



Review of the genus *Leptocysta* Stål with descriptions of two new species (Hemiptera: Heteroptera: Tingidae) from Argentina

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Abstract

Two new species of *Leptocysta* are described from Argentina, *L. dellapei* n. sp. and *L. delrioae* n. sp. An updated key to species is provided together with illustrations of the diagnostic characters, habitus photographs and new distributional records for Argentina.

Key words: *Leptocysta dellapei* n. sp., *Leptocysta delrioae* n. sp., key to species, new records

Introduction

Leptocysta Stål can be recognized by the following combination of characters: five cephalic spines; hood long, slender and compressed completely covering head and surpassing first antennal segment; paranota large and projected anteriorly, surpassing the anterior margin of the eyes; pronotum tricarinated, median carina foliaceous, high, higher than the hood; hemelytra large with a costal area wide and discoidal area reaching at least half the length of the hemelytra.

Previously the genus comprised only four species, all of them distributed in South America. These species are *Leptocysta notialis* Drake (1948) and *L. tertia* Monte (1946) from Argentina; *L. novatis* Drake (1928) from Argentina and Paraguay, and *L. sexnebulosa* (Stål) (1860) from Argentina, Brazil, Colombia, Paraguay, Peru and Venezuela. *Leptocysta sexnebulosa*, the only species whose host plants are known, has been recorded from *Antennaria* sp., *Ipomoea batatas*, *Mikania* sp. and *Vernonia* sp.

Stål (1873) erected the genus to accommodate *L. sexnebulosa*, first described in the genus *Tingis*. Drake (1928) described *L. novatis*; Monte (1946) described *L. tertia* and re-described the genus and the two previously known species providing dorsal habitus illustrations and a key to the species; and Drake (1948) added *L. notialis*.

In the present contribution two new species from Argentina are described, an updated key to species is provided together with habitus photographs and illustrations of the main characters. New distributional information and a map are provided for Argentina.

Material and methods

Type material of the two new species is deposited in the Museo de La Plata (MLP). Photographs were taken with a Sony W320 camera adapted to a stereoscopic microscope. Measurements were taken with an ocular micrometer, and are given in millimeters (“*” is used to indicate the measurement was repeated). When at least five specimens were measured, minimum, maximum and mean values are provided; when four or fewer specimens were measured, values for each individual are provided. New distributional records are marked as symbols filled in black in the map.

***Leptocysta dellapei* n. sp.**

(Figs. 1, 2, 5, 11)

Material examined: Holotype, ♂, Argentina, San Juan, Villa Aberastain (Dpto. Pocito), 22-I-64, Dr. Torres-Ferreyra col., (MLP); Paratypes, 5♀ 4♂, Argentina, San Juan, Villa Aberastain (Dpto. Pocito), 22-I-64, Dr. Torres-Ferreyra col., (MLP).

Diagnosis. Paranota subrounded with small, scattered spines; hemelytra without spines; hemelytral outer margin convex, maximum convexity on anterior half; hemelytral inner margin concave; subcostal area with three or four rows of areolae.

Description. General color yellowish brown with embrowned areas. Hood anteriorly forming an acute angle, reaching base of antennal segment III, in lateral view convex, separated from median carina by a deep constriction (Fig. 2). Bucculae brown, with three or four rows of areolae, exterior row larger. Rostrum reaching middle of metasternum, yellowish except for the brown tip.

Pronotum brown, coarsely punctate, hind process testaceous, areolate. Median carinae (Fig. 2) slightly shorter than hood, maximum height with three rows of large areolae; posterior margin embrowned. Lateral carinae divergent, with one row of quadrangular areolae longer than high. Paranota (Figs. 1, 5) hyaline with an embrowned area, rounded, margins with a few scattered small spines, anteriorly projected approximately up to anterior margin of head. Posterior process with areolae much larger than those of pronotal disc. Rostral laminae high; with one row of large areolae; mesosternal rostral laminae subparallel; metasternal laminae opened behind; longer than space between them.

Hemelytra (Figs. 1, 11) hyaline except embrowned at middle and apical areas; maximum convexity on anterior third; tips divergent; margins without spines. Costal area at base with three rows of areolae, at posterior third with some extra areolae. Subcostal area with three or four rows of areolae. Discoidal area at widest part with five rows of areolae. Hypocostal ridge with two rows of areolae.

Measurements: Females (N= 5) and males (N= 5) respectively. Total body length: 3.52–3.92 (3.74)/ 3.52–4.00 (3.74); Antennal segments I: 0.20–0.21 (0.20)/ 0.21–0.27 (0.23); II: 0.08–0.10 (0.09)/0.08*; III: 1.08–1.17 (1.12)/ 0.94–1.07 (0.98); IV: 0.32–0.37 (0.34)/ 0.28–0.37 (0.32); Hood length: 1.10–1.20 (1.14)/ 1.07–1.60 (1.12); width: 0.30–0.35 (0.32)/ 0.30–0.35 (0.33); longer than width: 3.28–3.75 (3.53)/ 3.21–3.66 (3.40); height: 0.47–0.50 (0.49)/0.50*; Median carina length: 0.85–0.95 (0.88)/0.77–0.87 (0.85); height: 0.35–0.42 (0.39)/0.37–0.42 (0.39); Hemelytral length: 2.25–2.57 (2.40)/ 2.25–2.55 (2.41); width: 1.07–1.15 (1.11)/ 1.10–1.15 (1.14); Discoidal area length: 1.57–1.65 (1.60)/ 1.62–1.65 (1.63); width: 0.37–0.42 (0.40)/ 0.40–0.42 (0.42).

Comments: *Leptocysta dellapei* can be distinguished from other members of the genus by its subrounded paranota, whereas all other species have subrectangular paranota. It also differs in the number of spines on the paranotal margins; in *L. dellapei* there are only a few small scattered spines, in *L. notialis* the spines are very short giving the appearance of a serrated margin and in the remainder species the spines are larger and more numerous. *Leptocysta dellapei* is grouped with *L. notialis* and *L. novatis* based in the unarmed hemelytral margins. The hemelytra of *L. notialis* are medially constricted and those of *L. novatis* exhibit their maximum convexity at the base, whereas in *L. dellapei* the hemelytra are not medially constricted and the maximum convexity is on the anterior third of the hemelytra.

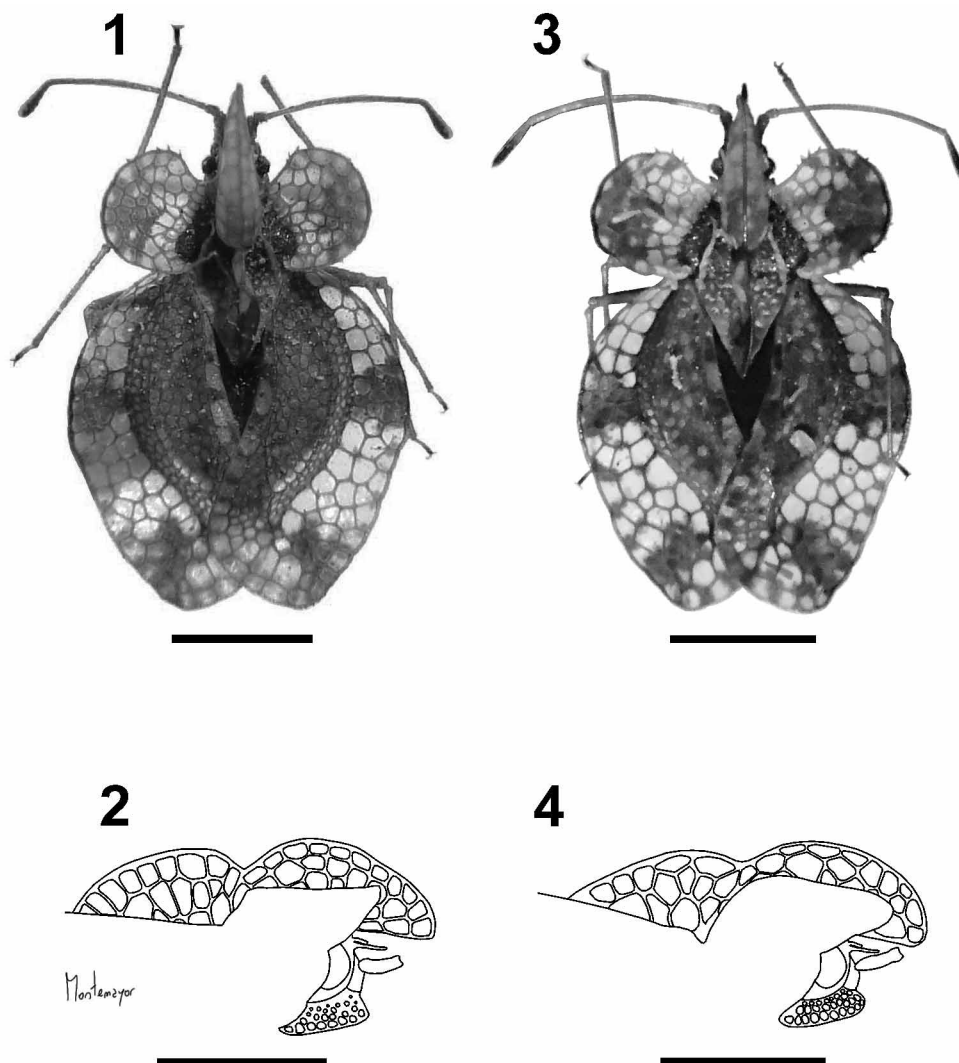
Etymology: This species is named after my friend and colleague Pablo Matias Dellapé.

Leptocysta delrioae n. sp.

(Figs. 3, 4, 6, 12)

Material examined: Holotype, ♂, Argentina, Jujuy, Santa Clara, 20-VII-33, P. Denier col., (MLP); Paratypes, 5♀ 1♂, Argentina, Jujuy, Santa Clara, 20-VII-33, P. Denier col., (MLP).

Diagnosis. Paranota subrectangular with large, numerous spines; hemelytra with spines on anterior half; hemelytral outer margin convex, maximum convexity on anterior half; hemelytral inner margin concave; subcostal area with three rows of areolae.



FIGURES 1–4. 1–2. *Leptocysta dellapei* n. sp. 1, Habitus; 2, Hood and median carina lateral view. 3–4. *Leptocysta delrioae* n. sp. 3, Habitus; 4, Hood and median carina lateral view. Scale bar: 1 mm.

Description. General color yellowish brown with obscured areas. Hood anteriorly forming a strongly acute angle, reaching base of antennal segment III, in lateral view moderately convex, separated from median carina by a weak constriction (Fig. 4). Bucculae brown, with three rows of areolae, exterior row larger. Rostrum reaching middle of metasternum, yellowish except for the brown tip.

Pronotum brown, coarsely punctate, hind process testaceous, areolate. Median carinae (Fig. 4) slightly shorter than hood, maximum height with two or three rows of large areolae; posterior extreme embrowned. Lateral carinae divergent, with one row of subquadrangular areolae. Paranota (Figs. 3, 6) hyaline with an embrowned area, subrectangular, anteriorly projected approximately up to anterior margin of head, anterior

and posterior margins with large spines, more numerous anteriorly. Posterior process with areolae much larger than those of pronotal disc. Rostral laminae high; with one row of large areolae; mesosternal rostral laminae subparallel; metasternal laminae opened behind; longer than space between them.

Hemelytra (Figs. 3, 12) hyaline except for embrowned middle and apical areas; maximum convexity on anterior third; tips divergent; margins basally with very small spines. Costal area at base with three rows of large areolae, at posterior third with a few extra areolae. Subcostal area with three rows of areolae. Discoidal area at widest part with five or six rows of areolae. Hypocostal ridge with two rows of areolae.

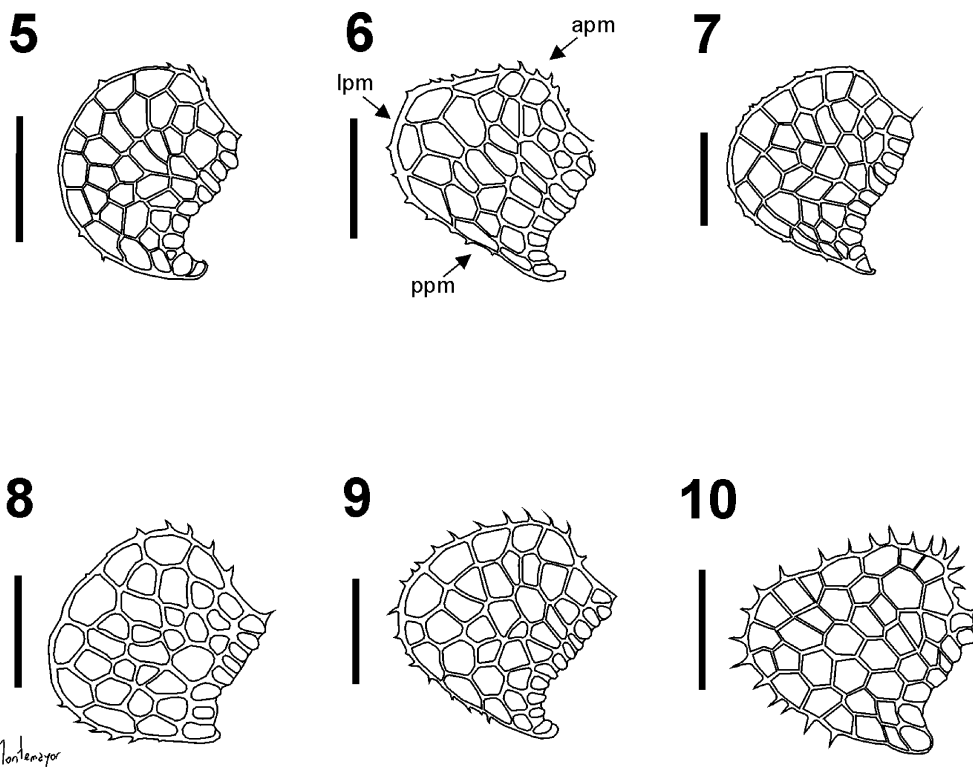
Measurements: Females (N= 5) and males (N= 2) respectively. Total body length: 3.52–3.72 (3.61)/ 3.65–3.67; Antennal segments I: 0.21–0.28 (0.23)/ 0.23–0.24; II: 0.08–0.10 (0.09)/0.10*; III: 1.93–1.07 (1.00)/ ?–1.20; IV: 0.36–0.37 (0.35)/ ?–43; Hood length: 1.07–1.15 (1.12)/ 1.10–1.12; width: 0.30–0.35 (0.34)/ 0.35–0.35; longer than width: 3.07–3.83 (3.32)/ 3.14–3.21; height: 0.45–0.52 (0.48)/0.50*; Median carina length: 0.87–0.92 (0.90)/0.90–0.92; height: 0.37–0.47 (0.42)/0.40–0.37; Hemelytral length: 2.27–2.40 (2.31)/ 2.30–2.40; width: 1.05–1.15 (1.09)/ 1.02–1.05; Discoidal area length: 1.50–1.60 (1.55)/ 1.52–1.57; width: 0.40–0.45 (0.41)/ 0.40–0.35.

Comments: *Leptocysta delrioae* shares with *L. novatis*, *L. sexnebulosa* and *L. tertia* large spines on the paranota. However, in *L. sexnebulosa* and in *L. tertia*, the spines are distributed all along the paranotal margins, whereas in *L. delrioae* and *L. novatis* the spines are only on the anterior and posterior margins and are absent laterally. The paranota of *L. delrioae* can be distinguished from those of *L. novatis* by the much longer and inclined posterior margin. The hemelytra of *L. delrioae* are very similar to those of *L. dellapei*, in that both species have the maximum convexity of the hemelytral on the outer anterior third, there is no constriction, the inner margin is concave and the subcostal area has three rows of areolae. In *L. notialis* and *L. sexnebulosa*, the hemeytra are constricted, the maximum convexity is on the anterior third, the inner margin is slightly convex, and the subcostal area has one or two rows of areolae. *Leptocysta novatis* has the maximum convexity at the base of the hemelytra, the outer margin is not constricted, the inner margin is straight and the subcostal area has two rows of areolae. Finally in *L. tertia* the maximum convexity is on the anterior half of the hemelytra, the inner margin is slightly concave, and the subcostal area has two rows of areolae.

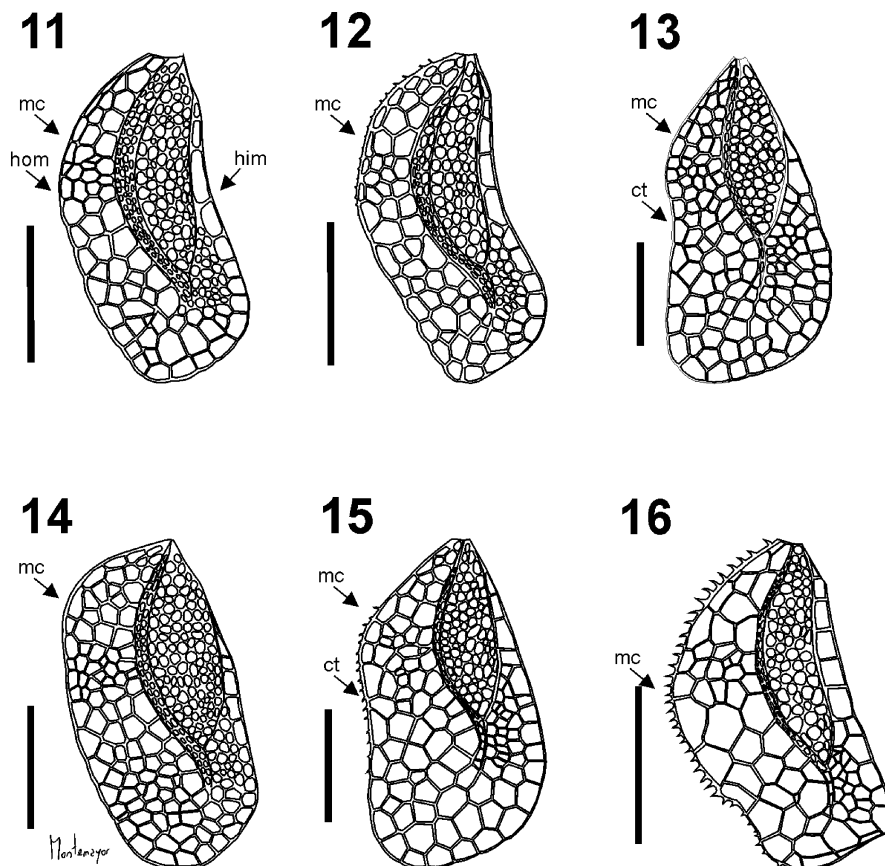
Etymology: This species is named after my friend and colleague María Guadalupe del Rio.

Key to species of *Leptocysta*

- | | | |
|---|---|----------------------------------|
| 1 | Margins of hemelytra subparallel (Figs. 13, 15)..... | 2 |
| - | Margins of hemelytra convex (Figs. 11, 12, 14, 16) | 3 |
| 2 | External margin of hemelytra without spines, subcostal area with one row of areolae, margins of paranota with weakly developed spines (Figs. 7, 13) | <i>L. notialis</i> |
| - | External margin of hemelytra with spines, subcostal area with two rows of areolae, margins of paranota with well developed spines (Figs. 9, 15)..... | <i>L. sexnebulosa</i> |
| 3 | Margins of paranota and hemelytra completely covered with spines (Figs. 10, 16) | <i>L. tertia</i> |
| - | Margins of paranota and hemelytra without spines or only partially covered with spines (Figs. 5, 6, 8, 11, 12, 14) .4 | |
| 4 | Paranota subrounded with a few small scattered spines (Fig. 5)..... | <i>L. dellapei</i> n. sp. |
| - | Paranota subrectangular with large spines distributed on anterior and posterior paranotal margins (Figs. 6, 8)..... | 5 |
| 5 | Hemelytra maximum convexity at anterior third, costal area at base with three rows of areolae, subcostal area with three rows of areolae (Fig. 12)..... | <i>L. delrioae</i> n. sp. |
| - | Hemelytra maximum convexity at base, costal area at base with four rows of areolae, subcostal area with two rows of areolae (Fig. 14) | <i>L. novatis</i> |



FIGURES 5–10. Paranota. **apm**—anterior paranotal margin; **lpm**—lateral paranotal margin; **ppm**—posterior paranotal margin. 5, *Leptocysta dellapei* n. sp.; 6, *Leptocysta delrioae* n. sp.; 7, *Leptocysta notialis* Drake; 8, *Leptocysta novatis* Drake; 9, *Leptocysta sexnebulosa* Stål; 10, *Leptocysta tertia* Monte. Scale bar: 0.5 mm.



FIGURES 11–16. Hemelytra. **ct**—constriction; **him**—hemelytral inner margin; **hom**—hemelytral outer margin; **mc**—maximum convexity. 11, *Leptocysta dellapei* n. sp.; 12, *Leptocysta delrioae* n. sp.; 13, *Leptocysta notialis* Drake; 14, *Leptocysta novatis* Drake; 15, *Leptocysta sexnebulosa* Stål; 16, *Leptocysta tertia* Monte. Scale bar: 1mm.

Distributional comments

All the species of *Leptocysta* are distributed in Argentina and have been recorded for provinces of the north and center of the country (Fig. 17). Previously, *Leptocysta notialis* was known from Buenos Aires; *L. novatis* from Buenos Aires and Cordoba; *L. sexnebulosa* from Buenos Aires, Corrientes and Misiones and *L. tertia* from Chaco. Here *L. novatis* is recorded for the first time from the provinces of Corrientes and Salta and *L. sexnebulosa* from the province of Salta. In this contribution the distribution of the genus is extended to three new provinces: Jujuy, Salta and San Juan.

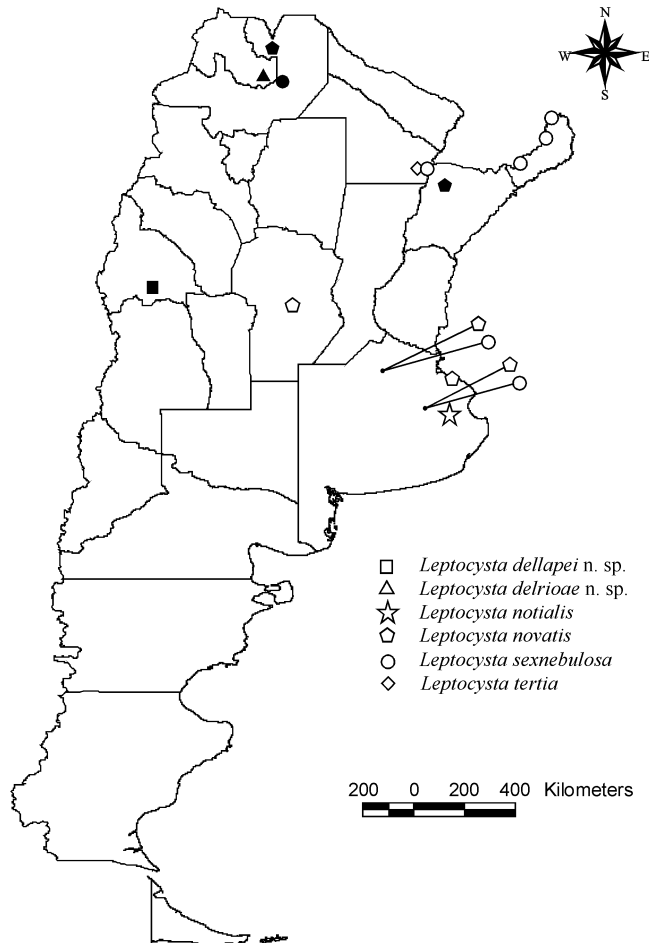


FIGURE 17, Distributional map.

Acknowledgments

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