



A new species of *Keysercypria* Karanovic (Crustacea: Ostracoda) from Argentina

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In her revision on Recent Cycloocypridinae, Karanovic (2011) erected the new genus *Keysercypria*, endemic of the Neotropical Realm. The aim of this study is to describe and illustrate a new species within the genus recorded from the lower Parana region, according to the recently proposed division of the world freshwater ecosystems (www.feow.org). The new species represents the most southern record of the genus.

Samples were taken in December 2008 from a temporary pond covered with macrophytes in Buenos Aires Province, Argentina. The material was collected with a fine-meshed (0.25 mm) hand net. The ostracods were then transferred to 70% alcohol for permanent storage. The specimens were dissected under a stereomicroscope immersed in polyvinyl-lactophenol. The limb morphology was studied under the light microscope and line drawings were made with the help of Zeiss, Standard 25 stereomicroscope with camera lucida.

The nomenclature of the limb chaetotaxy follows Broodbakker and Danielopol (1982), of the second antenna the revised model proposed by Martens (1987), and of the second and third thoracopods Meisch's nomenclature (2000). The terminology of hemipenis genital lobe anatomy is in accordance with McGregor and Kesling (1969) and that of the Zenker organ follows Matzke-Karasz (1997).

The following abbreviations are used: Cp = carapace. Valves: H = height, L = length, LV = left valve, RV = right valve. Limbs: An1 = first antenna, An2 = second antenna, Md = mandible, Rlo = rake-like organ, Mx = maxillula, T1 = first thoracic limb, T2 = second thoracic limb, T3 = third thoracic limb, CR = caudal ramus; CRa = caudal ramus attachment, Hem = hemipenis. Size measurements are given in millimeters; n = number of individuals.

Keysercypria Karanovic, 2011

Keysercypria ivanae n. sp.

(Figs 1&2)

Type locality. Atalaya, Magdalena County (35° 02' S – 57° 32' W). Buenos Aires Province, Argentina.

Type material. Deposited in the Invertebrate Collection of the Museum of La Plata, Argentina (catalogue number between brackets).

Holotype. A male with soft parts dissected in polyvinyl-lactophenol on a sealed slide and with valves stored dry on a micropaleontological slide (MLP 26498).

Allotype. A female dissected and stored in the same manner as the holotype (MLP 26499).

Paratypes. 1 female and 5 males dissected and stored in the same manner as the holotype (MLP 26500).

Etymology. From Ivana Karanovic. The species is named after Dr Ivana Karanovic from the Hanyang University, Seoul, as an acknowledgment of her great contribution to this study.

Description. Male's carapace is ovoid in anterior view. Greatest height is situated behind the middle. The calcified inner lamella is well developed on both the anterior and posterior margins. Hinge is adont. LV slightly overlaps the RV posteriorly. External surface with delicate reticulation, and numerous pores. Tiny pustules present on outer and inner margin both anteriorly and posteriorly and on both valves as well. In lateral view, greatest height is situated behind the mid-length. Both margins rounded. Anterior margin curved, and ventral margin ventrally slightly convex around mouth region. Females' carapace subovoidal and slightly bigger than male. Greatest L around mid-length. Anterior margin slightly truncated. Posterior margin rounded. Surface smooth with delicate hear-like setae and without pustules on free margins.

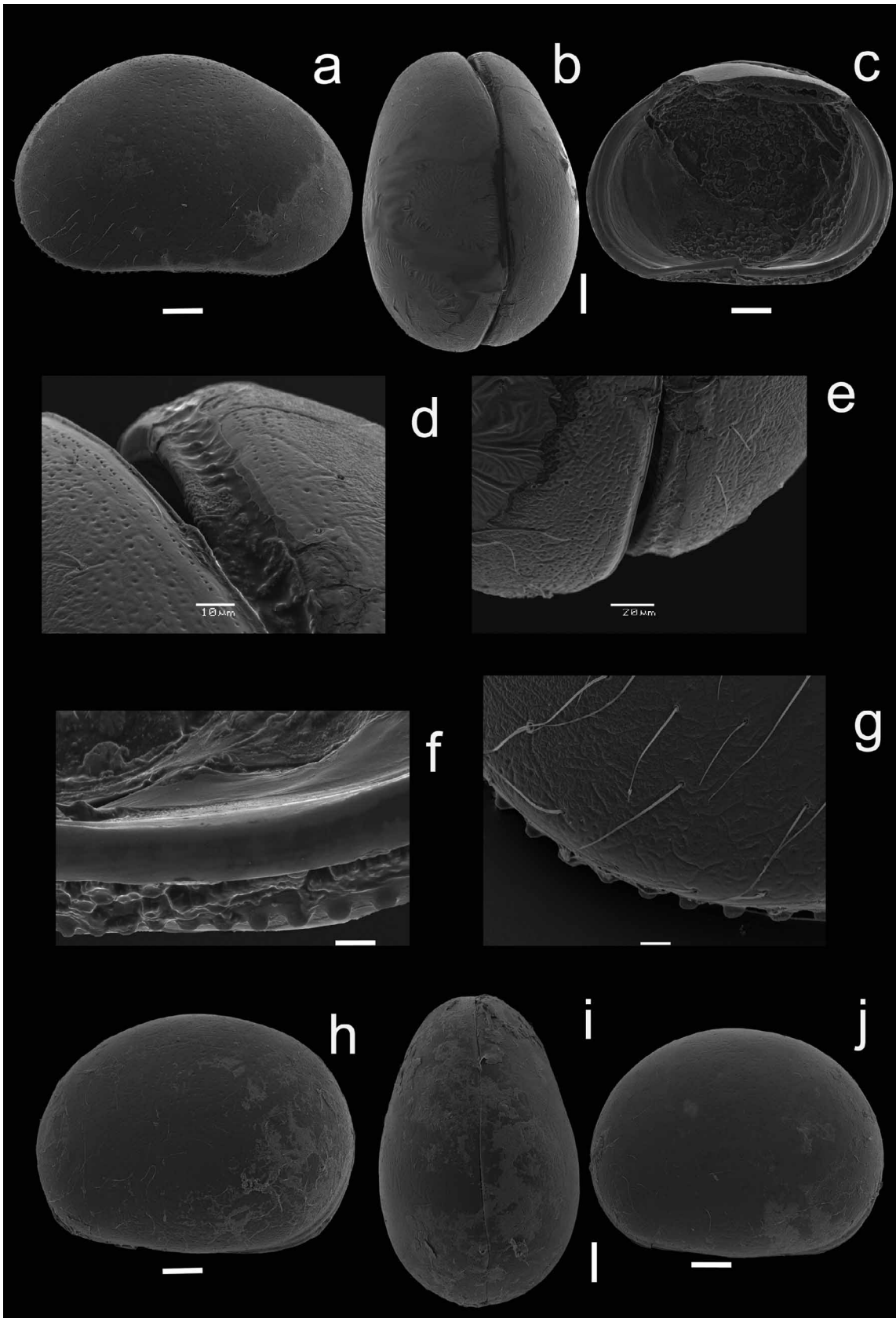


FIGURE 1. *Keysercypria ivanae* n. sp. (a) ♂ RV, external view. (b) ♂ carapace, dorsal view. (c) ♂ RV, internal view. (d) ♂, detail of anterior margin of carapace. (e) ♂, detail of postero-ventral margin of RV, internal view. (f) ♂, detail of tubercles on the posterior margin of carapace. (g) ♂, detail of posterior margin of RV, external view. (h) ♀ RV, external view. (i) ♀ carapace, dorsal view. (j) ♀ LV, external view. Scale = 100 μ m for a-c, h-j. 10 μ m for d, f, g; 20 μ m for e.

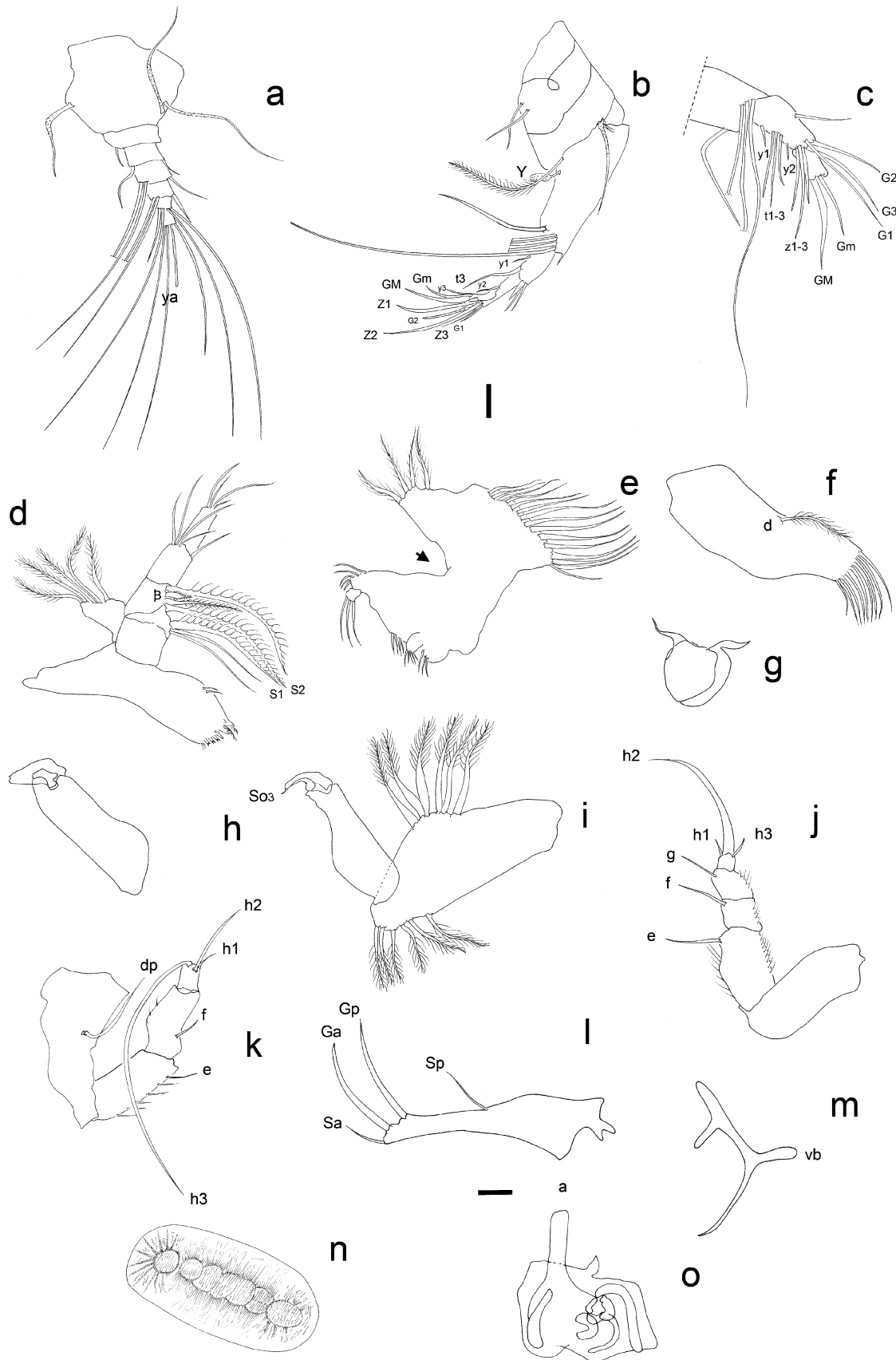


FIGURE 2. *Keysercypria ivanae* n. sp. (a) ♂ An1. (b) ♂ An2. (c) ♀ An2. (d) ♀ Md. (e) ♂ Mx. Arrowhead: partially disrupted here. (f) ♀ T1. (g) ♂ Rlo. (h) ♂ T1 left. (i) ♂ T1 right. (j) ♂ T2. (k) ♂ T3. (l) ♂ CR. (m) ♂ CRa. (n) ♂ ZO (o) ♂ Hem. Scale = 100 µm for l, m; 50 µm for a-k, n, o.

Anatomy of the soft parts. An1 (Fig. 2a) is 7-segmented. First segment with two postero-dorsal subequal setae and one antero-ventral setae. Second segments apically with one anterior seta. Third segment apically with one anterior and one postero-dorsal setae. Fourth and fifth segments with two long anterior setae and one short posterior seta each. Sixth with four long subequal apical setae. Terminal segment with three long apical setae and aesthetasc y_a .

An2 (Fig. 2b–c) is 5-segmented in females and 6-segmented in males. The chaetotaxy of the first three segments is identical for males and females. First segment of protopodite with two short subapical ventral seta, second segment with one long subapical ventral seta distally situated. The reduced exopodite with two short and one long setae. First segment of endopodite with a ventro-proximal aesthetasc Y, and four long and one short natatory setae extending beyond the tips of terminal claws. Differences in chaetotaxy of An2 of males and females are limited to the last two segments. Female (Fig. 1c) penultimate segment one short medio dorsal seta, three ventral subequal t-setae and a short aesthetasc (y_1) inserted proximally to the t-setae; this segment also with 3 subequal subapical z-setae, one aesthetasc (y_2) and two long (G_1, G_3) and one short (G_2) claws. Terminal segment apically bearing two long subequal (GM) and (Gm) claws. In males (Fig. 1b) in the penultimate segment only t_3 is present with a long aesthetasc (y_1). The two most anterior short z-seta ($z_{1,2}$) transformed into two short claws. Z_3 is short. Terminal segment with aesthetasc y_3 , one medium claw (Gm) and one long claw (GM).

Md (Fig. 2d) protopodite with six teeth, one serrated seta between first and second teeth and two short apical setae on the anterior side. Mandibular palp 4-segmented. First segment with two smooth and two serrated S_1 and S_2 setae. Second segment with one plumose seta, one β -seta and one long serrated seta apically inserted. Third segment with four subapical smooth setae and one ventro-apical seta. Terminal segment with four apical setae, two of which claw-like. Exopodite (respiratory plate) with five long plumed setae.

Rlo (Fig. 2e) without visible teeth.

Mx (Fig. 2f) with 2-segmented palp, three endites, and a large respiratory plate. First segment of the palp subquadrate. Second segment short with three apical claw-like setae. Each endite with three claw-like setae. Respiratory plate with 19 rays.

T1 (Figs 2g–i) sexually dimorphic. Female (Fig. 2g) protopodite with one plumose (d) seta. Masticatory process with 10 apical setae. In males the masticatory with process with three plumose and four smooth subequal setae. Exopodite (respiratory plate) with six rays; endopodite is 2-segmented and transformed into prehensile palps, right one being larger. First segment of right palp (Fig. 2h) large and subrectangular, second segment subtriangular. No sensory organs. Left palp (Fig. 2i) shorter. First segment large and rectangular, second segment very curved with one apical sensory organ (so_3).

T2 (Fig. 2j) endopodite consisting of four segments. First segment of endopodite with one smooth “e” seta, second segment with a short ventro-apical “f” seta, third segment with a short ventro-apical “g” seta. Fourth segment apically with a terminal claw h_2 and two shorter setae h_1 and h_3 .

T3 (Fig. 2k) protopodite with one long dp seta. Seta d_2 and d_1 absent. First segment of endopodite with one short “e” seta, second fused with the following one and with one short “f” seta. Terminal segment with three setae of different L h_1 and h_2 . Seta h_1 being at least twice shorter than h_2 and one long reflex seta h_3 .

CR (Fig. 2l) symmetrical, slender, nearly straight. Anterior (Sa) and posterior (Sp) setae of different L. Sp situated medially on caudal ramus.

CRa (Fig. 2m) slender and without loops, with the ventral branch (vb) shorter than the anterior branch.

Hem. (Fig. 2o) has one large distal lobe “a”. Lobe b is thin and pointed.

ZO (Fig. 2n) large and well developed with 5 spinous whorls. Total L 250 μm , end plates diameter 60 μm and braces of end plates L 7 μm . Maximum L of spines: 35 μm and diameter of central tube 6 μm . End plates “hat-like”. Oblique disposition of end plates in relation to the central tube very clear. Numerous long, radiating rigid spines present and arranged from thick chitinous bands lying upon the central tube itself. Surface of central tube ribbed. Number of chitinous whorls five and spines diagonally situated to the central tube and parallel to the end-plates. Number of braces on end-plates 18.

Female genital lobe with a conical process.

Remarks and affinities. The new species differs from the other nine species presently belonging to *Keysercypria* Karanovic, 2011, by the absence of the setae d_1 and d_2 on the basal segment of the third thoracopod and by a filamentous inner lobe on the hemipenis. *Keysercypria ivanae* n. sp. has tubercles present on both valves and on both anterior and posterior margins. This is so far unique feature in the genus, as in *K. obtusa* (Klie, 1940), *K. circinata* (Würdig & Pinto, 1993), and *K. pellucida* (Sars, 1901) tubercles are absent or barely visible (but only on one of the valves), while in all other representatives the tubercles are clearly visible, but only on the RV. Karanovic (2011) reported sexual dimorphism

in the L of the seta "h3" on the T2 (in males of *K. affinis* and *K. deformis*, this seta is considerably longer than in females). This character is not recorded in our species. Seta "e" on the same appendage is short, i.e., not exceeding distal end of the terminal segment, like in the most representatives of the genus, except in *K. deformis*.

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