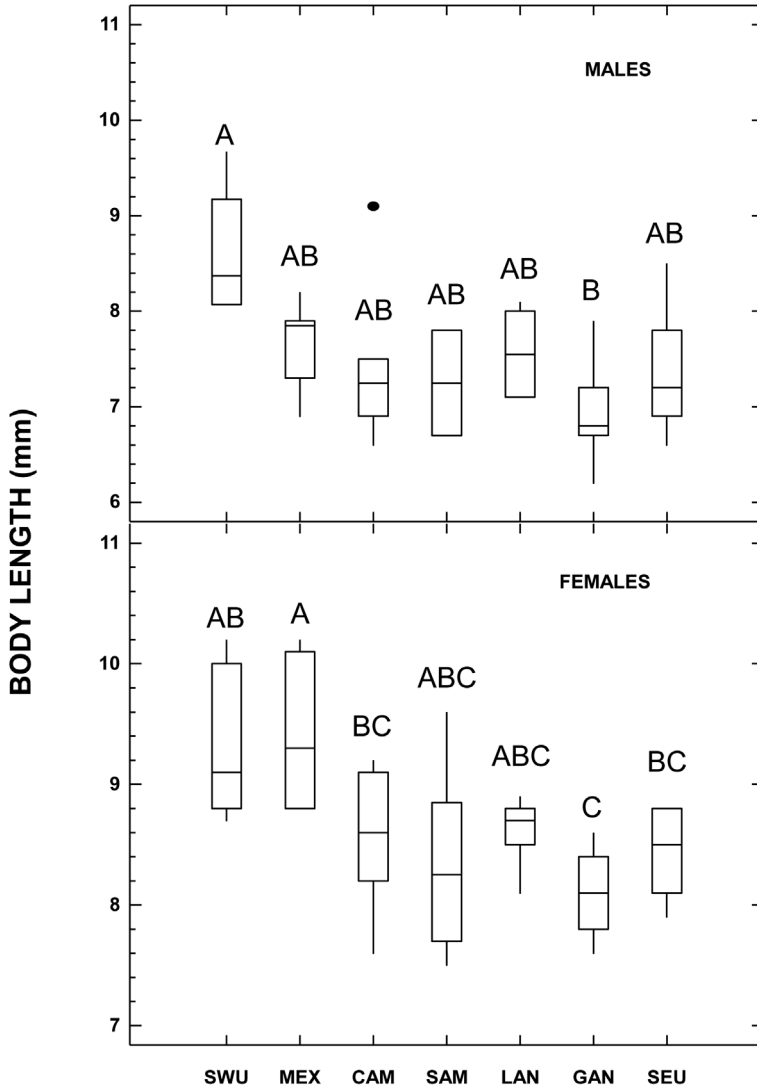


Figure 6. Box plots of body length for males and females of *Sphyrocoris obliquus* by geographic area. Abbreviations for areas are as follows: SWU = southwestern US, MEX = Mexico, CAM = Central America, SAM = South America, LAN = Lesser Antilles, GAN = Greater Antilles, SEU = southeastern US. Box represents middle 50% of observations, vertical lines represent the upper and lower 25% of the data when these data fall outside of the box, and individual data points are outliers. Median values are indicated by the horizontal line in the box.

Table 2. Geographic comparisons of body length and width, head length and width, and ratios of head width to length (anteocular ratio) and head width to height (head W/H ratio)*.

Geographic Area	Body Length	Pronotum Width	Head Length	Head Width	Anteocular Ratio	Convexity Ratio
Southwest US	8.91 a	5.65 a	2.22 a	3.05 a	1.93 a	3.70 ab
Mexico	8.59 ab	5.36 ab	2.15 a	2.97 ab	1.90 a	3.81 a
Central America	8.25 abc	5.31 ab	2.14 a	2.92 ab	1.83 b	3.56 ab
South America	8.10 abc	5.30 ab	2.12 a	2.83 abc	1.82 bc	3.32 bc
Lesser Antilles	7.91 abc	5.03 ab	2.05 ab	2.78 bcd	1.80 bc	3.28 bc
Greater Antilles	7.47 c	4.86 b	2.04 ab	2.59 d	1.75 c	2.95 c
Southeastern US	7.81 bc	5.02 b	1.93 b	2.63 cd	1.64 d	3.01 c

*Means within a column with the same letter were not significantly different according to Tukey-Kramer HSD ($P = 0.05$).

Table 3. Frequency of ratings for coloration in different geographic populations of *Sphyrocoris obliquus*.

Rating	Geographic Area							Southwest US
	Southeast US	Greater Antilles	Lesser Antilles	Northern S. America	Central America	Mexico Mexico		
Males								
1	0	0	1	0	0	0	0	0
2	1	0	1	0	0	0	0	0
3	5	4	4	0	6	2	0	0
4	5	11	1	4	13	7	10	10
5	0	0	0	0	0	1	1	1
Mean*	3.4 bc	3.7 b	2.7 c	4.0 ab	3.7 b	3.9 ab	4.1 a	4.1 a
Females								
1	6	7	2	6	4	0	0	0
2	2	3	7	4	13	0	2	2
3	0	1	3	3	7	7	9	9
4	0	0	0	1	2	4	2	2
5	0	0	0	1	0	3	1	1
Mean*	1.3 b	1.5 b	2.1 b	2.1 b	2.3 b	3.7 a	3.1 a	3.1 a

* Means in the same row with the same letter were not significantly different according to Nominal Logistic Regression ($P = 0.05$).

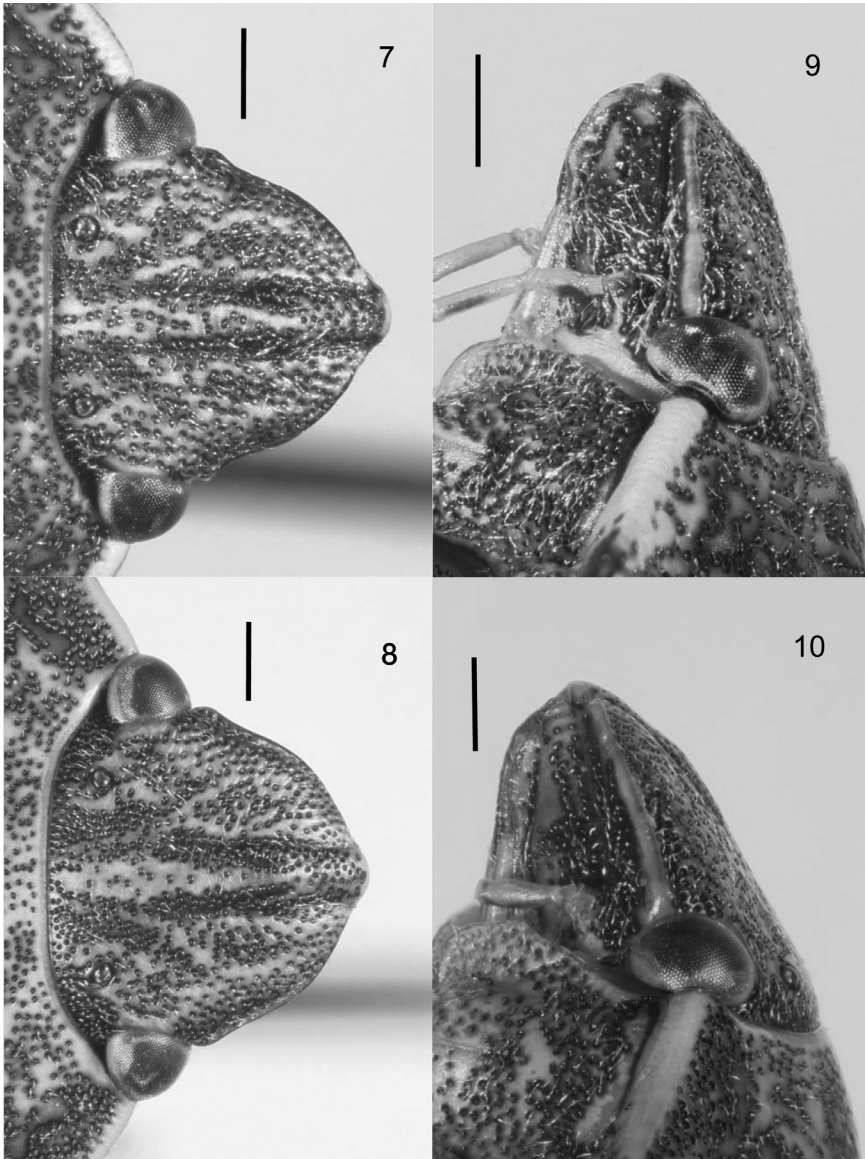
were significantly different from all other geographic areas, except southeastern U.S. Females showed a stronger clinal trend, those from the southeastern US being distinctly patterned and the pattern becoming more vague in Mexico and the southwestern U.S. Specimens from the southwestern U.S. and Mexico were significantly different from those collected in all other geographic areas, but only Mexico and southeastern U.S. specimens did not have overlap in coloration.

Head shape and convexity. Head length and width, as well as antecular ratios and convexity ratios are given in Table 2. Dorsal and lateral views of specimens from Florida and Arizona are illustrated in Figs. 7-10. There were significant differences in head length ($\chi^2= 25.2$, $df = 6$, $P = 0.0003$) and width ($\chi^2= 41.2$, $df = 6$, $P < 0.0001$) between areas. Head length of specimens from the southeastern U.S. was significantly less than that from all other areas except the Lesser Antilles and Greater Antilles. Specimens from the southwest U.S. had significantly greater head width than specimens from the southeastern U.S. and the Lesser Antilles and Greater Antilles. The relationship of antecular ratio to geographic locality is presented in Table 2. The mean antecular ratio ranged from a low of 1.64 in the southeastern U.S. to a high of 1.93 in the southwestern U.S. Ranges from these two areas did not overlap. Analyses indicated significant difference between areas ($\chi^2= 88.7$, $df = 6$, $P < 0.0001$) and there were differences in some adjacent geographic areas. Specimens from the southeastern U.S. had significantly smaller antecular ratios than those from any other area. Antecular ratios for specimens from the southwestern U.S. and Mexico were significantly different from those for all other areas. Despite significant differences, though, there was a clear trend toward lower ratios as you progress from the southwestern U.S. through Central America and back up to the southeastern U.S., indicating a gradual narrowing of the head. The convexity ratio also decreased across the same areas, suggesting an increase in convexity. This measure was significant across geographies ($\chi^2= 33.9$, $df = 6$, $P < 0.0001$), with specimens from the southeastern U.S. and the Greater Antilles having significantly lower ratios than those from the southwestern U.S., Mexico and Central America. The range in antecular ratios was greatest in the Lesser Antilles while the range in head convexity was greatest in the southwestern U.S. and the Lesser Antilles. A large range in these values for specimens from the Caribbean suggests a possible overlap of species distribution in these areas, but most values were intermediate and indicative of a single species.

Length of rostrum. The ratio of rostrum length to body length showed considerable overlap among all geographic populations. The mean for this ratio ranged from 0.5 in the southwestern U.S. to 0.53 in Central and South America with no significant difference among areas ($\chi^2= 10.3$, $df = 6$, $P = 0.113$). Differences in means were small and did not show a clear clinal trend. Length of the rostrum, therefore, was closely related to body size.

Mesosternal carinae. The mesosternal carinae were least acutely produced and elevated posteriorly in specimens from the southeastern U.S. and the Greater Antilles. They were most acutely produced and elevated in specimens from the southwestern U.S. and Mexico. Specimens from other areas were intermediate, suggesting that there was a clinal trend similar to that seen for other characters. The greatest range was observed in specimens from northern South America.

Male genitalia. Lattin (1964) stated that the male genitalia of *S. obliquus* and *S. punctellus* are very similar. He noted that the first conjunctival appendages are more slender and the sclerotized apices of the second conjunctival appendages were longer and thinner in *S. punctellus*. He further noted that the parameres of *S. obliquus* had a longer shank and more acute apex than those of *S. punctellus*. My examination of these characters generally supported Lattin's observations, but differences were minor and variability in conjunctival appendages was sufficient that they could not be reliably used to separate specimens



Figures 7-10. *Sphyrocoris obliquus*. 7-8) head, dorsal aspect; 9-10) head, lateral aspect; 7, 9) southeastern US; 8, 10) southwestern US. Scales = 0.5 mm.

from even the southeastern and southwestern U.S., let alone specimens from other areas. Parameres from representative specimens in the southwestern U.S. and southeastern U.S. were compared using the length of the shank and width of the head. For both measurements, the ranges did not overlap and means were found to be significantly different (shank $\chi^2=6.8$, $df=1$, $P=0.009$; head $\chi^2=6.1$, $df=1$, $P=0.014$). However, there was no difference in the ratio of paramere shaft length to paramere head width between the two geographic areas ($\chi^2=1.53$, $df=1$, $P=0.217$), suggesting that differences were primarily due to size. This was further investigated by taking ratios of body length to paramere shank length and paramere head width. These ratios were not significantly different ($\chi^2=0.24$, $df=1$, $P=0.624$ and $\chi^2=2.96$, $df=1$, $P=0.085$, respectively). Thus, the difference in parameres between the southeastern U.S. and the southwestern U.S. appear to be primarily due to differences in body size.

Although there were significant differences in some characters used by Lattin (1964) to separate *S. obliquus* and *S. punctellus*, the differences did not consistently separate populations from geographic areas outside the U.S. All characters evaluated showed a clinal trend from the southwest U.S. through Central America and northern South America, the Caribbean and into the southeastern U.S. Populations from the southeastern and southwestern US were distinct, but those from other geographic areas were consistently intermediate. Thus, there appears to be only a single species of *Sphyrocoris*, *S. obliquus*.

Taxonomic Treatment

Sphyrocoris Mayr

Sphyrocoris Mayr, 1864:904; Mayr, 1866:16 (keyed); Stål, 1867:495 (keyed); Schouteden, 1904:58-59 (keyed, species listed); Van Duzee, 1904:15-16; Kirkaldy, 1909:279; Van Duzee, 1917:8; Hart, 1919:168 (keyed); Blatchley, 1926:42 (keyed - Florida); Barber and Bruner, 1932:241 (keyed - Cuba); Torre-Bueno, 1939:169-170 (key to US species); Barber, 1939:278 (keyed - Puerto Rico); Lattin, 1964:161-165 (keyed, key to US species); Froeschner, 1988:691.

DIAGNOSIS: Small to medium size, body convex, broadly oval, dorsum moderately punctate, fine setae usually present in punctations. Ventral punctation dense, sparse mesially on abdomen. Head triangular, broadly to narrowly rounded, slightly to moderately convex above, porrect, wider across eyes than long, moderately narrowed anterad of eyes, tylus surpassing juga by less than its width. Antennae five segmented, segments 4 and 5 slightly flattened. Scutellum slightly longer than wide, hemelytra exposed beyond middle of scutellum, connexiva narrowly exposed.

Anterolateral pronotal margins nearly straight. Ostiolar orifices closer to metacoxae than to lateral margins of metapleura; ostiolar canal narrow basally, long, each expanded apically as large, poorly defined anteriorly directed lobe. Prosternum strongly sulcate, developed laterally into distinct carinae, mesosternum shallowly sulcate, metasternum flat or shallowly concave. Abdominal sterna not sulcate, lateral margins entire. Superior surfaces of tibiae sulcate. Male genital cup exposed. Proctiger simple. Aedeagus with two pairs of conjunctival appendages, first pair entirely membranous, second pair sclerotized apically. Parameres uncinat. Female genital plates simple. Dilatation of spermathecal duct irregular, spermathecal pump with only proximal flange developed, spermathecal bulb digitiform.

TYPE SPECIES: *Pachycoris obliquus* by reason of monotypy.

COMMENT: The shape of the ostiolar canal (Fig. 10) is unique among New World Scutelleridae.

Sphyrocoris obliquus (Germar)

Pachycoris obliquus Germar, 1839:94; Herrich-Schaeffer, 1839:54-55, fig. 491; Dallas, 1851:35; Walker, 1867:48.

Homaemus obliquus: Stål, 1862:81.

Homaemus punctellus Stål, 1862:81-82; Walker, 1867:54. **NEW SYNONYMY**

Sphyrocoris obliquus: Mayr, 1864:904; Stål, 1870:15; Distant, 1880:21; Schouteden, 1904:59; Kirkaldy, 1909:279; Crawford 1913:344 (parasites); Van Duzee, 1917:8; Stoner, 1925:8-9; Blatchley, 1926:42-43 (description, host); Barber and Bruner, 1932:242-243; Torre-Bueno, 1939:169 (keyed); Barber, 1939:278; Callan, 1948:123 (host, parasites); Wolcott, 1951:190; Lattin, 1964:165-173, figs. 52-54 (keyed, described, biology); McDonald, 1966:14, 49, figs. 52-56, 429-430 (genitalia); Johnson, 1987:294-295 (egg parasite); Froeschner, 1988:691, fig. 146.

Sphyrocoris punctellus: Stål, 1867:495; Stål, 1870:15; Distant, 1880:21-22, pl. 2, fig. 5; Schouteden, 1904:59, pl. 5, fig. 15; Kirkaldy, 1909:279; Van Duzee, 1917:8; Blatchley, 1934:2 (host); Torre-Bueno, 1939:169 (keyed); Bibby, 1961:329 (host); Lattin, 1964:173-180, figs. 55-57 (keyed, described, biology); Goeden and Ricker, 1976b:1171 (host); Froeschner, 1988:691; Jones, 1993:23 (hosts).

Pachycoris delineatus Walker, 1867:48-49 (synonymized by Distant, 1889a:44, 51).

Sphyrocoris punctellus vars. b, c, d: Stål, 1870:15.

Sphyrocoris elongatus Distant, 1880:21, pl. 2, fig. 6; Distant, 1889b:314; Distant, 1893:454; Schouteden, 1904:59; Kirkaldy, 1909:279. **NEW SYNONYMY.**

Tetyra ?delineatus: Uhler, 1886:1.

Sphyrocoris punctellus nigricans Kirkaldy, 1909:279. **NEW SYNONYMY.**

Sphyrocoris punctellus pallidomaculata Kirkaldy, 1909:279. **NEW SYNONYMY.**

Sphyrocoris punctellus sanguineoconsersa Kirkaldy, 1909:279. **NEW SYNONYMY.**

Sphaerocoris [sic] *punctellus*: Van Duzee, 1923:124 (host).

Sphyrocoris (*Pachycoris*) *obliquus*: Fennah, 1935:194 (host).

Sphyrocoris [sic] *obliquus*: Goeden and Ricker, 1976a:925 (host).

DIAGNOSIS: Coloration variable, pale to dark brown, with or without distinctive pattern; pattern typically consisting of alternating light and dark bands in an inverted 'U' or 'V' shape on the pronotum and scutellum, darker bands on the scutellum sometimes coalescing into two large macules. Coloration of head more uniform, narrow area at suture between tylus and juga darker than disc, dark coloration commonly continuing to base of head. Dorsal punctation dense, black, variably distributed, most dense on head.

Venter pale, punctation concolorous to black, dense to relatively sparse. Lateral margin of abdominal sterna and most of lateral margin of propleura pale, impunctate. Legs punctate, punctures black to concolorous, sometimes black maculate. First two antennal segments pale, terminal three segments pale to dark brown.

Genitalia described and figured by Lattin (1964) and McDonald (1966).

TYPE MATERIAL: The location of the type of *Pachycoris obliquus* was reported by Lattin (1964) to be unknown and I was unable to locate it. Stål (1862) described *Homaemus punctellus* from Mexico without designating types. He subsequently (Stål 1870) listed three varieties (vars. b, c, and d), which

Kirkaldy (1909) gave the varietal names *sanguineoconspersa*, *pallidomaculata*, and *nigricans*, respectively. Thus, Kirkaldy's names were based on Stål's specimens and because they were published before 1961, should be considered subspecies of *S. punctellus*. I examined five types of *Homaemus punctellus*, all in the Naturhistoriska Riksmuseet, Stockholm. They were as follows: 1 male labeled: a) Mexico, b) Signt., c) Type, d) Paratypus (designated **LECTOTYPE** of *Homaemus punctellus*); 1 male labeled: a) Mexico, b) Signt., c) Paratypus; 1 female labeled: a) Mexico, b) Boucard, c) Type, d) var. b, e) Paratypus (designated **LECTOTYPE** of *Sphyrocoris punctellus sanguineoconspersa*); 1 male labeled: a) Mexico, b) Sallé, c) Type, d) var. c, e) Paratypus (designated **LECTOTYPE** of *Sphyrocoris punctellus pallidomaculata*); 1 male labeled: a) Mexico, b) Boucard, c) Type, d) var. d, e) Paratypus (designated **LECTOTYPE** of *Sphyrocoris punctellus nigricans*). The type of *Pachycoris delineatus*, is a female in the British Museum, London, labeled: a) Type, b) St. Dom. 55.1, c)"17 *Pachycoris delineatus*", d) Brit. Mus., Type No. Hem. 506. The type of *Sphyrocoris elongatus* was not located, but specimens in the British Museum from Distant's collection, determined by Distant, leave little doubt that this is *S. obliquus*.

DISTRIBUTION: Specimens were examined from California, Arizona, Texas, Alabama, Georgia, Florida, Cuba, Bahamas, St. Lucia, Trinidad, Bequia, Dominican Republic, Haiti, St. Vincent, Antigua, Grenada, Jamaica, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Venezuela and Colombia. I have not seen specimens from Martinique, the type locality, Puerto Rico, or Barbados although it was reported from Puerto Rico by Wolcott (1951) and from Barbados by Stoner (1925).

BIOLOGY: *Sphyrocoris obliquus* has been reported from numerous plants (Bibby 1961; Blatchley 1926, 1934; Callan 1948; Fennah 1935; Goeden and Ricker 1976a, 1976b; Jones 1993; Lattin 1964; Van Duzee 1923). I have collected all life stages from Spanish needles (*Bidens bipinnata* L.) in Florida and I have observed adults and nymphs feeding on the seeds of this plant. I also collected adults from *Bidens* sp. in Mexico. In addition, the color pattern commonly found in Florida females provides excellent camouflage on the seed heads of *B. bipinnata*. This is one of the most common scutellerids in Florida and, judging by the numbers of specimens in collections, is quite common throughout much of its range. *Bidens* spp. are common weeds in disturbed areas and its abundance may be one reason that this insect is so common.

The eggs of *S. obliquus* are reportedly parasitized by *Trissolcus trinidadensis* Crawford (Hymenoptera: Scelionidae) (Crawford 1913, Callan 1948), a junior synonym of *T. urichi* Crawford (Johnson 1987).

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