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## Revision of the Cyrtocoridae (Hemiptera: Pentatomoidea)

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**ABSTRACT** The pentatomoid family Cyrtocoridae Distant 1880 is revised. The family occurs only in the Neotropics, from Argentina north through central Mexico. Several features ally the family with others grouped around the Cydnidae. Other features, including those of the nymphs' tergal plates, the venation of both wings, and the placement of the abdominal trichobothria, confirm the family-rank status of Cyrtocoridae. We recognize the following 4 genera and 11 species: *Ceratozygum horridum* (Germar), *Cyphothyreia erosa* Horváth, *Cyrtocoris andicola* Horváth, *C. egeris* new species, *C. gibbus* (F.), *C. montanus* Horváth, *C. obtusus* Horváth, *C. paraensis* Pirán, *C. simplex* Horváth, *C. trigonus* (Germar), and *Pseudocyrtocoris laceratus* (Herrich-Schaeffer). *Cyphothyreia bridarollii* Kormilev is synonymized with *laceratus*; and *Cyrtocoris subobtusus* Kormilev is synonymized with *C. trigonus*. All descriptions are from type material. Dimorphism of the paratype in male *Ceratozygum horridum* is described and discussed (1 form resembles the female; in the other, the paratype is greatly extended forward).

**KEY WORDS** Cyrtocoridae, dimorphism (male), Pentatomoidea, Heteroptera

CYRTOCORIDAE is a family of humpbacked pentatomoids, small (6–10 mm long from tip of clypeus to end of abdomen), somewhat rounded, dark gray to brownish black, exclusively Neotropical, and characterized by flattened expansions of the anterior part of the head, and by a hump or thickened spine on the scutellum (not unlike certain members of the unrelated pentatomid Podopinae). The family may belong to a group of families related to Cydnidae (C.W.S., unpublished data). There were 12 described species, in 4 genera. Here we synonymize 2 species and describe 1 new species.

In 1987, Joseph E. Eger (DowElanco, Tampa, FL) sent to us specimens of adults and the 3rd–5th instars of a species of *Cyrtocoris*. The immatures then not having been described, we described, illustrated, and measured them (Schaefer et al. 1998); we then turned to the literature to identify them, and expected little trouble: There are not many *Cyrtocoris* species, several people have described and illustrated them, and cyrtocorids are so distinctive that separating the species should not be difficult. As we gathered the literature, we heard the gods chuckling hollowly; and what had begun as a confident step down a slight incline became a tumble down a cliff. Published descriptions of the same species disagreed with one another and with published figures; original descriptions were inadequate for identification of specimens; the only key (Kormilev 1955) and the few comparative accounts (e.g., Horváth 1916, 1923) were vague or contradictory, or both.

We decided to revise the family, and began gathering types; eventually we had type specimens of all but 2 of the 12 described species. Those of *Pseudocyrtocoris laceratus* (Herrich-Schaeffer) and *Ceratozygum horridum* (Germar) appear to have been lost; however, we had the specimens studied by Jensen-Haarup and Horváth, when they set up the monobasic genera *Pseudocyrtocoris* and *Ceratozygum*, respectively.

Brailovsky et al. (1988) redescribed 2 species from Veracruz, Mexico, and described the nymphs of 1, which they identified as *Cyrtocoris trigonus* (Germar). Brailovsky et al. (1988) also listed the species of Cyrtocoridae, but omitted *C. paraensis* Pirán. Their descriptions differed from those we had already prepared of the Ecuadoran specimens we had by then tentatively identified as *C. trigonus*. Having examined the specimens studied by Brailovsky et al. (1988) we now believe that their *C. obtusus* Horváth is true *C. trigonus*, and their *C. "trigonus"* is in fact a new species; our Ecuadoran material is also this new species, which is highly variable over its wide range. Our description of the immatures of this new species, and comparisons with the descriptions of Brailovsky et al. (1988) will be published separately (Schaefer et al. 1998).

## Materials and Methods

We examined ~360 specimens, including all existing type material. Type material was the basis for the redescriptions, augmented when possible with additional specimens. Acronyms of museums are those in Heppner and Lamas (1982) and are spelled out in the Acknowledgments. In addition, some specimens are deposited in the collections of the authors. Measure-

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ments in the text are total length of the holotype followed by the average and range of our other specimens. Other measurements (of type material) are in the tables.

To dissect male genitalia, we softened the specimen in boiling water, removed the genital capsule, and macerated it briefly in hot KOH. Unfortunately, the remarkable hardness and obturacy of the specimens, and our reluctance to dissect type material forcibly (and perhaps injure it), prevented our using genitalic characters as completely as we would have liked.

### Cyrtocoridae Distant 1880

- 1843 Oxynotides Amyot and Serville, Hist. Nat. Ins. Hém.  
1843: 58 (based on a preoccupied type genus).  
1852 Oxynotidae: Dallas, List Hem. I: 74.  
1872 Oxynotina: Stål, Enum. Hem. II: 3.  
1880 Cyrtocorinae: Distant, Biol. Centr. Am. I: 43.  
1979 Cyrtocoridae: Rolston and McDonald, J. N.Y. Entomol.  
Soc. 87: 189.  
1988 Cyrtocoridae: Brailovsky, Cervantes, and Mayorga, An.  
Inst. Biol. Univ. Nac. Auton. Mex. 58: 539.  
1988 Cyrtocoridae: Henry and Froeschner, *Catalogue of the  
Heteroptera...*, xv.  
1995 Cyrtocorinae: Schuh and Slater, *True bugs of the world*,  
231.

### Redescription of the Family

Body black to brown in ground color, often covered with brown-tan and/or white scalelike setae, giving the bug a lighter brown color dorsally and ventrally. Ventral covering usually variegated with areas of deep brown and yellow-white. Some specimens lacking the scalelike covering, making them black dorsally and ventrally. Body broadly rectangular in dorsal view, in lateral view convex above, and nearly flat below; trapezoidal to rectangular in posterior view. Length from tip of clypeus to end of abdomen 6–10 mm.

Head black, eyes red. Head subquadrate, angles rounded in front of eyes; dorsal surface of head made up mostly of flattened paraclypei, these depressed on either side of clypeus, forming 2 concavities between eyes and clypeus (lacking in males of *Ceratozygum*). Apex of clypeus at base of beak expanded laterally beyond bucculae. Bucculae extending past eyes. Antennae arising from below eyes; 5th segment longest, slightly swollen distally; 2nd shortest (very short). Beak and antennae fitting into midventral sulcus on thoracic sternum.

Pronotum broadly trapezoidal, humeri greatly expanded and directed downward anterolaterally. Anterior pronotal edge raised, forming slight collar, this extending to 2 anterior spines on each side of head; inner spine shorter, narrower, and more acute than outer spine. Posterior angles obtuse, posterior edge of pronotum broadly rounded between them.

Scutellum broadly U-shaped, extending to end of abdomen, most of corium and sometimes part of membrane exposed. Anterior triangular portion of scutellum raised for slightly more than half its length. Extreme anterolateral angle of scutellum with small pit,

this obscured by small projection of scutellum; projection slightly overlapping base of pronotum. Corium strongly bisinuate along anterior leading edge. Metathoracic scent gland opening with a single auricle, teardrop-shaped, laterally directed, black or brown, free of pubescence.

Procoxae and mesocoxae well separated, mesocoxae and metacoxae closer together; without coxal combs. Femora and tibiae with areas of thick pubescence and scattered erect setae; femora clavate. Each tibia often with external tubercle just distal to middle (lacking in *Cyphothyreia*). Tarsi 2-segmented, 2nd segment 2–4 times as long as 1st.

Abdominal segments II–IV exposed dorsally, strongly extended laterally and angled ventrally. Each abdominal spiracle closer to preceding segment than to lateral edge of its own segment, or to posterior segment; 2nd abdominal spiracle on membranous anterior of segment. Abdominal sterna 3–7 laterally with 2 trichobothria side by side, those on anterior sterna lateral to spiracle; trichobothria all of equal size.

**Distribution.** The Cyrtocoridae occur from Argentina north through central Mexico. Banks (1910) recorded *Cyrtocoris trigonus* from California. Although this record was accepted by Horváth (1916) and Brailovsky et al. (1988), we agree with Henry and Froeschner (1988) that the lack of any subsequent discovery of *Cyrtocoris* in the United States makes Banks's record suspect. Van Duzee also apparently rejected Banks's record, which does not occur either in Van Duzee's Check List (1916) or his Catalogue (1917).

**Diagnosis.** The combination of 2-segmented tarsi, 5-segmented antennae, very short 2nd antennal segment, small size, gray to brownish black color, and especially the covering of flattened scalelike setae, the tubercle mediodistal on at least the foretibiae, and the expanded scutellum bearing a broad-based spine, will separate this family from all others.

**Note.** Until recently, this taxon was treated as a subfamily of Pentatomidae and has been so treated as recently as 1995 (Schuh and Slater 1995). Although da Costa Lima (1940) mentions that "alguns autores elevaram esta subfamilia á categoria de familia" (p. 45), Kormilev (1955) appears to have been the first to present evidence for raising Cyrtocorinae to family rank, although he withheld formal action until a full analysis of the Pentatomoidea could be achieved. Kormilev's arguments persuaded Rolston and McDonald (1979) to raise Cyrtocorinae, and for the most part Cyrtocoridae has been recognized since.

We agree that the taxon is distinct enough to warrant family status. The combination of characters in the Diagnosis (above) provides a strong argument, as does the number of abdominal tergal plates in the nymphs (Schaefer et al. 1998). Kormilev's (1955) evidence is somewhat more equivocal. He argues that features of the fore- and hindwing venation, the position of the 2nd abdominal spiracle in the membrane, and the placement of the abdominal trichobothria all separate Cyrtocoridae from other Pentatomoidea (except Cydnidae, with respect to the 2nd abdominal spiracle). However, in 2 of these 3 cases (venation and

spiracle), we do not know enough to make a firm decision.

As Kormilev (1955) points out, the position of the trichobothria is unusual in the Cyrtocoridae. In most Pentatomoidea, the trichobothria lie medial to, or on either side of, an imaginary line drawn from 1 spiracle to the next; and this relative position does not change from 1 sternum to the next (Ruckes 1961, Schaefer 1975). In the Cyrtocoridae, the anterior trichobothria (sterna 3-5) are lateral to this line, and the posterior ones are more and more medial relative to it. This anterior lateral position, and the progressive "movement" medially, are both highly unusual in the Pentatomoidea, and neither Ruckes (1961) nor Schaefer (1975) record the latter elsewhere; the pattern also occurs in nymphs (Schaefer et al. 1998). In adult Discocephalinae (Pentatomidae), the trichobothria of all sterna lie lateral to the spiracle (D. A. Rider, personal communication); the trichobothrial patterns of discocephaline nymphs are not known. We suspect this similarity—which, as far as we know, occurs nowhere else in the Pentatomoidea—represents convergence. The cyrtocorid pattern seems to be both Ruckes' (1961) combination 6 (anterior trichobothria) and combination 8 (posterior trichobothria).

As described and illustrated (hindwing only) by Kormilev (1955), the venation of the cyrtocorid fore- and hindwings does differ from that of Pentatomidae. However, the differences may be ones of degree, not kind. Moreover, we do not know enough about the venation throughout the superfamily to assess accurately the venation of Cyrtocoridae.

Kormilev (1955) allies Cyrtocoridae with Cydnidae, and separates the family from Pentatomidae, partly because the cyrtocorid and cydnid 2nd abdominal spiracles lie in the membranous part of the segment's anterior sternum. In contrast, that region of the Pentatomidae is sclerotized. However, this situation varies in different groups of pentatomids (C.W.S., unpublished data) and a more complete survey is needed before systematic conclusions can be drawn.

Gapud (1991) separates Cyrtocorinae (as a pentatomid subfamily) from the rest of Pentatomidae by the latter's possession of completely fused 2nd valvifers and a triangulin in the female, and in the male the rigid phallosome. These are apomorphies characteristic of Pentatomidae *sensu* Cyrtocorinae (but not exclusive to Pentatomidae); thus, although they exclude Cyrtocorinae from Pentatomidae, they alone do not support family rank for Cyrtocorinae. (A further pentatomid apomorphy, the membranous dorsum of the male's 8th abdominal segment, occurs too widely in Heteroptera to help define any group.)

The projections at the anterolateral corners of the scutellum may help stabilize or support the pronotal-mesonotal juncture. These projections may be unique to the Cyrtocoridae, but what may be analogous supports occur in other groups: posterior projections from the pronotum in *Moromorpha tetra* (Walker) (Pentatominae: Pentatomini) (D. A. Rider, personal communication), similar pronotal projections (paired or medial) in several alydines (Alydidae) (C.W.S., un-

published data); and certainly in other bugs are other structures designed to prevent too great a bending where the pronotum and mesonotum join.

In addition, the broadened dorsal rim, and other features, of the male's genital capsule, and the structure of the female's spermatheca, suggest a phylogenetic affinity with the Cydnidae and its relatives (C.W.S., unpublished data), as does the position of the 2nd abdominal spiracle (Kormilev 1955). Although these last characters do not suggest that Cyrtocoridae is distinct, they certainly show that the family should not be included in the Pentatomidae. But the other characteristics listed here and in the Diagnosis, taken together, lead inexorably to the conclusion that the taxon is of familial rank.

#### Key to the Genera of Cyrtocoridae

1. Body without tubercles above; scutellar process short, rounded; abdominal segments III-V expanded laterally, fused, segments nearly indistinct apically; body posteriorly squared off; last 3 abdominal segments nearly forming an indented rectangle in posterior view . . . . . *Cyphothyreia* Horváth
- Body tubercled above; scutellar process angled, sometimes produced; abdominal segments III-V expanded laterally, with area between segments incised, each segment forming a lobe laterally; body posteriorly rounded; last 3 abdominal segments forming a trapezoid in posterior view . . . . . 2
2. Scutellar process measured from abdominal dorsum longer than length of scutellum, notched at apex, with 2 large basal anterior tubercles; humeral processes strongly expanded apically, nearly 2 times wider apically than at base . . . . . *Ceratozygum* Horváth
- Scutellar process shorter than length of scutellum, never notched apically, usually lacking basal posterior tubercles; humeral processes nearly equal in width basally and apically . . . . . 3
3. Head anteriorly quadrilobate, notched medially and incised more strongly at lateral angles in front of eyes; anterior angles of pronotum strongly produced, at least half the length of the humeral processes . . . . . *Pseudocyrtocoris* Jensen-Haarup
- Head anteriorly bilobate at most, not or very slightly notched medially, but always lacking 2nd incision in front of eyes; anterior angles of pronotum consisting of teeth, and shorter than half the length of the humeral processes . . . . . *Cyrtocoris* White

#### *Ceratozygum* Horváth 1916

1916 *Ceratozygum* Horváth, Ann. Mus. Nat. Hung. 14: 222.  
Type species: *Oxynotus horridus* Germar 1839, Zeitschr. Entomol. 1: 45. Monotypic.

### Redescription

Head with wide medial V-shaped incision anteriorly and 2nd incision near lateral angle; head quadrilobate and clypeus strongly enclosed in females and some males. In other males, clypeus exposed anteriorly and paraclypei produced forward beyond humeral extension and as wide as pronotum. Beak extending to anterior of mesocoxae or just beyond.

Pronotal anterior angle produced forward and with slight tooth, just lateral to eye, anterior angle curving sinuately behind eye; space between anterior tooth and humeral expansion with 1 or more slight teeth medially. Expansion of humerus wide apically (nearly 2 times wider than at base), multilobate. Pronotum strongly tuberculate, extremely so along posterior edge (basally). Median sternal groove receiving beak ending at anterior of metacoxae. Raised area at anterior metasternum (end of sternal sulcus) Y-shaped with single carina posteromedially. All tibiae with external mediobasal setose tubercle.

Scutellum with 2 multitubercled callosities subbasally, flanking a high medial extended process much longer than scutellum. Medial process notched ventrally at apex and with 2 subbasal tubercles anteriorly. Scutellar edge ringed with tufts of setae and inner row of 4 tufts posteriorly.

Abdominal segments III-V expanded downward laterally into multilobate lobes, segment VI laterally forming slightly upturned broadly rounded triangle, segment VII forming slight tubercle that points posteriorly (only in males).

**Diagnosis.** The long scutellar process, notched at apex and longer than the length of the scutellum, and the strongly expanded apex of the humeral process, separate members of this genus from all others.

### *Ceratozygum horridum* (Germar 1839)

(Fig. 1)

- 1839 *Oxynotus horridus* Germar (♂), Zeitschr. Entomol. I: 45.  
 1839 *Oxynotus monstrosus* Germar (♀), Zeitschr. Entomol. I: 46.  
 1863 *Oxynotus perfoliatus* Costa, Rend. Acad. Napoli II: 193.  
 1901 *Cyrtocoris monstrosus*: Sharp, Cambr. Nat. Hist. II: 546.  
 1916 *Cyrtocoris horridum* Horváth, Ann. Mus. Nat. Hung. 14: 223.

### Redescription

Body black with lighter brown to white scalelike covering, giving body an overall cream-colored appearance, slightly lighter ventrally, but with ventral variegated areas of deep-brown and yellow-white (some specimens entirely black). Body trapezoidal from posterior view.

Two radically different head types occur: 1 with strongly produced paraclypei, half as long as rest of body (Fig. 1 A and C); 1 lacking produced paraclypei (Fig. 1B); the former always male and the latter may be male or female (see Note below). In extended form, clypeus open in front, paraclypei extending for-

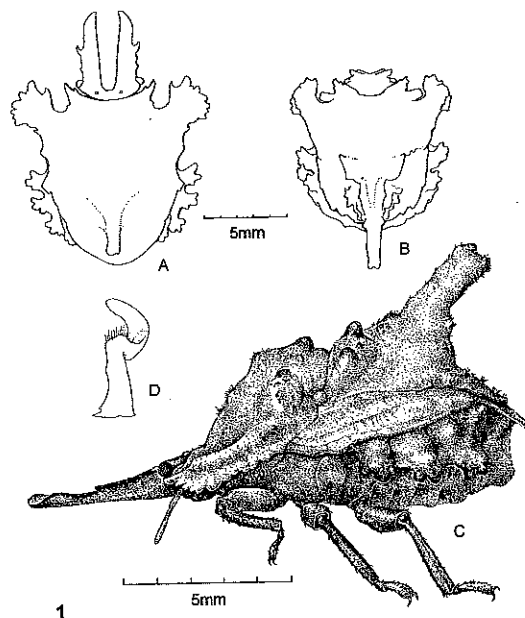


Fig. 1. *Ceratozygum horridum* (Germar). (A) Dorsal view of "long" male (diagrammatic). (B) Dorsal view of female (diagrammatic). (C) Lateral view of "long" male. (D) Lateral view of paramere of "long" male (from Barro Colorado Island) (note: paramere of "short" male the same).

ward with open space between. Each extension relatively straight to sinuate internally, with wide external tooth medially (may be smaller tooth between eye and medial tooth). In short head form, head with area in front of eyes concave, notched at anterolateral angle, forming shallow, wide V anteriorly, or nearly straight; head anteriorly quadrilobate. Head medially concave between eyes and anterior margin. Clypeus strongly enclosed by paraclypei in short form; not enclosed in extended form; clypeus slightly raised in both. Ocelli strongly posterior, well behind level of eyes. Distance between ocelli much less than distance from each ocellus to eye. Antennal I with white covering, remaining segments reddish-brown. Beak reddish-brown, extending to between mesocoxae; 3rd segment longest, 4th shortest.

Pronotum strongly bisinuate behind head, curving gently behind each eye to anterior angle, this consisting of single large tooth with smaller inner medial tooth. Median third of pronotum slightly raised, extending to 2 wide lobes laterally; anterior lobe ending behind each eye, posterior lobe narrowing at each humerus, then widening to a raised median lobe free of tubercles, this extending nearly to apex of each humerus. Humeri extended anterolaterally, each ending in a roundedly squared lobe, each with 7-9 lobes apically; each humerus with single notch posteriorly at base.

Anterior triangular portion of scutellum raised; raised portion with 2 large multitubercled tubercles at base. Distal two-thirds of raised portion terminating in high, raised, slightly arching extension, appearing

Table 1. Measurements (mm) of *Ceratozygum horridum* (Horváth material), *Cyphothyrea erosa* (holotype), and *Pseudocyrtocoris lacertus* (Jensen-Haarup material) (also holotype and paratype of *Cyphothyrea bridarollii*)

Characteristics	<i>Ceratozygum horridum</i>		<i>Cyphothyrea erosa</i>	<i>Pseudocyrtocoris lacertus</i>	<i>(Cyphothyrea bridarollii<sup>a</sup>)</i>	
Sex	♂	♀	♀	♀	♀	♀
Body length <sup>b</sup>	9.0	8.5	7.4	7.4	7.0	7.2
Head width (widest point)	3.6	2.8	2.9	2.1	2.1	2.2
Head width (before eyes)	3.1	2.3	2.5	1.8	1.9	2.0
Head length (from ocelli)	1.4	1.6	1.3	1.2	1.0	1.1
Eye to ocellus	1.6 <sup>c</sup>	0.9	1.0	0.6	0.6	0.6
Interocular distance	2.9	2.1	2.3	1.6	1.6	1.7
Interocellar distance	0.9	0.8	0.8	0.6	0.7	0.7
Pronotum width	10.9	8.2	7.5	6.2	5.7	6.2
Pronotum length	3.7	3.3	2.4	2.9	2.6	2.9
Scutellum width	4.7	4.3	3.6	3.1	3.1	3.4
Scutellum length	4.8	4.6	4.2	4.0	4.0	4.2
Spine height from scutellum	3.2	3.7	1.2	1.0	1.0	1.0
Spine height from abdominal venter	6.5	7.4	4.5	3.8	3.5	3.5
Antennal segments:						
length 1	0.8	0.6	0.5	0.4	0.4	0.4
2	0.1	0.1	0.1	0.1	0.1	0.2
3	0.9	0.9	0.5	0.3	0.4	0.4
4	—	0.7	0.6	0.4	0.5	0.5
5	—	0.9	0.7	0.7	0.6	0.6
Rostral segments:						
length 1	0.8	0.7	0.6	0.4	0.4	0.4
2	0.9	0.7	0.6	0.4	0.4	—
3	0.6	0.5	0.5	0.4	0.4	—
4	0.6	0.5	0.4	0.4	0.5	—
Abdominal segments: midventral						
length 3	0.7	0.6	0.5	0.6	0.5	0.4
4	0.6	0.6	0.5	0.6	0.6	0.5
5	0.7	0.7	0.5	0.7	0.6	0.7
6	0.6	0.6	0.5	0.7	0.7	0.8
7	1.4	0.9	1.0	0.6	0.6	0.7
Length of profemur	2.6	2.1	2.0	1.7	1.7	1.6
Length of protibia	2.3	1.7	1.9	1.5	1.5	1.6
Length of protarsus	—	—	0.7	0.6	0.6	0.7
Length of mesofemur	3.4	2.6	2.1	1.7	1.8	1.9
Length of mesotibia	2.8	1.8	1.9	1.4	1.4	1.5
Length of mesotarsus	1.3	0.8	0.7	0.6	0.6	—
Length of metafemur	3.4	2.6	2.6	1.9	2.1	1.9
Length of metatibia	2.8	2.0	1.7	1.8	1.7	1.8
Length of metatarsus	1.2	0.8	0.7	0.7	—	0.7

<sup>a</sup> Synonymized with *Pseudocyrtocoris lacertus*.<sup>b</sup> From tip of clypeus to end of abdomen.<sup>c</sup> Eye shifted laterally with lateral process of male's head.

notched at apex and quadritubercled, with 2 strong tubercles projecting posteriorly near base of extension, as seen from side. Pronotum and scutellar raised area strongly tubercled. Corium with tooth externally between humerus and abdominal segment III. Pronotum, scutellum, coria with scattered tufts of setae. Scutellum with tufts of setal at edge and with inner semicircle of tufts.

Legs black, tarsi and tibial apex reddish-brown. All tibiae with external mediodistal tubercle. Sternal sulcus receiving beak and antennae; prosternal sulcus triangular with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides; metasternum with small V-shaped portion to receive beak tip only, followed posteriorly by narrow, single carina.

Abdominal segment III with strong tooth antero-medially; segments III–V with excisions between segments. Segments VI and VII each forming wide triangle posteriorly, giving abdomen a multitoothed look

posteriorly, from above. Segment VI bituberculate at apex. Ventrally, abdominal segment III with slight upraised carina widening posteriorly. Segments IV–VI lacking striae medially. Ventral segment VII of female narrowly flat medially, with 1 medioapical tubercle, then sloping upward to sides; segment heavily setose medioapically. Basal plates of female slightly wider than long, lacking mediolongitudinal ridge, heavily setose basally. Male genital capsule notched externally on either side of midline, with an apically flat, squared extension medially; parameres sickle-shaped, each visible in lateral notch of genital capsule.

**Measurements.** Holotype not available. Total length 7.0–9.6 mm (mean = 8.7 mm,  $n = 15$ ). Other measurements: Tables 1 and 2.

**Type Material.** Type apparently lost; description from a male and a female upon which Horváth based his erection of the genus. Label data: Male: Peru, Vilanöta; horridum; det. Horváth. Female: Patria?; horridum, det. Horváth. Both in TMB.

Table 2. Extension of paraclypei and body lengths in male and female *Ceratozygum horridum*

Where collected	When collected	Sex	Color	Body length, mm <sup>a</sup>	Paraclypei extended
"Patria?" <sup>b</sup>	—	♀	Coffee	8.5	No
Vilcanota, Peru <sup>b</sup>	—	♂	Coffee	9.0	Yes
Rio Ucayali, Peru	1927	♂	Coffee	9.1	Yes
Rio Ucayali, Peru	1927	♀	Gray	9.2	No
Canal Zone, Panama	1924	♂	Black	9.1	Yes
Canal Zone, Panama	1974	♂	Black	9.1	Yes
Barro Colorado Isl., Panama	1934	♂	Black	9.0	Yes
Parq Nac. Soberania, Panama	1993	♀	Black	9.4	No
Parq Nac. Soberania, Panama	1993	♂	Black	9.1	Yes
Teffe, Brazil	1924	♀	Coffee	9.6	No
Iquitos, Amazon R., Brazil	1927	♂	Gray	8.3	Yes
Guanabara (=Rio de Janeiro), Brazil	1989	♂	Black	7.0	No
Barueri, Brazil	1961	♂	Black	7.0	No
Barueri, Brazil	1955	♂	Black	7.2	No
Mt. Marahuaca	1950	♀	Coffee	9.6	No

<sup>a</sup> Measured dorsally from tip of clypeus to tip of abdomen.

<sup>b</sup> Horváth material, upon which he established the genus.

**Distribution.** Brazil, Panama, Peru, Venezuela (see Table 2); additional material from D. A. Rider and AMNH. Disposition of material: AMNH (3), CWS (3), DRC (4), MZSP (1), TMB (2; see above), USNM (2).

**Diagnosis.** Same as the generic diagnosis.

**Note.** As Horváth noted in setting up the genus, *Ceratozygum* is sexually dimorphic. However, the situation is actually more complex: There are 2 forms of the males themselves. One form resembles the female; in each the paraclypei are not greatly produced anteriorly. In the other form of male (but in no female), the paraclypei extend far forward (Fig. 1 B and C). The parameres of the 2 forms are identical (Fig. 1D).

These males seem to exhibit a positive allometry, of the sort Kawano (1995; also see Emlen 1996) has described in some giant rhinoceros beetles (Scarabaeidae). Among our males, as among Kawano's beetles, larger specimens have more greatly developed structures; longer males (9 mm) have the prolonged paraclypei, and shorter ones (7 mm) do not (Table 2) and resemble females.

The 1 exception is the sole long Brazilian male, which is only 8.2 mm long. Of the 10 males available to us, 3 of the 4 from Brazil are short, and the others (Peru, Panama) are long (Table 2). The 3 short Brazilian specimens were collected over a 6-yr period, so the short state is not likely to be an aberration.

We are unaware of a similar sexual dimorphism (of head structures) in the pentatomomorph Heteroptera, except in the Plataspidae, at least 1 Thyreocoridae, some Pentatomidae, and a few Lygaeids. The clypeus of the male thyreocorid *Galgupha* (*Gyrocnemis*) *tabida* (Stål) is prolonged and expanded, and the paraclypei are bifid; clypeus and paraclypei are simple in the female (J. E. Eger, unpublished data). The Thyreocoridae and Plataspidae are pentatomoids perhaps related to Cyrtocoridae (C.W.S., unpublished data). In several genera of Plataspidae various structures of the head are extended forward in the male, and less so or not at all in the female; these structures include the paraclypei, the mandibular plates, et al. With respect to these structures, some genera super-

ficially resemble *Ceratozygum* (Miller 1955, Jessop 1983). Among the Pentatomidae, the paraclypei of male (but not female) *Opilomus dichrous* (Herrich-Schaeffer) (Asopinae) are prolonged (Thomas 1992), as are those of *Atelocera serrata* (F.) (Pentatominae: Halyini) (D. A. Rider, personal communication); the paraclypei of male (but not female) *Stenozygum genale* Linnavuori (Pentatominae: Strachiini) are inflated (D. A. Rider, personal communication). Males of several lethaeine rhyarochromines (Lygaeidae) have various extension of head structures not found in the conspecific females; in 1 species, *Cryphula fasciata* (Distant), the development of tusks below the antennifers varies among males, but are always present (absent in females) (J. O'Donnell, personal communication). In *Dentisblissus* (Lygaeidae: Blissinae) the genae of the males are produced forward (Slater 1961a) as are the bucculae and paraclypei of male *Iphicrates* (Slater 1961b, 1966). These structures are not produced, or not so greatly produced, in the females of these genera. In one possibly aberrant male of *I. malayensis* Slater, the paraclypei resemble those of the female, and the bucculae are slightly smaller than those of other males (Slater 1961b). Except for this probable anomaly, and *C. fasciata*, we do not know of other pentatomomorphans with males dimorphic with respect to structures of the head.

### *Cyphothyrea* Horváth 1916

1916 *Cyphothyrea* Horváth, Ann. Mus. Nat. Hung. 14: 219.  
Type species: *Cyphothyrea erosa* Horváth 1916, Ann. Mus. Nat. Hung. 14: 219. Monotypic.

### Redescription

Head with wide V-shaped incision anteriorly, lacking 2nd incised area laterally in front of eyes; head slightly bilobate. Clypeus strongly enclosed by paraclypei. Beak extending to between mesocoxae.

Anterior angle of pronotum produced as small tooth, followed by large tooth on humeral process.



Humeral process extending anterolaterally, equal in length to two-thirds width of head at apex. Raised tubercle at anterior metasternum (end of sternal sulcus) slightly cup-shaped, narrowing posteriorly to single carina medially. All tibiae lacking external tubercles.

Scutellum lacking basal tubercles on either side of median ridge. Scutellum basally expanded upward as triangle medially, with wide extended medial ridge. Ridge convex dorsally, ending in obtuse angle posteriorly, as seen from side.

Abdominal segments III-V expanded downward laterally forming squared-off extensions on each side, slightly toothed at apices. Segments VI and VII together forming upturned broadly rounded triangle at posterior edge. Abdominal sternum III with well-developed tooth anteromedially.

**Diagnosis.** Members of this genus are easily separated from others by the bluntly square humeral processes and the lack of an incision between abdominal segments II-V.

**Notes.** The genus formerly contained 2 species, *C. erosa* Horváth and *C. bridarollii* Kormilev. Our examination of the 2 Kormilev paratypes has shown that they have none of the characters of the genus as described above, but belong in *Pseudocyrtocoris* Jensen-Haarup. *Cyphothyrea bridarollii* Kormilev is hereby transferred to the genus *Pseudocyrtocoris*.

#### *Cyphothyrea erosa* Horváth 1916

(Fig. 2)

1916 *Cyphothyrea erosa* Horváth, Ann. Mus. Nat. Hung. 14: 219.

#### Redescription (Holotype ♀)

Body black with lighter brown scalelike covering, giving body an overall brown appearance, slightly lighter ventrally, but lacking variegated areas of deep brown and yellow-white. Body rectangular from posterior view.

Lateral margin of head anterior to eyes straight, rounded at anterolateral angle, anterior margin of head forming a shallow, wide V-shaped concavity; head slightly bilobate in front. Head medially concave between eyes and anterior angle. Clypeus strongly enclosed by paraclypei, slightly raised. Ocelli strongly posterior, well below level of eyes. Distance between ocelli much less than distance from each ocellus to eye. Antennae with 1st segments lighter yellow-brown, 1st darker at base becoming lighter distally, 2nd lighter at base becoming darker distally, 3rd and 4th segments dark brown. Beak light brown, extending to between mesocoxae; 2nd segment longest, 4th shortest.

Pronotum strongly bisinuate behind head, curving gently behind each eye to anterior angle, this consisting of 2 teeth, the more medial the smaller. Median third of pronotum slightly and broadly raised. Each humeral process a bluntly squared lobe, lacking apical teeth or lobes, each with single median tooth posterolaterally, each with slight posterior ridge.

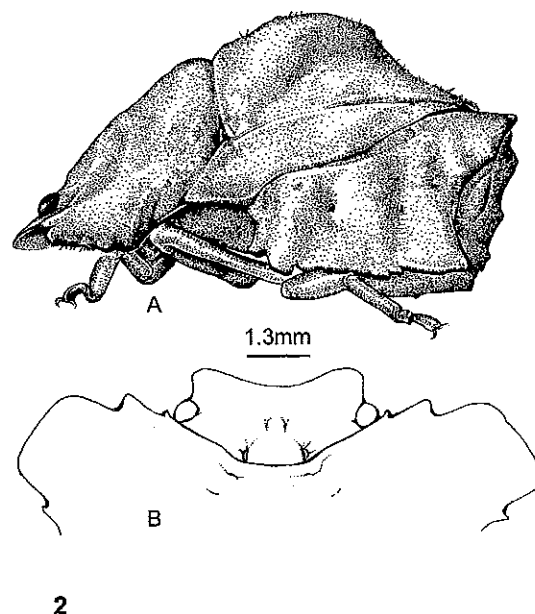


Fig. 2. *Cyphothyrea erosa* Horváth (holotype female). (A) Lateral view. (B) Dorsal view of head and anterior pronotum (diagrammatic).

Anterior triangular portion of scutellum slightly raised; raised portion strongly convex, as seen from side. Pronotum and scutellar raised area relatively smooth, lacking tubercles or striae. Corium strongly bisinuate along lateral edge. Pronotum, scutellum, and coria with scattered tufts of (and individual) setae.

Legs black, tarsi and apices of tibiae reddish-brown. Each tibia externally lacking mediobasal tubercle. Procoxae and mesocoxae widely separated, mesocoxae and metacoxae nearly oppressed. Sternal sulcus receiving beak and antennae; prosternal sulcus triangular with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides; metasternum with small cup-shaped portion to receive beak tip only, followed posteriorly by narrow, single carina.

Abdominal segments III-V appearing fused laterally, no incision between segments. Segments VI and VII together forming wide triangle posteriorly, giving abdomen a squared-off look posteriorly, when seen from above. Segment VI with small lateral tooth. Ventrally, abdominal segment III with strong anteriorly upraised carina. Segments IV-VI lacking striae medially. Ventral segment VII of female narrowly flat medially, sloping upward to sides; segment heavily setose medioapically. Basal plates of female twice as long as wide, with mediolongitudinal ridge, heavily setose basally.

**Measurements.** Total length 7.4 mm (holotype); other specimen seen (see below), total length 5.7 mm. Other measurements (holotype): Table 1.

**Type Material.** Holotype, female. Label data: Peru, Pachitea; *erosa* Horv. [underlined in red], det. Horváth. In TMB.

**Distribution.** Peru, Brazil.



**Diagnosis.** Same as for the genus.

**Note.** One other specimen (a female) was examined and determined by us as *C. erosa*; it bears the cryptic label "Peru-Brazil frontier" (CWS).

### *Cyrtocoris* White 1842

- 1833 *Coptosoma* (*Oxynotus*) Laporte Essai. Hém. 1833: 74.  
Type species: *Tetyra gibba* Fabricius 1803, Syst. Rhyng. 1803: 141.  
1843 *Oxynotus* Amyot et Serville, Hist. Nat. Ins. Hém. 1843: 58.  
1842 *Cyrtocoris* White, Trans. Entomol. Soc. Lond. 3: 89 (new name for *Oxynotus*).  
1880 *Cyrtocoris*: Distant, Biol. Centr. Am. I: 43.  
1988 *Cyrtocoris*: Brailovsky, Cervantes, and Mayorga, An. Inst. Biol. Univ. Nac. Auton. Mex. 58: 541.

### Redescription

Head sometimes slightly incised anteromedially, forming a shallow V, or nearly straight across, but lacking 2nd lateral incision in front of eyes; head, at most, bilobate. Clypeus enclosed by paraclypei, or free anteriorly. Beak extending at least to mesocoxae. Body trapezoidal in posterior view. Lateral margins of head nearly straight in front of eyes, rounded at anterolateral angle; anterior margin straight or nearly straight across; anterior margin of head not bilobate. Clypeus strongly enclosed by paraclypei, as high dorsally as level of eyes. First antennal segment with whitish covering, remaining segments reddish-brown.

Pronotum strongly bisinuate behind head. Anterior angle of pronotum consisting of 2 teeth; smaller tooth behind eye, posterior tooth larger. Humeral process not expanded apically, but tapering from base to apex, strongly serrate apically. Posterior one-third of disc broadly convex; middle of disc with 2 short, raised longitudinal ridges on either side terminating in 2 transverse ridges placed at one-third and two-thirds of length, respectively, forming roughly squared concavity centrally and roughly rectangular concavity on either side. Raised area at anterior metasternum (end of sternal sulcus) Y-shaped but never fusing into single carina posteromedially, bicarinate for its length. All tibiae with external raised tubercle, just distal of middle (except in *C. obtusus* and *C. paraensis*, where tubercle on foretibiae only).

Scutellum basally expanded upward as triangle medially, with wide medial ridge terminating in spine posteriorly (Fig. 3), thus forming apex of the triangle. Scutellum lacking tufts of setae, but with scattered single setae.

Abdominal segments III-V expanded downward laterally into lobes, each with 2 teeth apically, segment VI produced laterally (more posteriorly) into broad upturned triangle, segment VII not produced. Abdominal sternum III without anteromedial tooth.

**Diagnosis.** All members of this genus have a double carina on the metasternum; this occurs in no other genus. They also can be separated by the combination of a lack of a lateral incision on the head in front of

eyes, the humeri not squared, and humeri apically toothed, angular, or multilobate.

In general, females are larger than males, but wherever we have a large sample, variation ranges widely. Therefore, it is difficult to determine sex by size, or relative size, alone.

The name *Cyrtocoris* was given by White (1842), who stated simply, "M. Laporte's generic name *Oxynotus* has been preoccupied by Mr. Swainson in Ornithology, and must consequently be altered; CYRTOCORIS might not improperly be applied to them" (1842, p. 89). Distant (1882) notes further that the name had also been used "by a less followed writer, Rafinesque, in Pisces" (p. 43).

**Note.** The following key serves to identify the species of *Cyrtocoris*, despite the considerable variation found within some of the species.

### Key to the Species of *Cyrtocoris*

1. Humeral extensions lacking lobes or teeth apically, slightly angular; pronotum, scutellum, and coria lacking tufts of setae (Brazil) (Fig. 12) . . . . . *C. simplex* Horváth
- Humeral extensions serrate or multilobate apically; pronotum, scutellum, and coria covered with tufts of setae . . . . . 2
2. Scutellum produced posteriorly as a high spine, its height at least 45% of the length of the scutellum (Fig. 3 A-H, J; Table 3) . . . . . 3
- Scutellum produced as a low ridge, its height <40% of the length of the scutellum (Fig. 3 L-O; Table 3) . . . . . 7
3. Abdominal sterna III-VII in females, III-V in males with small medial tubercle on posterior border (Peru) . . . . . *C. andicola* Horváth
- Abdominal sterna IV-VI without small median tubercle . . . . . 4
4. Humeral expansions nearly reaching level of anterior angles of pronotum, strongly surpassing a line drawn through the bases of these angles' larger anterior teeth (widely distributed). . . . . *C. gibbus* (F.)
- Humeral expansions less projecting anteriorly, never surpassing a line drawn through the bases of the larger anterior teeth (Fig. 4) . . . . . 5
5. Beak not extending beyond anterior metasternum, rarely reaching anterior of metacoxae (Mexico through Brazil) . . . . . *C. egeris*, new species
- Beak extending well onto the metasternum, nearly beyond the metacoxae . . . . . 6
6. Scutellar spine extending posteriorly to a point <55% of the length of the scutellum as seen from above (Fig. 3H; Table 3) (Peru) . . . . . *C. montanus* Horváth
- Scutellar spine extending posteriorly to a point >65% of the length of the scutellum (Fig. 3J; Table 3) (southern Brazil) . . . . . *C. paraensis* Pirán
7. Beak not extending beyond anterior metasternum, never reaching metacoxae (Mexico through Argentina) . . . . . *C. trigonus* (Germar)

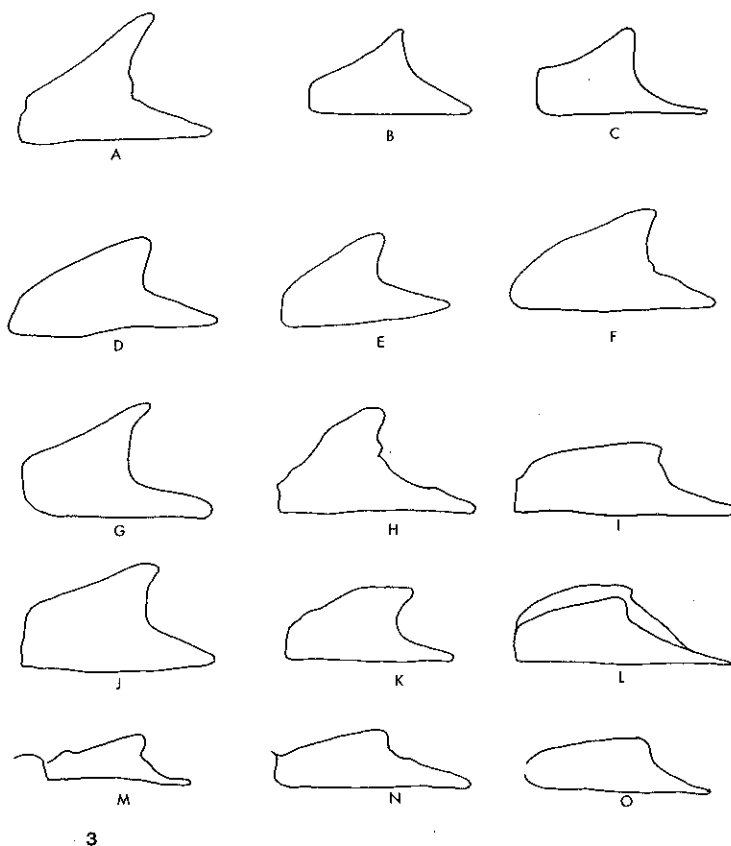


Fig. 3. Lateral view of scutellum (diagrammatic and to scale) of *Cyrtocoris* spp. (A) *C. andicola* (lectotype ♂). (B) *C. egeris* (holotype ♀ [Ecuador]). (C) *C. egeris* (allotype ♂ [Ecuador]). (D) *C. egeris* (paratype; det. *Trigonus* by Horváth). (E) *C. egeris* (det. *trigonus* by Kormilev). (F) *C. egeris* (♀, det. *trigonus* by Brailovsky). (G) *C. gibbus* (♂ lectotype). (H) *C. montanus* (holotype). (I) *C. obtusus* (holotype). (J) *C. paraensis* (holotype). (K) *C. simplex* (holotype). (L) *C. trigonus* (lectotype and paralectotype, both ♀, upper line and lower). (M) *C. trigonus* (holotype of *C. subobtusus*). (N) *C. trigonus* (allotype of *C. subobtusus*). (O) *C. trigonus* (det. *obtusus* by Brailovsky).

Table 3. Relative length and height of scutellar spine of *Cyrtocoris* species (as percentage of length of scutellum) (see Fig. 3)

Species	Length	Height	Fig.
<i>Cyrtocoris andicola</i>	69	63	3A
<i>C. egeris</i> holotype	70	55	3B
<i>C. egeris</i> allotype	67	48	3C
<i>C. egeris</i> "trigonus" (det. Horváth) (paratype)	70	45	3D
<i>C. egeris</i> "trigonus" (det. Kormilev)	63	56	3E
<i>C. egeris</i> "trigonus" (det. Brailovsky)	70	49	3F
<i>C. gibbus</i> (syntype)	67	61	3G
<i>C. montanus</i>	53	53	3H
<i>C. abtusus</i> (holotype)	64	32	3I
<i>C. paraensis</i> (holotype)	69	54	3J
<i>C. simplex</i>	76	42	3K
<i>C. trigonus</i> (syntype)	52	33	3L
<i>C. trigonus</i> (syntype)	54	29	3L
<i>C. trigonus</i> ( <i>subobtusus</i> holotype)	64	30	3M
<i>C. trigonus</i> ( <i>subobtusus</i> holotype)	56	28	3N
<i>C. trigonus</i> ("obtusus" of Brailovsky)	72	28	3O

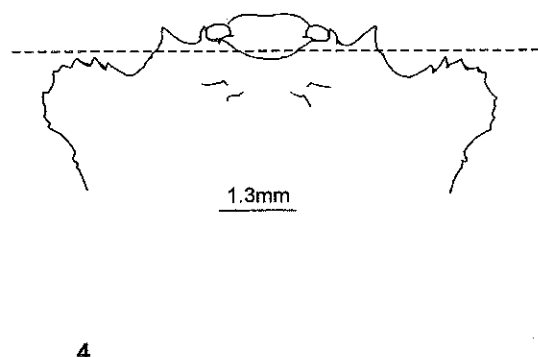


Fig. 4. *Cyrtocoris paraensis* Pirán (holotype ♂). Head and anterior pronotum (diagrammatic). Dotted line passes through bases of large anterior teeth.

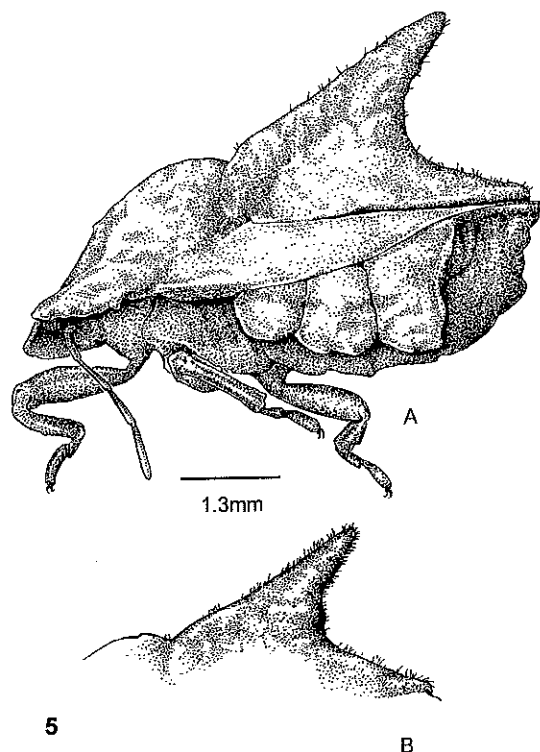


Fig. 5. *Cyrtocoris andicola* Horváth. (A) Paralectotype ♀, lateral view. (B) Lectotype ♂, lateral view of scutellar dorsum and spine.

Beak extending well onto the metasternum,  
nearly beyond the metacoxae (Brazil) . . . .  
. . . . . *C. obtusus* Horváth

***Cyrtocoris andicola* Horváth 1923**  
(Figs. 3A and 5)

1923 *Cyrtocoris andicola* Horváth, Ann. Mus. Nat. Hung. 20:  
150.

**Redescription (Lectotype ♂, Paralectotype ♀)**

Body black with lighter brown scalelike covering, giving body an overall brown appearance, slightly darker on scutellum and pronotum; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Mesopleura, metapleura, abdominal segments brown laterally, lightening strongly medially. Venter of body white, narrow white line arching from 1 angle to the other, apex of arch just below genital segment (occasionally obscure); line passing through and surrounding spiracle of abdominal segment VI; white line also above this on abdominal segment VII, also passing through spiracle.

Distance between ocelli greater than distance from each ocellus to eye. Beak lacking last 2 segments in lectotype, but light brown with 2nd segment longest, 4th shortest in paralectotype; extending to between mesocoxae.

Pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, 1st smaller than 2nd in holotype, 1st longer, narrower, more acute in paratype. Middle of pronotum slightly raised, extending to 2 wide low lobes laterally; anterior lobe ending behind anterior angle; posterior lobe narrowing at each humerus, then widening into a large lobe nearly extending to apex of each humerus, posterior lobe forming large callosity at base of humerus posteriorly. Humeri extended anterolaterally, apices rounded, each with 6-7 teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angles.

Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as acute high spine, as seen from side. Scutellar process height  $\approx 70\%$  of scutellar length. Pronotum and scutellar raised area strongly tubercled to striate. Corial costa lacking external tooth. Pronotum, scutellum, and coria with scattered tufts of setae.

Legs reddish-brown, covered with white; tarsi and tibiae slightly lighter. All tibiae with external medio-distal tubercle. Sternal sulcus receiving beak and antennae; prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides, carina slightly raised medially; metasternum with long V-shaped double carina, this narrowing to apex, where sides oppressed.

Abdominal sterna III-V with incisions separating segments laterally, each sternum with 2 teeth at lateral edge. Sternum VI forming an upraised triangle posteriorly, abdomen thus appearing squared-off dorsally. Sternum VII not raised or projecting posteriorly. Sternum III with strong anteriorly upraised carina. Sterna III-VII striate medially, each with single medioapical tubercle on posterior border of sternum in female; tubercle only on sterna III-V in male. Sternum VII of female widely flat medially, forming strong projecting lip below genital segment. Basal plates of female one-fourth wider than long, with slight projection medially behind ovipositor. Most posterior 6th-sternal trichobothrium medial to a line drawn through spiracles of segments VI and VII in female. Segment VI with strong incision apicomedia in males. Ventral rim of genital capsule straight across. Both 7th-sternal trichobothria lateral to a line drawn through the spiracles of segments VI and VII in male.

**Measurements.** Total length 7.0 mm (lectotype male), 8.2 mm (paralectotype female); other specimens (2, both females): total lengths 8.8 and 8.3 mm. Other measurements (of types): Table 4.

**Type Material.** We have the 2 syntypes of Horváth. We here designate the male as lectotype and the female as paralectotype of *Cyrtocoris andicola* Horváth. Lectotype, male: Label data: Peru, Callanga; andicola H. [underlined in red], Horváth. Paralectotype, female: Label data: Peru; andicola H. [underlined in red], det. Horváth. Both in TMB.

**Distribution.** Peru, Brazil. In addition to the type material, we have 2 female specimens, 1 from Rio Santiago, Peru (CWS collection), the other from Nova Teutonia, Santa Catarina State, Brazil (USNM).

Table 4. Measurements (mm) of *Cyrtocoris andicola* (♂ lectotype and ♀ paralectotype) and *C. egeris* (holotype and allotype)

Characteristics	<i>Cyrtocoris andicola</i>		<i>Cyrtocoris egeris</i>	
	♂	♀	Holotype	Allotype
Sex				
Body length	7.0	8.2	7.0	6.0
Head width (widest point)	1.9	2.1	2.3	1.7
Head width (before eyes)	1.5	1.8	1.8	1.6
Head length (from ocelli)	1.0	1.2	1.1	0.9
Eye to ocellus	0.5	0.6	0.5	0.5
Interocular distance	1.4	1.6	1.5	1.4
Interocellar distance	0.6	0.7	0.6	0.5
Pronotum width	6.4	7.3	5.6	5.5
Pronotum length	2.3	3.0	2.5	2.3
Scutellum width	3.0	3.4	2.7	2.7
Scutellum length	4.0	4.6	3.5	3.5
Spine height from scutellum	2.0	2.1	1.2	1.1
Spine height from abdominal venter	4.6	4.9	3.6	3.5
Antennal segments:				
length 1	0.4	0.5	0.6	a
2	0.1	0.1	a	0.1
3	0.6	0.5	a	0.5
4	0.6	0.7	0.5	0.5
5	0.8	0.8	0.7	0.7
Rostral segments:				
length 1	0.6	0.7	a	0.5
2	0.8	0.8	a	0.7
3	—	0.6	0.5	0.5
4	—	0.8	0.5	0.5
Abdominal segments: midventral				
length 3	0.4	0.5	0.4	0.4
4	0.6	0.8	0.6	0.5
5	0.6	0.9	0.7	0.6
6	0.5	1.0	0.7	0.5
7	1.1	0.7	0.5	0.9
Length of profemur	2.1	2.4	2.0	1.8
Length of protibia	1.8	1.0	1.8	1.5
Length of protarsus	0.8	—	0.6	0.7
Length of mesofemur	2.3	2.7	2.2	2.0
Length of mesotibia	1.8	2.0	1.7	1.6
Length of mesotarsus	0.8	—	0.7	—
Length of metafemur	2.5	2.8	2.6	2.4
Length of metatibia	2.1	2.5	2.0	1.8
Length of metatarsus	0.8	0.9	0.7	0.7

a Obscured by other structures.

**Diagnosis.** This species differs from others in having apicomedial tubercles (small, but noticeable) on ventral abdominal segments III–VI. The scutellar process is also the longest of any *Cyrtocoris* species (Fig. 3A; Table 3).

*Cyrtocoris egeris*, new species  
(Figs. 3 B–F, 6, 7, 15 A, B, F, G)

1916 *Cyrtocoris trigonus* Horváth, Ann. Mus. Nat. Hung. 14: 221 (in part, see note under *C. egeris*).

1988 *Cyrtocoris trigonus* Brailovsky, Cervantes, and Mayorga, An. Inst. Biol. Univ. Nac. Auton. Mex. 58: 541.

**Description (Holotype ♀, Allotype ♂)**

Body black with lighter brown scalelike covering, giving body an overall brown appearance, slightly darker on scutellum and pronotum; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Mesopleura and metapleura brown laterally, lightening strongly medially and internally, ab-

dominal segments brown with obscure lighter line submedially. Ventral angles of body white, obscure narrow white line arching from 1 angle to the other, apex of arch just below genital segment. Also white line below this on abdominal segment VII.

Distance between ocelli slightly more than distance between ocellus and eye. Beak extending onto metasternum, not reaching metacoxae; light brown; 2nd segment longest, 3rd shortest.

Pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, 1st shorter, narrower, more acute than 2nd. Middle of pronotum slightly raised, extending to 2 wide low lobes laterally; anterior lobe ending behind each anterior angle; posterior lobe narrowing at each humerus, then widening into large lobe nearly extending to apex of each humerus, posterior lobe forming large callosity at base of each humerus posteriorly. Humeri much extended anterolaterally, apices rounded, each with 6–7 teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angles.

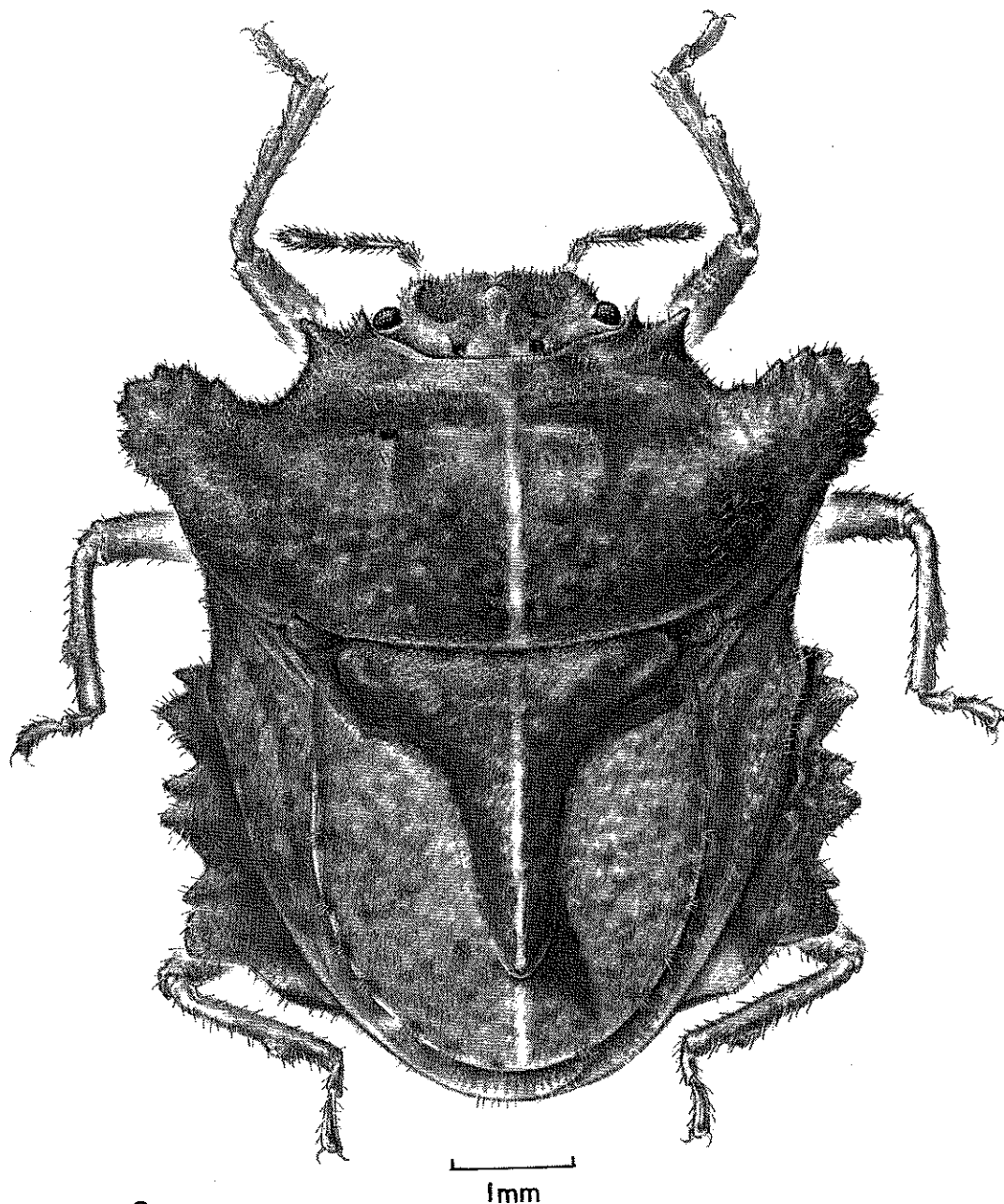
Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as acute to blunt high spine, as seen from side. Scutellar process height 50% of scutellar length. Pronotum and scutellar raised area strongly tubercled to striate. Corial costa lacking external tooth. Pronotum, scutellum, and coria with scattered tufts of setae.

Legs black, with white covering, appearing black spotted to striped, trochanters, tarsi, and tibial apices slightly lighter. Each tibia with external mediobasal tubercle. Sternal sulcus receiving beak and antennae; prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides; metasternum with cup-shaped double carina, sides of carinae closely oppressed behind cup. Beak extending onto metasternum, not reaching metacoxae.

Abdominal sterna III–V with incisions separating segments laterally, each sternum with 2 teeth at lateral edge. Sternum VI forming upraised obtuse to rounded triangle posteriorly. Sternum VII usually not raised or projecting posteriorly. Sternum III with raised carina. Sterna IV–VII striate medially. Most posterior trichobothrium on sternum VI medial to a line drawn through spiracles of sterna VI and VII. Sternum VII of female widely flat medially, forming strong projecting lip below genital segment. Basal plates of female one-fourth wider than long. Sternum VI with a strong incision apicomediaally in males. Ventral rim of genital capsule nearly straight or notched medially, never completely straight.

**Measurements.** Total length 7.0 mm (holotype ♀), 6.0 mm (allotype ♂). Paratype ♂♂: mean = 6.4 mm (5.9–7.2 mm,  $n = 46$ ); paratype ♀♀: mean = 6.9 mm (5.9–7.8 mm,  $n = 96$ ). Other measurements: Table 4.

**Type Material.** HOLOTYPE ♀, label data: (1) EC-UADOR: Pinchincha Prov./Tinalandia; 12 km. E. Sto./Domingo de los Colorados/ca 2,500 ft., 11–17-V-1986/J. E. Eger, coll. (2) ECUADOR. (3) (red) *Cyrtocoris/egeris* Packauskas & Schaefer 1996/ PARATYPE [crossed out] Holotype. Genitalia in vial

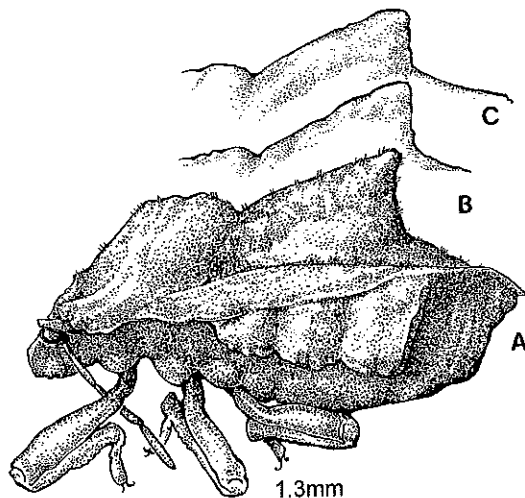


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Fig. 6. *Cyrtocoris egeris* n. sp. (holotype ♀), dorsal view.

on same pin as holotype (USNM). ALLOTYPE ♂, label data: 1) and 2) same as holotype. (3) (red) *Cyrtocoris/egeris* Packauskas & Schaefer 1996/ PARATYPE [crossed out] Allotype (USNM). PARATYPES (143 adults): ARGENTINA: Misiones (12; 2 paratypes in CWS, 2 IMC, 2 RJP, 6 TUC). BOLIVIA: Santa Cruz (1; TMC). BRAZIL: Amazonas (1; CWS); Espirito Santo (2; 1 CWS, 1 MZSP); Goiás (10; 2 CWS, 7 MZSP, 1 RJP); Guanabara (now Rio de Janeiro, but labelled separately) (21; 15 AMNH, 4 CWS, 2 RJJP);

Mato Grosso Sul (3; 2 AMNH, 1 CWS); Minas Gerais (9; 6 AMNH, 2 CWS, 1 RJP); Para (7, and 5 fifth instars; 4 adults and 3 fifth instars AMNH, 2 adults and 2 fifth instars CWS, 1 adult MZSP); Paraná (5; 4 AMNH, 1 CWS); Rio de Janeiro (15; 3 AMNH, 3 CWS, 7 MZSP, 2 RJP); São Paulo (22; 2 CNC, 4 CWS, 15 MZSP, 1 RJP); Santa Catarina (9; 5 AMNH, 2 CWS, 2 MZSP). COLOMBIA: Putumayo (3; 1 CWS, 2 AMNH); Santander (1; CNC); Magdalena (1; AMNH). COSTA RICA: (1; CNC). ECUADOR: (4, same labels as ho-



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Fig. 7. *Cyrtocoris egeris* n. sp. (holotype and 2 paratypes), lateral views. (A) Holotype ♀. (B) Paratype ♂. (C) Paratype ♂.

holotype and allotype; 1 CWS, 2 JEE, 1 RJP), others: Pichincho (2; CWS), Balzapamba (1; MZSP). HONDURAS: Tegucigalpa (1; AMNH). MEXICO: Chiapas (1; HBC); San Luis Potosi (1; CNC); Sinaloa (1; UCR); Vera Cruz (5; 2 CWS, 3 HBC). PANAMA (4, including specimen determined as *C. trigonus* by Horváth; labels of this specimen: (1) Amer. Centr./Chiriqui (2) *trigonus*/det. Horváth (3) A [see Discussion below]; this specimen in TMB. Other specimens (2 AMNH, 1 CWS). TRINIDAD: (2; 1 AMNH 1 CWS) VENEZUELA: Caracas (1; AMNH).

**Distribution.** Mexico, Honduras, Costa Rica, Panama, Colombia, Trinidad, Venezuela, Ecuador, Bolivia, Brazil, Argentina.

**Diagnosis.** All members of this species can be separated from others by the combination of beak not reaching metacoxae, scutellar process higher than 50% of the scutellar length, and humeri never surpassing a line drawn through the bases of the larger anterior angle spines of the pronotum. In particular, *C. egeris* might be confused with *C. trigonus*, both being widespread and variable species, although the scutellar process of *C. trigonus* is lower and more ridgelike than that of *C. egeris*. (See additional discussion under the latter species.)

**Variation.** There is some variation in total lengths within the paratype series, although the variation does not suggest a geographical pattern. Similar variation would probably manifest itself in other *Cyrtocoris* species, were enough material to be available. Total lengths of *C. egeris* vary from 5.9 to 7.2 mm (♂♂) and 5.9 to 7.8 mm (♀♀). By country, from north (Mexico) to south (Argentina), the average lengths (mm) are as follows: Mexico ♂♂: 6.5 (6.4–6.6,  $n = 3$ ); ♀♀: 6.8 (6.4–7.4,  $n = 5$ ). Honduras ♀: 6.8 ( $n = 1$ ). Costa Rica

♂: 6.9 ( $n = 1$ ). Panama ♀♀: 7.1 (6.9–7.13,  $n = 3$ ). Trinidad ♀♀: 7.1 (7.0–7.2,  $n = 2$ ). Colombia ♂♂: 6.4 (6.2–6.8,  $n = 3$ ); ♀♀: 6.4 (6.2–6.6,  $n = 2$ ). Venezuela ♀: 6.8 ( $n = 1$ ). Ecuador ♂♂: 6.6 (6.1–7.2,  $n = 5$ ); ♀♀: 7.3 (7.3–7.4,  $n = 2$ ). Bolivia ♀: 5.9 ( $n = 1$ ). Brazil ♂♂: 6.4 (5.9–6.9,  $n = 31$ ); ♀♀: 7.0 (6.0–7.8,  $n = 70$ ). Argentina ♂♂: 6.5 (6.0–7.2,  $n = 3$ ); ♀♀: 6.7 (6.4–6.8,  $n = 9$ ).

The color of most specimens differs little from the holotype's; in others it may vary from brown to brownish-black; a few specimens are reddish-brown. Other aspects of coloring and marking vary slightly, darker in darker specimens and lighter in lighter ones; some markings may be obscured in particularly dark or light specimens.

The number of teeth on each humeral lobe varies from 3 to 7. When there are only 3 or 4, the middle one(s) are large and blunt, as if they incorporated more than 1 tooth.

None of this variation is correlated with sex, size, or distribution.

We have 2 specimens (from TMB) identified by Horváth as *C. trigonus*. The most important difference between *C. trigonus* and *C. egeris* n. sp. is the height of the scutellar process expressed as a percentage of scutellar length (at most 35% in *C. trigonus*, 40% or more in *C. egeris*). The percentages of the 4 *C. trigonus* syntypes are 26, 28, 29, and 33% (Table 3). The process height–scutellar length percentage of 1 of the Horváth specimens (label: "Mexico Procopp") is 35%, which confirms its identification by Horváth as *C. trigonus*. The percentage of the other Horváth specimen ("Chiriqui, Central America" [Panama]) is 45%; we conclude that this specimen (a female) is *C. egeris* n. sp., and designate it a paratype of this species; the specimen is identified by a separate label, "A."

Brailovsky et al. (1988) identified some Mexican specimens as *C. trigonus*. We believe these to be *C. egeris*, and we discuss them under *C. trigonus*.

**Note.** This species is named in honor of Joseph E. Eger. When in 1987 he sent us Ecuadoran specimens that we could not identify, this project was begun; moreover, his comments on the paper have very greatly improved it.

### *Cyrtocoris gibbus* (F. 1803) (Figs. 3G and 8)

1803 *Tetyra gibba* F. Syst. Rhyng. 1803: 141.

1833 *Coptosoma (Oxynotus) gibbus*: Laporte, Essai Hém. 1832: 74.

1835 *Oxynotus gibbus*: Hahn, Wanz. Ins. III: 28.

1835 *Podops gibbus*: Burmeister, Handb. Entomol. II: 386.

1880 *Cyrtocoris gibbus*: Distant, Biol. Centr. Am. I: 43.

### Redescription (Lectotype ♂, 2 Paralectotype ♀♀)

Body black with lighter brown scalelike covering, giving body overall brown appearance, slightly darker on scutellum and pronotum; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Mesopleura, metapleura, abdominal segments



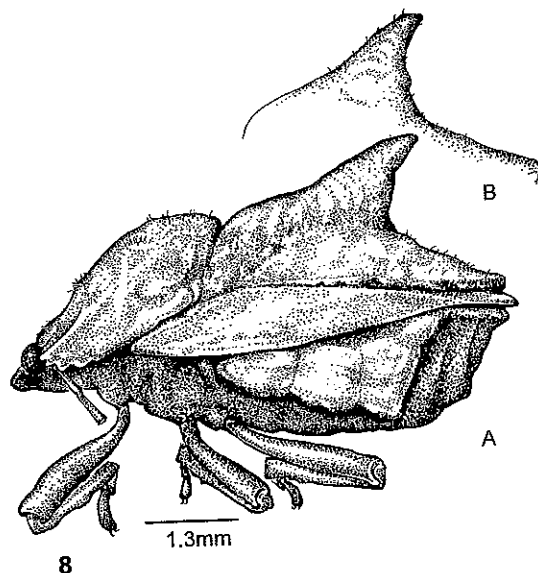


Fig. 8. *Cyrtocoris gibbus* (F.) A, B 2 paralectotypes, both ♀, lateral views.

brown laterally, lightening strongly medially. Ventral angles of body white, narrow white line arching from 1 angle to the other, apex of arch just below genital segment (occasionally obscure); line passing through and surrounding spiracle of abdominal segment VI. Also white line above this on abdominal segment VII also passing through spiracle.

Distance between ocelli less than distance of an ocellus to eye. Beak light brown, extending to between metacoxae; 2nd segment longest, 3rd shortest.

Pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, the lateral one larger than the medial. Middle of pronotum with slight shallow squared depression bounded by low ridges; each lateral ridge ending at level of (but not near) each eye. Lateral to depression, 2 low anterior lobes extending towards anterior angle. Posterior to depression, raised area (posterior lobe), this extending laterally onto each humerus, and forming low callosity posteriorly at base of each humerus. Humeri extended anterolaterally, apices rounded, each with 4–6 teeth. Humeri surpassing line drawn through bases of larger (lateral) spines of anterior angles of pronotum.

Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as acute high spine, as seen from side. Scutellar process height 58% of scutellar length (1 syntype, Table 3). Pronotum and scutellar raised area strongly tubercled to striate. Corial costa lacking external tooth. Pronotum, scutellum, coria with scattered tufts of setae.

Legs black with white covering, appearing black-spotted to striped, trochanters, tarsi, and tibial apices slightly lighter. Each tibia with external mediobasal tubercle. Sternal sulcus receiving beak and antennae;

prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides; metasternum with long V-shaped double carina, carina narrowing to apex, where appressed.

Abdominal sterna III–V with incisions separating segments laterally, each sternum with 2 teeth at lateral edge. Sternum VI forming upraised triangle posteriorly, giving abdomen a squared-off look posteriorly, from above. Sternum VII not raised or projecting posteriorly. Sternum III with strong anteriorly upraised carina. Sterna III–VII striate medially. Sternum VII of female widely flat medially, forming a strong projecting lip below genital segment. Basal plates of female one-fourth wider than long, with slight projection medially behind ovipositor. Ventralmost 6th-sternal trichobothrium medial to a line drawn through spiracles of segments VI and VII. Segment VI with a strong excision apicomedia in males. Ventral rim of genital capsule straight across. Both trichobothria on sternum VI lateral to a line drawn through the spiracles of segment VI and VII in males.

**Measurements.** Total length 7.0 mm (lectotype ♂), 7.2, 7.4 mm (paralectotype ♀ ♀). Other specimens (all ♀ ♀): mean = 7.3 mm (7.0–7.4 mm,  $n = 5$ ). Other measurements (of lectotype series): Table 5.

**Type Material.** Three syntypes, 1 male, 2 females. Label data: 1 female: (small green blank square); TYPE (red label); Amer. mer., Schmidt, Gibbus, Fabr. Other syntypes: green, and red TYPE labels only. All in ZMUC. According to Zimsen (1964), the tiny square green labels on the 3 syntype specimens indicate that these are indeed types. We designate here the male as lectotype and the females as paralectotypes of *Cyrtocoris gibbus* (F.) and have added the appropriate labels to the specimens. Zimsen (1964) writes that there is a 4th syntype in the Fabricius collection at the University of Kiel. We have not seen this specimen.

**Distribution.** “America meridionalis.” Distant (1880) lists the species from Brazil, Colombia, Guatemala, and Venezuela. We also have specimens from Corumbá, Mato Grosso Sul, Brazil (2; AMNH, CWS); Rio de Janeiro and “Brasília,” Brazil (determined by Horváth, in TMB); Misiones Argentina (1; INESALT); and Costa Rica (2; AMNH, USNM).

We do not know to what Fabricius’s “Amer”[ica] “mer”[idionalis] refers. However, a Johan Christian Schmidt—which may be the “Schmidt” on the one syntype label—lived on St. Croix (then a Danish possession) and supplied Fabricius with specimens (Zimsen 1964). These syntypes may therefore have come from in or near the West Indies.

**Diagnosis.** This species can be differentiated from others by the well developed scutellar process, and by humeri that surpass a line drawn through the bases of the larger anterior angled spines.

**Note.** da Costa Lima (1940) reports *Cyrtocoris gibbus* on the branches of *Mimosa scabrella* Benth. (Leguminosae).



Table 5. Measurements (mm) of *Cyrtocoris gibbus* (♂ lectotype, 2 ♀ paralectotypes), *C. montanus* (holotype), and *C. obtusus* (holotype)

Characteristics	<i>Cyrtocoris gibbus</i>		<i>Cyrtocoris montanus</i>	<i>Cyrtocoris obtusus</i>
Sex	♂	♀	♀	♀
Body length	7.0	7.2	7.4	7.5
Head width (widest point)	1.9	1.9	1.9	2.0
Head width (before eyes)	1.5	1.5	1.6	1.1
Head length (from ocelli)	1.0	1.1	1.1	1.2
Eye to ocellus	0.5	0.5	0.5	0.6
Interocular distance	1.4	1.4	1.4	1.5
Interocellar distance	0.6	0.6	0.6	0.7
Pronotum width	6.2	6.2	6.6	6.1
Pronotum length	2.3	2.3	2.3	2.7
Scutellum width	3.0	3.3	3.4	3.1
Scutellum length	3.9	4.2	4.4	3.9
Spine height from scutellum	1.6	1.6	1.6	1.6
Spine height from abdominal venter	6.0	5.7	6.0	4.2
Antennal segments:				
length 1	0.4	0.4	0.4	0.4
2	0.1	0.1	0.1	0.1
3	0.5	0.6	0.6	0.6
4	0.6	—	0.5	0.7
5	0.8	—	0.7	0.7
Rostral segments:				
length 1	0.5	0.6	0.5	0.7
2	0.5	0.6	0.5	0.8
3	0.6	0.5	0.5	0.7
4	0.6	0.5	0.5	0.7
Abdominal segments:				
length 3	0.7	0.6	0.6	0.5
4	0.7	0.6	0.7	0.7
5	0.7	0.7	0.7	0.8
6	0.6	0.7	0.8	0.7
7	0.8	0.6	0.6	0.7
Length of profemur	1.8	2.0	2.0	2.2
Length of protibia	1.6	1.7	1.5	1.7
Length of protarsus	0.7	0.7	0.7	0.8
Length of mesofemur	2.1	2.2	2.2	2.3
Length of mesotibia	1.8	1.8	1.7	1.7
Length of mesotarsus	0.7	0.8	0.7	0.7
Length of metafemur	2.3	2.1	2.3	2.5
Length of metatibia	1.9	1.6	2.0	2.0
Length of metatarsus	0.8	0.8	0.8	0.8

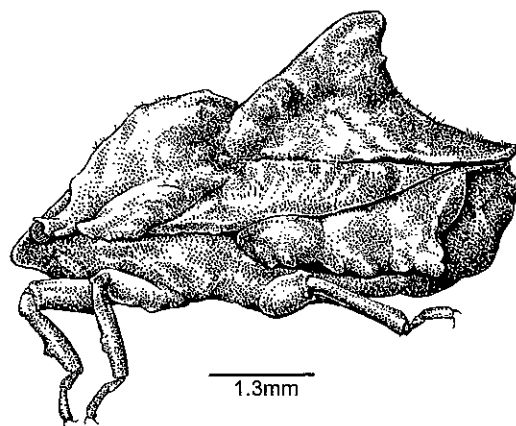
*Cyrtocoris montanus* Horváth 1923  
(Figs. 3H and 9)

1923 *Cyrtocoris montanus* Horváth, Ann. Mus. Nat. Hung. 20: 150.

Redescription (Holotype ♀)

Body reddish-brown with lighter brown scalelike covering, giving body overall brown appearance, slightly darker on scutellum and pronotum; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Mesopleura, metapleura, abdominal segments brown laterally, lightening strongly medially and internally. Ventral angles of body dark, lighter behind, with obscure narrow white line arching from 1 angle to other, apex of arch just below genital segment; line passing through and surrounding spiracle of abdominal segment VI. Also obscure white line above this on abdominal segment VII also passing through spiracle.

Distance between ocelli slightly more than distance from each ocellus to eye. Beak light brown, extending



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Fig. 9. *Cyrtocoris montanus* Horváth (holotype ♀), lateral view.

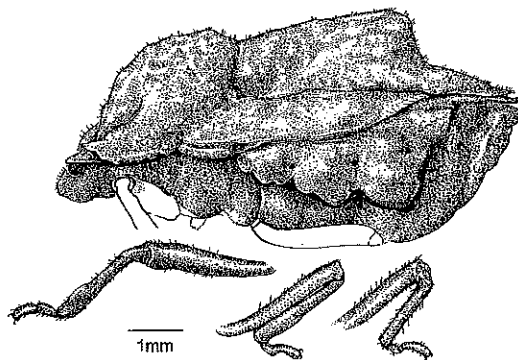
to between metacoxae; 2nd segment longest, 3rd shortest.

Pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, 1st smaller, narrower, more acute than 2nd. Middle of pronotum slightly raised, extending to 2 wide low lobes laterally; anterior lobe ending behind anterior angle, posterior lobe narrowing at each humerus, then widening into large lobe nearly extending to apex of each humerus, posterior lobe forming large callosity at base of humerus posteriorly. Humeri extended anterolaterally, apices rounded, each with 6-7 teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angles.

Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as blunt high spine as seen from side. Scutellar process height ≈50% of scutellar length. Pronotum and scutellar raised area strongly tubercled to striate. Corial costa lacking external tooth. Pronotum, scutellum, coria with scattered tufts of setae.

Legs black, white covering very sparse, trochanters, tarsi, and tibial apex slightly lighter. Each tibia with lateral mediobasal tuberculate thickening. Sternal sulcus receiving beak and antennae; prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides, carinae raised medially; metasternum with long V-shaped double carina, carina narrowing to apex, open posteriorly. Beak extending to between metacoxae.

Abdominal sterna III-V with incisions separating segments laterally, each sternum with 2 teeth (hint of 3rd posteriorly) at lateral edge. Sternum VI forming upraised triangle posteriorly. Sternum VII slightly projecting posteriorly. Sternum III with slight raised carina. Sternum VI striate medially. Most posterior trichobothrium on sternum VI medial to a line drawn through spiracles of sterna VI and VII in male and female. Sternum VII of female widely flat medially, forming strong projecting lip below genital segment.



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Fig. 10. *Cyrtocoris obtusus* Horváth (holotype ♀), lateral view.

Basal plates of female one-fourth wider than long, with slight projection medially behind ovipositor. Segment VI with a strong excision apicomedia in male. Ventral rim of genital capsule straight across.

**Measurements.** Total length 7.4 mm (holotype ♀). Male specimen: 6.5 mm. Other measurements (of holotype): Table 5.

**Type Material.** Holotype, female. Label data: Peru, Marcapata; montanus (underlined in red), det. Horváth. In TMB.

**Distribution.** Peru.

**Diagnosis.** This species can be separated from others by the combination of scutellar process produced as a blunt spine higher than 50% of the length of the scutellum, beak always reaching metacoxae, and scutellar spine not extending past 55% of the length of the scutellum as seen from above.

**Note.** The description of the male is from a specimen (AMNH) identified as *C. montanus* by us. Label data: Iberia Madre, de Dios Peru, Apr. 30 1947, Alt. 500 ft.; J. C. Pallister, Coll. Donor, Frank Johnson. This specimen and the holotype are the only specimens of this species we have seen.

*Cyrtocoris obtusus* Horváth 1916  
(Figs. 3I, 10, 15H)

1916 *Cyrtocoris obtusus* Horváth, Ann. Mus. Nat. Hung. 14: 220.

**Redescription (Holotype ♀)**

Body reddish-brown with lighter brown scalelike covering, giving body overall brown appearance, slightly darker on scutellum and pronotum; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Propleura, mesopleura, metapleura, abdominal segments light brown laterally, with obscure whitish line mediolongitudinally. Ventral angles of body dark, lighter behind, lacking white line from one angle to the other. Also lacking white line above this on abdominal segment VII.

Distance between ocelli slightly more than distance from each ocellus to eye. Beak light brown, extending

nearly to posterior border of metasternum; 2nd segment longest, 3rd shortest.

Pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, 1st shorter, narrower, and more acute than 2nd. Middle of pronotum slightly raised, extending to 2 low wide lobes laterally; anterior lobe ending behind anterior angle; posterior lobe narrowing at each humerus, then widening into large lobe nearly extending to apex of each humerus, posterior lobe forming large callosity at base of humerus posteriorly. Humeri short, extending anterolaterally, apices rounded, each with 6-7 teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angles.

Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as low ridge, as seen from side. Scutellar process height 32% of scutellar length. Pronotum and scutellar process tuberculate to striate. Corial costa with external tooth just above level of abdominal segment III. Pronotum, scutellum, and coria with scattered tufts of, and individual, setae.

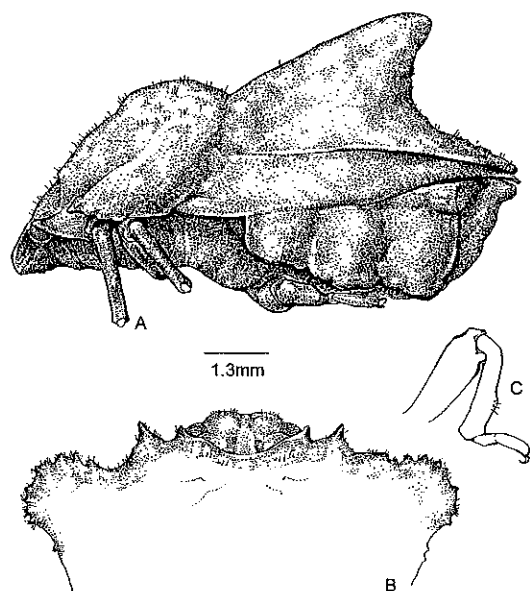
Legs black, with white covering, appearing black-spotted, trochanters, tarsi, and tibial apices slightly lighter. Each protibia with lateral mediodistal tubercle or thickening, this absent in meso- and metatibiae. Sternal sulcus receiving beak and antennae; prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides, carinae raised medially; metasternum with long V-shaped double carinae, carinae anteriorly expressed, narrowing to apex, open posteriorly.

Abdominal sterna III-V with incisions separating segments laterally, each sternum with 3 teeth at lateral edge. Sterna VI and VII each forming upraised triangle posteriorly; both sterna slightly projecting posteriorly. Sternum III with slight raised carina, carina widening posteriorly. Sterna VI and VII striate medially. Most posterior trichobothrium on sternum VI medial to a line drawn through spiracles of sterna VI and VII in both sexes. Sternum VII of female widely flat medially, forming less pronounced projecting lip below genital segment. Basal plates of female one-third wider than long, with slight ridgelike projection medially behind ovipositor. Ventral abdominal segment VI with a strong incision apicomedia in males. Ventral rim of genital capsule straight across.

**Measurements.** Total length 7.5 mm (holotype ♀); other specimens: ♂♂ mean = 7.4 mm (6.6-8.1 mm,  $n = 3$ ); ♀♀ mean = 7.7 mm (7.3-8.2 mm,  $n = 6$ ); 1 other specimen lacks abdomen. Other measurements (of holotype): Table 5.

**Type material.** Holotype, female. Label data: Brasília, Sta. Catarina; obtusa Horv. [underlined in red], det. Horváth. In TMB.

**Distribution.** Brazil. In addition to the holotype, we have 10 specimens (1 without abdomen), from the following Brazilian states: Rio de Janeiro (5; 2 AMNH, 1 CWS, 1 MZSP, 1RJP), Guanabara 1; AMNH), Espírito Santo (2; 1 CWS, 1 MZSP); another specimen is labeled only "Rio Nov"; if this is "Rio Novo," this ♀ is



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Fig. 11. *Cyrtocoris paraensis* Pirán (holotype ♂). (A) Lateral view. (B) Head and anterior pronotum, dorsal view. (C) Foreleg.

from Minas Gerais state (USNM); 1 specimen lacks any locality label at all (AMNH).

**Diagnosis.** This species can be distinguished from others by the combination of scutellar process produced as a low ridge, humeri never extending past a line drawn through the bases of the larger anterior angle spines, and beak reaching to or beyond metacoxae.

**Note.** Our description of the male is from a specimen identified as *C. obtusus* by us. We believe that Mexican specimens identified as *C. obtusus* by Brailovsky et al. (1988) are in fact *C. trigonus*; we discuss this under the latter species.

*Cyrtocoris paraensis* Pirán 1968  
(Figs. 3J, 4, 11)

1968 *Cyrtocoris paraensis* Pirán, Rev. Soc. Entomol. Argent. 30: 18.

**Redescription (Holotype ♂)**

Body reddish-brown with lighter brown scalelike covering, giving body overall brown appearance, slightly darker on scutellum and pronotum; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Propleura, mesopleura, metapleura, abdominal segments light brown laterally, with obscure whitish line mediolongitudinally. Ventral angles of body dark, lighter behind, lacking white line from

one angle to the other. Also lacking white line above this on abdominal segment VII.

Distance between ocelli slightly more than distance from each ocellus to eye. Beak light brown, extending nearly beyond metacoxae; 2nd segment longest, 3rd shortest.

Pronotum strongly bisinuate behind head, pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, 1st shorter, narrower, and more acute than 2nd. Middle of pronotum slightly raised, extending to 2 low wide lobes laterally; anterior lobe ending behind anterior angle; posterior lobe narrowing at each humerus, then widening into a large lobe nearly extending to apex of humerus, posterior lobe fused with large callosity at base of each humerus posteriorly. Humeri short, extended anterolaterally, apices rounded, 7–8 teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angles.

Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as high, nearly right-angled, blunt spine, as seen from side. Scutellar process height 52% of scutellar length. Pronotum and scutellar process tuberculate to striate. Corial costa with external angle just below level of abdominal segment III. Pronotum, scutellum, and coria with scattered tufts of, and individual, setae.

Legs black, with white covering, appearing black-spotted, trochanters, tarsi, and tibial apices slightly lighter. Each protibia with external mediobasal tubercle or thickening, this lacking in mesotibiae and metatibiae. Sternal sulcus receiving beak and antennae; prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides, carinae raised medially; metasternum with long V-shaped double carina, carinae anteriorly expressed, narrowing to apex, open posteriorly.

Abdominal sternum III–V with incisions separating segments laterally, each sternum with 3 teeth at lateral edge. Sternum VI forming an upraised triangle posteriorly. Sterna VI and VII slightly projecting posteriorly. Sternum III with slight median tubercle. Sterna IV–VII longitudinally striate medially. Most posterior trichobothrium on sternum VI medial to a line drawn through spiracles of sterna VI and VII in male. Sternum VI with strong excision apicomedia in males. Genital capsule with slight notch medially on ventral rim. Female unknown.

**Measurements.** Total length 6.8 mm (holotype male). Other measurements (holotype male): Table 6.

**Type Material.** Holotype, male. Label data: Holotypus (red); Boa Vista, Para - Brasil, A. Mones, Col. A. A. Pirán IX.1964. *Cyrtocoris, paraensis*, Pirán Det. A. A. Pirán. In MACN.

**Distribution.** Brazil. Specimen examined: holotype only.

**Diagnosis.** Members of this species can be separated from other species by the long scutellar process, and the beak's extending to the metacoxae (and nearly beyond).

Table 6. Measurements (mm) of *Cyrtocoris paraensis* (holotype) and *C. simplex* (holotype)

Characteristics	<i>Cyrtocoris paraensis</i>	<i>Cyrtocoris simplex</i>
Sex	♂	♂
Body length	6.8	6.1
Head width (widest point)	1.9	1.7
Head width (before eyes)	1.6	1.4
Head length (from ocelli)	1.0	0.9
Eye to ocellus	0.5	0.4
Interocular distance	1.5	1.2
Interocellar distance	0.6	0.5
Pronotum width	6.1	4.9
Pronotum length	2.6	2.2
Scutellum width	3.1	2.9
Scutellum length	3.9	3.5
Spine height from scutellum	1.4	1.2
Spine height from abdominal venter	4.0	3.6
Antennal segments:		
length 1	0.5	0.3
2	0.1	0.1
3	0.5	0.5
4	0.5	0.4
5	0.7	0.6
Rostral segments:		
length 1	0.7	0.6
2	0.7	0.6
3	0.5	0.4
4	0.5	0.4
Abdominal segments: midventral		
length 3	0.5	0.6
4	0.5	0.6
5	0.7	0.6
6	0.6	0.5
7	0.8	0.6
Length of profemur	1.9	1.6
Length of protibia	1.6	1.4
Length of protarsus	—	0.6
Length of mesofemur	2.0	1.8
Length of mesotibia	1.8	1.4
Length of mesotarsus	0.6	0.6
Length of metafemur	1.9	1.9
Length of metatibia	1.7	1.6
Length of metatarsus	—	0.6

*Cyrtocoris simplex* Horváth 1923  
(Figs. 3K and 12)

1923 *Cyrtocoris simplex* Horváth, Ann. Mus. Nat. Hung. 20: 149.

Redescription (Holotype ♂)

Body black with lighter brown scale-like covering sparse, giving body overall black appearance; slightly lighter ventrally, but with sparse covering. Further coloration obscure.

Distance between ocelli slightly more than distance from each ocellus to eye. Beak light brown, extending onto metasternum but not reaching metacoxae; 2nd segment longest, 3rd shortest.

Pronotum curving gently behind each eye to anterior angle, latter consisting of 2 flat angles, 1st (nearly a tooth on 1 side) smaller, narrower, and more acute than 2nd. Middle of pronotum slightly raised, extending to 2 low wide lobes laterally; anterior lobe ending behind each anterior angle; posterior lobe narrowing at each humerus, then widening into large lobe nearly extending to apex of each humerus, posterior lobe

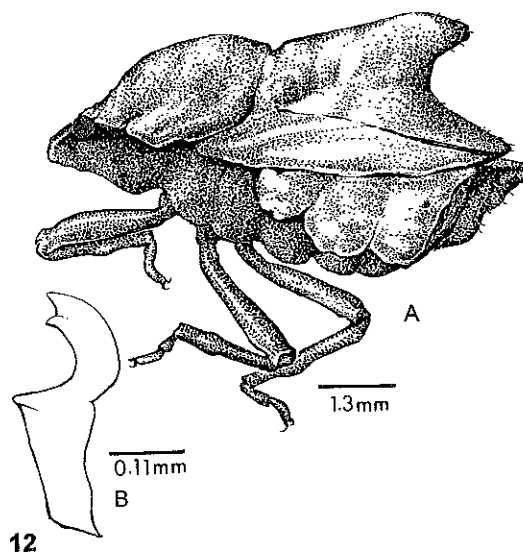


Fig. 12. *Cyrtocoris simplex* Horváth (holotype ♂). (A) Lateral view. (B) Lateral view of paramere.

forming large callosity at base of each humerus posteriorly. Humeri extended more laterally than anteriorly, apices angulate, lobed, lacking teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angles.

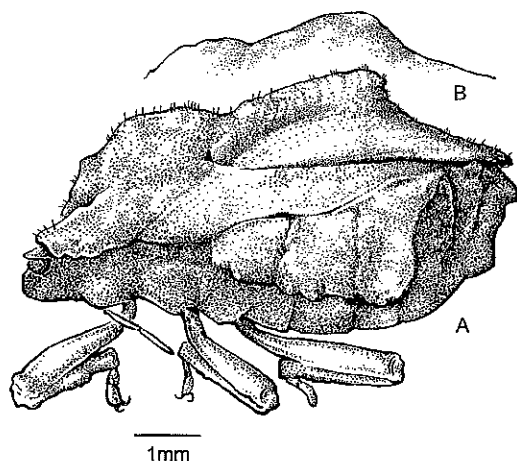
Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as blunt high spine, as seen from side. Scutellar process height 43% of scutellar length. Pronotum and scutellar raised area lacking tubercles or striae. Corial costa lacking external tooth. Pronotum, scutellum, and coria lacking scattered tufts of setae, and lacking individual setae.

Legs black, white covering very sparse, trochanters, tarsi, tibial apices slightly lighter. Each tibia with external mediodistal tubercle or thickening. Sternal sulcus receiving beak and antennae mostly destroyed (by an earlier pin), metasternum with cup-shaped double carina, carinae abruptly narrowing, carinae closely appressed posteriorly.

Abdominal sterna III-V with incisions separating segments laterally, each sternum with 2 lobate angles at lateral edge. Sternum VI forming very slight up-raised triangle posteriorly. Sternum VII very slightly projecting posteriorly. Sternum III with slight raised tubercle. Sternum VI striate medially. Most posterior trichobothrium on sternum VI on line drawn through spiracles of sterna VI and VII in male. Sternum VI with a strong incision apicomedia in males. Ventral rim of genital capsule with wide V-shaped notch medially. Female unknown.

Measurements. Total length 6.1 mm (holotype male). Other measurement (of holotype): Table 6.

Type Material. Holotype, male. Label data: Brasília; simplex. H. (underlined in red), det. Horváth. In TMB. Genitalia in a vial on pin.



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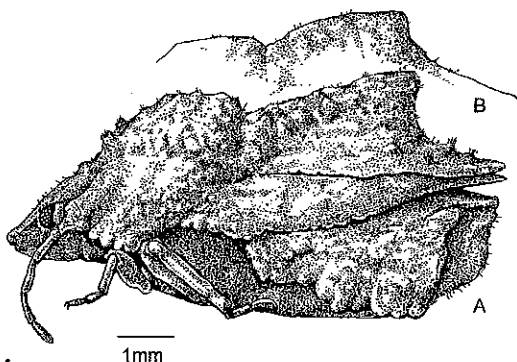
Fig. 13. *Cyrtocoris trigonus* (Germar). (A) Lectotype ♀, lateral view. (B) Paralectotype ♀, lateral view of thoracic nota.

**Distribution.** Brazil. Specimen examined: holotype only.

**Diagnosis.** This species can be separated from others by the lack of pronotal, corial, and scutellar tufts of setae, and by the humeri being angulate apically (lacking teeth or lobes).

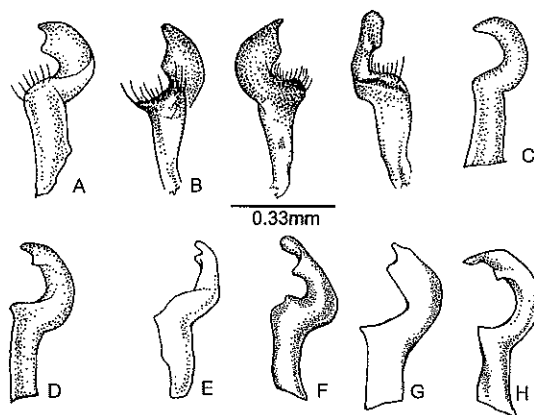
*Cyrtocoris trigonus* (Germar, 1839)  
(Figs. 3 L-O, 13, 14, 15 C-E)

- 1839 *Oxynotus trigonus* Germar, Zeitschr. Entomol. I: 43.  
1880 *Cyrtocoris trigonus*: Distant, Biol. Centr. Am. I: 43, 322.  
1955 *Cyrtocoris subobtusus* Kormilev, Rev. Ecuat. Entomol. Parasitol. 2: 330. New synonymy.  
1988 *Cyrtocoris obtusus*: Brailovsky, Cervantes, and Mayorga, An. Ins. Biol. Univ. Nac. Auton. Mex. 58: 541 (misidentification).



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Fig. 14. *Cyrtocoris trigonus* (Germar). (A) Holotype ♂ of *C. subobtusus* Kormilev, lateral view. (B) Paratype ♀ of *C. subobtusus*, lateral view of thoracic nota.



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Fig. 15. Parameres of: *Cyrtocoris egeris* n. sp. A, B (several views), F, G (lateral views); *Cyrtocoris trigonus* (Germar) C, D, E (C and D are the same paramere seen at different angles); *Cyrtocoris obtusus* Horváth H (lateral view).

**Redescription (Lectotype, 3 Paralectotypes, all ♀♀)**

Body black with lighter brown scalelike covering, giving body overall light brown appearance; slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Mesopleura, metapleura, abdominal segments brown, with mediolongitudinal lighter stripe, stripe extending along abdominal segments, becoming obscure on segments VI and VII.

Distance between ocelli slightly more than distance from 1 ocellus to eye. Beak light brown, extending to between mesocoxae; 2nd segment longest, 3rd shortest.

Pronotum curving strongly behind each eye to anterior angle, latter consisting of 2 teeth, 1st shorter, narrower, and more acute than 2nd. Middle of pronotum slightly raised, extending to 2 low wide lobes laterally; anterior lobe ending behind each anterior angle; posterior lobe widening at each humerus, then narrowing into lobe nearly extending to apex of each humerus, posterior lobe forming large callosity at base of each humerus posteriorly. Humeri slightly extended anterolaterally, apices rounded, each with 7 or more teeth. Humeri not surpassing line drawn through bases of larger spines of anterior angle.

Anterior triangular portion of scutellum slightly raised; raised portion produced posterodorsally as low ridge, as seen from side. Scutellar process height 28% of scutellar length. Pronotum and scutellar raised area strongly tubercled to striate. Corial costa lacking external tooth. Pronotum, scutellum, coria with scattered tufts of setae.

Legs black with white covering, appearing black-spotted to striped, trochanters, tarsi, and tibial apex slightly lighter. Each tibia with lateral mediobasal tubercle. Sternal sulcus receiving beak and antennae; prosternal sulcus squarish with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides; metasternum with anterior cup-shaped

Table 7. Measurements (mm) of *C. trigonus* and *C. subobtusus* (holotype, paratype, allotype)

Characteristics	<i>C. trigonus</i>				<i>C. subobtusus</i> <sup>a</sup>		
	lectotype	paralectotypes			holotype	paratype	allotype
Sex	♀	♀	♀	♀	♂	♀	♀
Body length	7.0	6.0	8.1	7.2	5.5	6.9	6.8
Head width (widest point)	1.9	1.8	2.2	2.0	1.6	1.8	1.8
Head width (before eyes)	1.6	1.6	1.9	1.7	1.4	1.5	1.6
Head length (from ocelli)	1.0	0.9	1.2	1.1	0.9	1.0	1.0
Eye to ocellus	0.4	0.5	0.5	0.6	0.4	0.5	0.5
Interocular distance	1.5	1.4	1.6	1.6	1.2	1.4	1.4
Interocellar distance	0.6	0.6	0.7	0.6	0.5	0.6	0.5
Pronotum width	6.0	5.2	6.1	6.2	4.3	6.1	5.9
Pronotum length	2.5	2.3	2.7	2.7	2.0	2.6	2.6
Scutellum width	3.1	2.9	3.5	3.2	2.2	3.0	3.1
Scutellum length	4.0	3.8	4.7	4.0	3.0	3.6	3.8
Spine height from scutellum	0.6	0.6	0.6	0.6	0.8	0.9	0.8
Spine height from abdominal venter	3.6	3.0	3.9	3.6	3.1	3.3	3.4
Antennal segments:							
length 1	0.4	0.4	0.4	0.5	0.5	0.4	0.5
length 2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
length 3	0.4	0.4	0.4	0.5	0.3	0.4	0.4
length 4	0.5	0.5	0.6	0.5	0.4	0.5	0.5
length 5	0.7	0.6	0.7	0.7	0.5	0.7	0.6
Rostral segments:							
length 1	0.5	0.5	0.7	0.7	0.6	0.5	0.5
length 2	0.5	0.5	0.6	0.7	0.7	0.7	0.6
length 3	0.5	0.5	0.8	0.7	0.5	0.5	0.5
length 4	0.5	0.5	0.8	0.6	0.5	0.5	0.5
Abdominal segments: midventral							
length 3	0.4	0.4	0.5	0.5	0.4	0.5	0.3
length 4	0.5	0.5	0.8	0.5	0.5	0.7	0.6
length 5	0.7	0.6	0.8	0.7	0.7	0.5	0.8
length 6	0.7	0.7	0.9	0.7	0.5	0.6	0.7
length 7	0.7	0.6	0.9	0.7	0.7	0.5	0.5
Length of profemur	1.8	1.7	2.1	2.0	1.5	2.0	1.7
Length of protibia	1.6	1.7	1.8	1.7	1.2	1.5	1.5
Length of protarsus	0.7	0.5	0.6	0.6	0.5	0.5	0.5
Length of mesofemur	2.0	1.9	2.2	2.2	1.5	2.0	2.0
Length of mesotibia	1.8	1.5	2.0	2.0	2.1	1.7	1.5
Length of mesotarsus	0.7	0.5	0.7	0.6	0.5	0.6	0.6
Length of metafemur	2.1	2.1	2.8	2.2	1.6	2.1	2.1
Length of metatibia	1.8	1.7	2.2	2.0	1.5	1.7	1.8
Length of metatarsus	—	0.6	0.7	0.6	0.5	0.6	0.7

<sup>a</sup> Synonymized with *C. trigonus*.

carinae meeting medially, carinae strongly appressed behind cup.

Abdominal sterna III-V with incisions separating segments laterally, each sternum with 2-3 teeth at lateral edge. Sternum VI forming slightly upraised triangle posteriorly. Sternum VII raised and/or projecting posteriorly, this varying among the syntype series. Sternum III with strong anteriorly upraised carina. Sterna IV-VII striate medially. Sternum VII of female widely flat medially, forming strong projecting lip below genital segment. Basal plates of female one-fourth wider than long, with slight projection lateral to ovipositor. Most posterior trichobothrium on sternum VI medial to a line drawn through spiracles of sterna VI and VII in both males and females. Sternum VI with a strong incision apicomediaally in males. Ventral rim of genital capsule slightly notched medially.

**Variation.** The color varies from light brown through black and occasionally reddish-brown; similar variation occurs in *C. egeris*, and doubtless would be seen in other species had we large enough series. Size also varies (see *Measurements*, below).

**Measurements.** Total lengths: 7.0-8.1 mm (lectotype ♀), 6.0, 8.1, 7.2 mm (paralectotype ♀♀); *Cyrtocoris obtusus*: 5.5 mm (holotype ♂), 6.8 mm (allotype ♀), 6.9 mm (paratype ♀). Other specimens: 6.5 mm (5.3-7.7 mm,  $n = 18$ ); 6.6 mm (5.2-8.3 mm,  $n = 23$ ). Other measurements (of both type series): Table 7.

**Type Material.** We have (from ZMBM) 4 specimens with identification labels of Schumacher and also with type labels identifying them as *C. trigonus* Germar. We assume that these are indeed the Germar types, despite their mysterious Schumacher labels. All 4 specimens are females. Label data (for all 4 specimens): Mexico, Nr. 134 (green); Typus (red); Zoolog. Museum, Berlin. Additional labels on 1 specimen: 134; *Cyrtocoris trigonus*, \* Burm. All specimens in ZMBM. Here we designate 1 of these females as lectotype, and the others as paralectotypes. Appropriate labels have been added to these specimens.

*Cyrtocoris subobtusus*. Label data: Holotype ♂ (genitalia missing): ♂ (small square), Arg. Formosa, Gran Guardia, X.52. Förster; Holotype (red); C. J. Drake, coll. 1956; *Cyrtocoris subobtusus*, Korm. 53 (red). In



USNM. Allotype ♀ : ♀ (small square), Misiones Argentina, Dep. Concep. Sta. Maria, 16.XI.46 M. J. Viana; 52529; Allotypus (pink); *Cyrtocoris obtusus*, Horváth, det. N. Kormilev 1957, Museo Argentino de Ciencias Naturales; *Cyrtocoris subobtusum*, Kormilev 53, Museo Argentino de Ciencias Naturales (red). In MBR. Paratype ♀ : ♀ Paratypus (pink); *Cyrtocoris subobtusum*, Kormilev 1953, Museo Argentino de Ciencias Naturales (pink). Note: According to Kormilev (1955), an additional label on this specimen should read Argentina, Misiones, Iguazu-Boero leg. XI. 1944. In MBR.

**Distribution.** Distant (1880–1893) lists this species from Brazil, Colombia, Guatemala, Mexico, and Panama. Although some of these records may actually be *C. egeris*, we have seen specimens of *C. trigonus* from each of these countries, as well as from others: ARGENTINA: Misiones (1, INESALT); Santa Fé (1, CWS). BOLIVIA: Santa Cruz (1, IML). BRAZIL: Goiás (2, CWS and MZSP); Minas Gerais (2, MZSP); Rio de Janeiro (1, CWS); São Paulo (5, AMNH, CWS, MZSP); “Chapada” (3, AMNH, CWS, RJP): note: “Chapada” almost certainly is in Brazil; however, where is unclear: perhaps in Maranhão State (see Hussey 1927, p. 233) or in Goiás State (see Costa Lima 1940, p. 122). COLOMBIA: Valle Agua Claro (1, CNC); Putumayo (1, CWS). COSTA RICA: 2 (AMNH, CNC). GUATEMALA: 2 (AMNH, USNM). PANAMA: 1 (AMNH). PARAGUAY: 1 (CWS). Three other specimens are labeled only with numbers; these are very probably Brazilian specimens (MZSP); 1 other specimen is labeled “Pan”, which we take to be Panama (AMNH). One specimen is labeled “Los Amates, Chis., Mex.” (printed label); we cannot locate a Los Amates in Mexico, nor anything that might be abbreviated “Chis.”; there is a Los Amates in Guatemala (and a Chisec), and this specimen may have been collected in Guatemala (AMNH).

**Diagnosis.** This species can be separated from others by the combination of scutellar process extended as a low ridge, humeri not surpassing a line drawn through the larger anterior angle spines, and beak never reaching metacoxae. The genital capsule's ventral rim is produced posteriorly as a flange more prominently in *C. trigonus* than in either *C. egeris* or *C. obtusus*. (See also *C. egeris* diagnosis.)

**Note.** The male was described from specimens identified by us as *C. trigonus*. We examined the holotype, allotype, and paratype of *C. subobtusum* Kormilev (MBR and USNM). All agree completely with the description of *C. trigonus* given here. We therefore place *C. subobtusum* Kormilev in synonymy with *C. trigonus* Germar.

**Note on Specimens Identified by Brailovsky.** As noted above, Brailovsky et al. (1988) identified several Mexican *Cyrtocoris* as *C. obtusus* and *C. trigonus*. Through the kindness of H. Brailovsky, we have specimens of these species, and believe they actually represent *C. trigonus* and *C. egeris*, respectively.

The parameres of *C. egeris* are relatively stubby, the shank (region between subapical tooth and sharply angled base) being short (Fig. 15 A and B). The shanks

of the *C. obtusus* (Fig. 15H) and *C. trigonus* (Fig. 15 D and E) parameres are longer. We have dissected 2 specimens identified by Brailovsky et al. (1988) as *C. trigonus*, and their parameres are also stubby (Fig. 15 F and G; see also Figs. 23–25 in Brailovsky et al. [1988]). We believe the *C. trigonus* of Brailovsky et al. (1988) is actually *C. egeris* (Fig. 15 A, B, F, G). Although this stubbiness is consistent, there is variation in degree of development of the subapical tooth: The specimens from which our Fig. 15 F and G were drawn were collected at the same place within 3 weeks. This widespread species (*C. egeris*) is variable in other characters as well.

Brailovsky et al. illustrate the parameres of specimens they identify as *C. obtusus* (Brailovsky et al. 1988, figures 26 and 27); these are long (a relatively long shank) and lack a subapical tooth. We have drawn 2 views of a paramere from a Mexican specimen of undoubted *C. trigonus* and show that although it has a subapical tooth (Fig. 15D), that tooth may be invisible at a certain angle (Fig. 15C): The absence of the subapical tooth does not define *C. obtusus*, which indeed has one (see also Fig. 15H). We lack males of what Brailovsky et al. (1988) identify as *C. obtusus*, but their figures (figures 26–27) show parameres slightly longer and more slender than those of *C. trigonus* (compare our Fig. 15 D and E with H). Because *C. trigonus*, like *C. egeris*, is a widespread species, its parameres may vary as do those of *C. egeris* (Fig. 15 F and G). Therefore, paramere shape alone does not prove that the *C. obtusus* of Brailovsky et al. (1988) is in fact *C. trigonus*. Other evidence does, however, including the fact that the Mexican *C. obtusus* specimens key to *C. trigonus* in our key. In addition, all undoubted *C. obtusus* occur in Brazil, and the species' occurrence in Mexico therefore seems unlikely. *C. trigonus* is widespread: The specimen in Figs. 15C and D, an undoubted *C. trigonus*, is from Oaxaca, Mexico, and that in Fig. 15E is from Brazil.

#### *Pseudocyrtocoris* Jensen-Haarup 1926

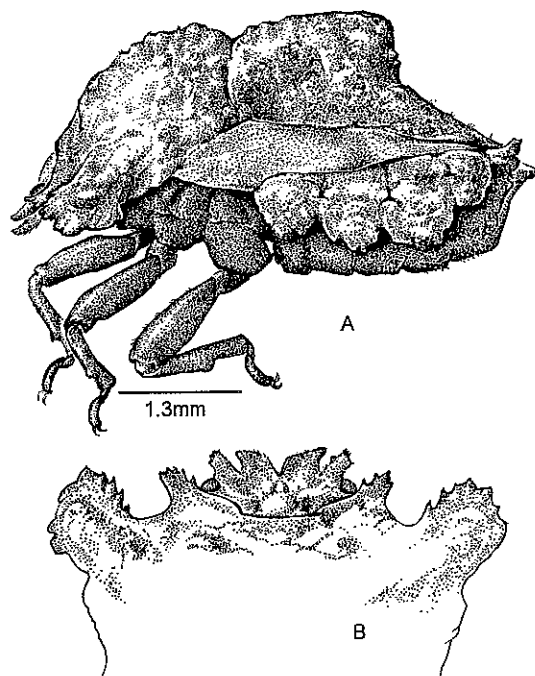
1926 *Pseudocyrtocoris* Jensen-Haarup, Entomol. Meded. 16: 53. Type species: *Podops laceratus* Herrich-Schaeffer 1836, Wanz. Ins. III: 108. Monotypic.

#### Redescription

Head anteriorly with strong medial incision and 2nd incision near lateral angle; head quadrilobate. Clypeus strongly enclosed by paraclypeus, raised. Beak extending to anterior of mesocoxae.

Pronotum strongly sinuate behind eyes, forming a slight ridge. Pronotal anterior angle produced into strong spine (multitoothed on 1 side of type), with a smaller tooth lateral to each eye. Humeral process slightly expanded apically, basal width nearly equal to apical width, apically multilobate to spinose. Pronotum not strongly tubercled, with low tubercles, slightly rugose. Strongly raised tubercle at anterior metasternum (end of sternal sulcus) narrowing pos-





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Fig. 16. *Pseudocyrtocoris laceratus* (Herrich-Schaeffer). (A) Female, lateral view. (B) Female, dorsal view of head and anterior pronotum.

teriorly to single carina medially. Each tibia with external nearly medial tubercle.

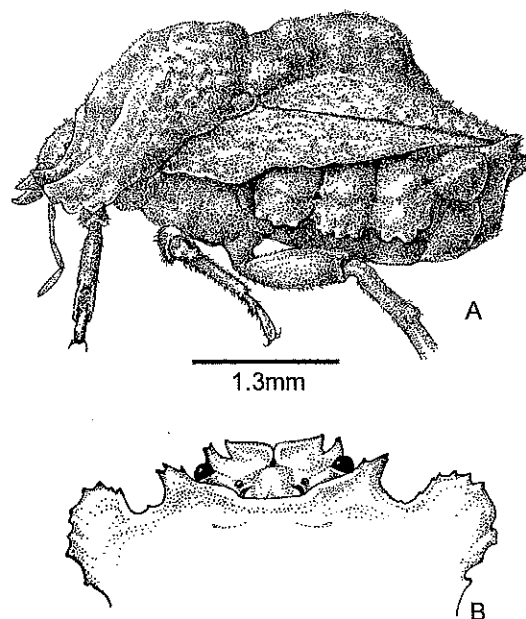
Scutellum with 2 large multitubercled callosities basally flanking raised median ridge, together forming a basally elevated triangle. Median raised ridge forming a right angle as seen from side; raised area multitubercled. Scutellum with scattered tufts of brownish setae, scutellar lateral and posterior borders ringed with scattered similar tufts of setae. Corium strongly sinuate at base of costa.

Abdominal segments III-V expanded downward laterally into multilobate lobes, VI expanded as a multitubercled lobe raised above the plane of segments III-V. Segment VII produced laterally as upturned triangle. Abdominal sternum III with strong tooth anteromedially.

**Diagnosis.** This genus is distinguished from other cyrtocorids by having a 2nd incision on the head laterally in front of the eyes; and in particular from *Ceratozygum* by the lack of the high notched scutellar process found in the latter genus.

*Pseudocyrtocoris laceratus* (Herrich-Schaeffer) 1836  
(Figs. 16 and 17)

1836 *Podops laceratus* Herrich-Schaeffer, Wanz. Ins. III: 108.  
1839 *Oxynotus laceratus*: Germar, Zeitschr. Entomol. I: 45.  
1916 *Cyrtocoris laceratus*: Horváth, Ann. Mus. Nat. Hung. 14: 222.



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Fig. 17. *Pseudocyrtocoris laceratus* (Herrich-Schaeffer). *Cyphothyreia bridarollii* Kormilev. (A) Holotype ♀, lateral view. (B) Holotype ♀, dorsal view of head and anterior pronotum.

1926 *Pseudocyrtocoris laceratus*: Jensen-Haarup, Entomol. Meded. 16: 53.

1955 *Cyphothyreia bridarollii* Kormilev, Rev. Ecuat. Entomol. Parasitol. 2: 325. New synonymy.

### Redescription

Body black with lighter gray scalelike covering, giving body an overall gray appearance, darker medially (especially corium and scutellum brown to black), slightly lighter ventrally, with variegated areas of deep brown and yellow-white. Pronotum ventrally variegated white and brown. Mesopleura and metapleura brown, with white stripe mediolongitudinally; stripe enclosing black metasternal scent gland opening. Abdominal ventral segments variegated white to brown near lateral edges, brown to black medially, each with white angular stripe running longitudinally halfway between middle and lateral edge. Body trapezoidal from posterior view.

Lateral margins of head in front of eyes concave; head forming shallow, wide V anteriorly, deeply notched medially with 2nd incision at anterolateral angle; head quadrilobate in front, medially concave between eyes and anterior edge. Ocelli strongly posterior, well posterior to level of eyes. Distance between ocelli much less than distance from each ocellus to eye. First antennal segment covered with whitish scales, other segments light brown. Beak light brown; 4th segment longest, 1st shortest.

Pronotum strongly bisinuate behind head, pronotum curving gently behind each eye to anterior angle, latter consisting of 2 teeth, 1st smaller and narrower than 2nd, which may be serrate. Median third of pronotum slightly raised, extending to 2 wide lobes laterally; anterior lobe ending behind each eye, posterior lobe narrowing at each humerus, then widening to become a raised median lobe covered with striae and tubercles extending nearly to apex of each humerus. Humeri extended anterolaterally, each forming 2 lobes, each with 7-8 teeth or smaller lobes apically.

Anterior triangular portion of scutellum slightly elevated; raised portion strongly convex, forming a right triangle, as seen from side. Pronotum and scutellar raised area relatively multitubercled and striate. Corial costa with slight tooth at level of abdominal segment III. Pronotum, scutellum, and coria with scattered tufts of setae.

Legs brown to white variegated, tarsi and tibial apices reddish-brown. Sternal sulcus receiving beak and antennae; prosternal sulcus triangular with slight carinae on sides; mesosternal sulcus diamond-shaped with slight carinae on sides; metasternum with small extended cup-shaped portion to receive beak tip only, followed posteriorly by narrow, single carina.

Abdominal sterna III-V with strong notches between segments. Sterna VI and VII each forming wide triangle posteriorly, giving abdomen a multitoothed appearance posteriorly, when seen from above. Segment VI lacking small lateral tooth. Sternum III with strong posteriorly upraised carina. Sterna IV-VI lacking striae medially. Sternum VII of female widely flat medially, sloping upward to sides, with strong excised ridge below lateral tooth (edge); segment lacking medioapical setae. Basal plates of female equally long as wide, lacking mediolongitudinal ridge, lacking setae basally. Two posteriorly directed blunt teeth on either side of ovipositor. Male unavailable.

**Measurements.** Total length 7.4 mm (♀). Other measurements (of holotype): Table 1.

**Type Material.** Type apparently lost; description based upon specimen studied by Jensen-Haarup when he established genus. Label data: ♀ (on very small card); Sete, Lagoas, Reinhardt; Pseudocyrto-, coris lacera-, tus H. Sch., Jensen-Haarup det. In ZMUC.

*Cyphothyrea bridarollii*. Label data: Female holotype: Esperanza S.Fe, 10-1-30, bridarolli S.J.; holotype (red); Cyphothyrea, bridarollii, Kormilev 53 (red). Female paratype: Arg. Córdoba, Sta Maria, Rio S. José; paratype (red); Cyphothyrea, bridarollii, Kormilev 55 (yellow). Both specimens in INESALT.

**Distribution.** Argentina, Brazil (Sete Lagoas is in Minas Gerais State).

**Diagnosis.** Same as for the genus.

**Note.** The holotype and paratype females of *Cyphothyrea bridarollii* Kormilev both agree in all aspects with the Jensen-Haarup material of *Pseudocyrtochoris laceratus*. We synonymize *Cyphothyrea bridarollii* with *P. laceratus*.

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