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New records of water mites from Chile (Acari: Hydrachnidia), with the description of three new species

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Original research

ABSTRACT

Abstract. Three new species of water mites are described from Chile, viz. *Pseudohydrachna chilensis* n. sp. (Hydrachnidae), *Rhynchaturus dispar* n. sp. and *Rhynchaturus rucuensis* n. sp. (Hygrobatidae). *Andesobates magellanicus* (Tuzovskij & Stolbov, 2016) is synonymized with *A. longipalpis* Smit, 2002. The first description is given of the females of *Omartacarus ferradasae* Cook and *Rhynchaturus projectus* Cook, and the male of *Hygrobatella coriacea quiponensis* Cook. Moreover, many new records are given, and two species are reported new for the fauna of Chile (not including the new species described in this paper).

Keywords systematics; taxonomy; water mites; Hydrachnidia; Chile

Zoobank <http://zoobank.org/47A09CA2-CEC7-4CDD-8E1F-1B6492FAD335>

Introduction

Studies on the water mites of Chile started as early as the mid-19th century with a publication of Gervais (1849). He described two *Hydrachna* species, one of these is considered a *species incertae sedis* by K. Viets (1956). Some fifty years later, Ribaga (1902, 1903) reported five species from Chile, one *Eylais* species is considered a *species incertae sedis* by K. Viets (1956). Daday (1902) reported two larvae of *Unionicola figuralis* (Koch, 1836). However, the occurrence of this species in Chile is highly unlikely, and cannot be checked due to the absence of an illustration or description. Moreover, no specimen has been lodged in a museum (see www.watermite.org, collections). Also Lundblad (1930) was the opinion that the *Unionicola*-specimens of Daday belonged probably to a different species. I consider this *Unionicola*, therefore, as a *species incertae sedis*. K. Viets (1935) published one new species from a river near Santiago. From the sixties of the 20th century onwards, the most comprehensive studies were published by Besch (1964) and Cook (1988). Less extensive papers were published by Besch (1962, 1963a, b), K.O. Viets (1964, 1967, 1968), Schwoerbel (1986a, b, 1987), Martin & Schwoerbel (2002), Tuzovskij (2016), Tuzovskij & Stolbov (2016a, b, c, 2017a, b), Pešić *et al.* (2010) and Pešić & Smit (2020). An overview of the South American water mites was published by Rosso de Ferradás & Fernández (2005). The total number of species known from Chile tallies 192, synonyms and *species incertae sedis* excluded. Fifteen genera and two subgenera are endemic for Chile, i.e. *Ankelothyas* Besch, 1964, *Axonopsella* (*Chilaxonopsella*) Cook, 1988, *Brevaturus* Schwoerbel, 1986, *Callumobates* Cook, 1988, *Camposea* Schwoerbel, 1986, *Dubiobates* Cook, 1988, *Miraxonides* (*Eomiraxonides*) Cook, 1988, *Mixolimnesia* Cook, 1988, *Noesaturus* Cook, 1988, *Notoaturus* Besch, 1964, *Notaxona* Besch, 1964, *Notomomonia* Cook, 1988, *Osornobates* Cook, 1988, *Phreatomideopsis* Schwoerbel, 1986, *Sigthoriella* Besch, 1964, *XenThoracaphorus* Cook, 1988 and *Zabobates* Cook, 1988. It is likely that after more research a number of these genera and subgenera will occur in Argentina as well. K.O.

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Viets (1968) and Cook (1988) reported *Hydrodroma despiciens* (Müller, 1776) from Chile, but with the current knowledge of the genus, this is very unlikely (Smit 2020).

The aim of this paper is to increase the knowledge of the water mites from Chile. Many new records are given, and three species are described new for science. Moreover, the unknown sex is described for three species.

Material and methods

The material described in this paper has been collected in December 2018 by using a dip net and kick-sampling. Interstitial samples were taken by the so-called Karaman-Chappuis method. All material from this study is collected by the author, unless stated otherwise. Holotypes, paratypes and all non-type material will be lodged in Naturalis Biodiversity Center, Leiden (RMNH). The following abbreviations are used: a.s.l. – above sea level; Cx-I – first coxae; Cx-IV – fourth coxae; Cxgl-4 – coxoglandularia 4; Dgl-3 – dorsoglandularia 3; NP - National Park; P1-5 – palp segments 1-5; IV-leg-2 – second segment of fourth leg. All measurements are in μm , measurements of palp and leg segments are of the dorsal margins, measurements of paratypes are given in parentheses. Ventral length is measured from the tip of Cx-I till posterior idiosoma margin. Numbers are given as male/female/deutonymph or adult/deutonymph. All coordinates are taken with a GPS. Coordinates given as degrees, minutes and seconds are taken from Google Earth and are by approximation. Data on the world distribution are taken from Smit (2020). Distributional data from Chile are taken from Besch (1964) and Cook (1988), those from Argentina from Cook (1980), unless stated otherwise.

Taxonomy

Family Hydryphantidae Piersig

Subfamily Protziinae Koenike

Genus *Neocalonyx* Walter, 1919

A genus with a dozen species known from Central and South America.

Neocalonyx (Neocalonyx) penai Besch, 1964

New records. 1/1/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018; 0/1/0, Río San Pedro at Puente Puchagran, prov. Chiloé, 42°23.676' S 73°52.568' W, 91 m a.s.l., 21 Dec. 2018; 1/0/0, Estero Cabreria, Nahuelbuta NP, prov. Malleco, 37°49.680' S 73°00.858' W, 1116 m a.s.l., 23 Dec. 2018.

Distribution. Argentina, Chile.

Family Hydryphantidae Piersig

Subfamily Pseudohydryphantinae K. Viets

Genus *Pseudohydrphant* K. Viets, 1907

A widespread genus, with several species known from the Holarctic and a dozen species from Australasia.

Pseudohydrphant chilensis n. sp.

Zoobank: [2EB4EDFD-6354-4674-9DCD-1CB97771AB01](https://zoobank.org/2EB4EDFD-6354-4674-9DCD-1CB97771AB01)

(Figure 1A-E)

Material examined. Holotype male, small stream crossing road W-480, W of Pidpid, prov. Chiloé, Chile, 42°23.545' S 73°51.911' W, 100 m a.s.l., 21 Dec. 2018 (RMNH).

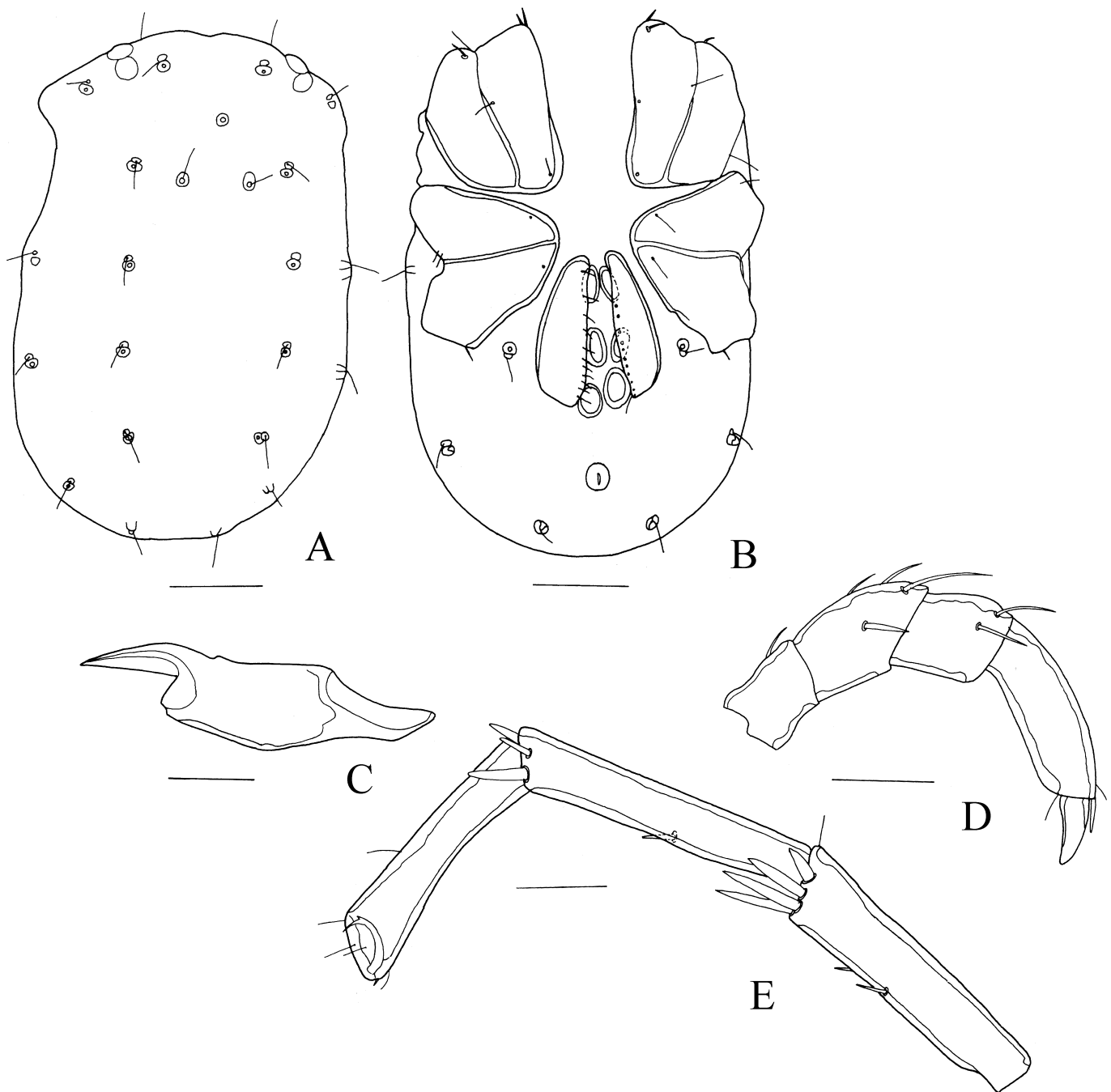


Figure 1 *Pseudohdryphantes chilensis* n. sp., holotype male. A – dorsum; B – venter; C – chelicera; D – palp; E – IV-leg-4-6. Scale bars: A-B = 100 μ m; C-E = 50 μ m.

Diagnosis. Glandularia sclerites small, not crescent shaped; legs without swimming setae.

Description. Male: Idiosoma reticulate with large papillae, dorsally 535 long and 348 wide, ventrally 559 long. Glandularia sclerites smaller than accompanying glandularia, rounded (Figure 1A). Median eye and postocularia on small platelets, the latter more or less between Dgl-3. Chelicera 211 long. Coxae in four groups, with few small setae; tip of Cx-I with two small, stout setae. Genital field with three pairs of acetabula, genital flap 164 long; along

medial margin a row of small setae (Figure 1B). Excretory pore sclerotized. Length of P1-5: 47, 72, 48, 96, 36. P2 and P3 with a medial seta and three and one dorsal setae, respectively. P4 with a stout dorsodistal setae (Figure 1D). Length of I-leg-4-6: 100, 120, 124. Length of IV-leg-4-6: 170, 180, 136. Legs without swimming setae (Figure 1E). Claw of legs simple, without serrations or ventral clawlet, but with a small dorsal clawlet.

Female: Unknown.

Etymology. Named after the country of the type locality.

Remarks. This is the first *Pseudohydryphantes* species from South America. The new species differs from all known *Pseudohydryphantes* species in the absence of swimming setae. From North America two species are known, both insufficiently described by Marshall (1924, 1929). Main difference with the new species is the presence of swimming setae in the North American species.

Family Anisitsiellidae Koenike

Subfamily Anisitsiellinae Koenike

Genus *Anisitsiellides* Lundblad, 1941

A genus known from Australia, New Zealand, Colombia, Argentina and Chile.

Anisitsiellides australis Smit, 2002

New record. 0/1/0, tributary of Río Tinquilco, N of Lago Tinquilco, prov. Cautín, 39°09.432' S 71°43.113' W, 770 m a.s.l., 12 Dec. 2018.

Distribution. Argentina (Smit 2002), Chile (Pešić *et al.* 2010).

Anisitsiellides chilensis Cook, 1988

New record. 1/0/0, unnamed stream at Puente Chulengo, Pumalín NP, prov. Palena, 42°37.943' S 72°35.146' W, 246 m a.s.l., 18 Dec. 2018.

Distribution. Chile.

Family Limnesiidae Thor

Subfamily Limnesiinae Thor

Genus *Limnesia* Koch, 1836

A genus occurring worldwide with numerous species known.

Limnesia (Limnesia) patagonica Lundblad, 1941

New records. 1/1/0, lake, Isla Juan Stiven, prov. Capitán Prat, 48°01.172' S 75°11.090' W, 28 Mar. 2018, leg. P.W. Veel; 3/0/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018; 1/0/0, pool in Estero Granizo, La Campana NP, prov. Marga Marga, 33°00.158' S 71°07.112' W, 437 m a.s.l., 25 Dec. 2018.

Distribution. Argentina (Lundblad 1944), Chile.

Subfamily Mixolimnesiinae Cook

Genus *Mixolimnesia* Cook, 1988

A genus confined to Chile, with eight species known.

***Mixolimnesia pallida* Cook, 1988**

New records. 0/7/0, Río Lircay, Reserva Nacional Altos de Lircay, prov. Talca, 35°35.667' S 71°02.199' W, 1342 m a.s.l., 5 Dec. 2018; 1/3/0, Río Puntra, prov. Chiloé, 42°07.180' S 73°48.708' W, 16 m a.s.l., 20 Dec. 2018.

Distribution. Chile.

Family Oxidae K. Viets

Genus *Oxus* Kramer, 1877

A genus occurring worldwide with numerous species known.

***Oxus (Flabellifrontipoda) neotropicus* (Lundblad, 1954)**

New records. 1/0/0, Estero el Aguada o el Volcan, near National Park Laguna del Laje, 37°27.768' S 71°18.951' W, prov. Biobío, 1407 m a.s.l., 7 Dec. 2018; 0/1/0, Río Palgulil, S of Termas Palguin, prov. Cautín, 39°26.237' S 71°47.411' W, 809 m a.s.l., 9 Dec. 2018; 2/0/0, stream at Puente el León, tributary of Río Palguin, prov. Cautín, 39°25.055' S 71°46.022' W, 730 m a.s.l., 9 Dec. 2018; 0/1/0, Río Blanco Arenal, at Puente Blanco Arenales, E of Lago Llanquihue, 41°03.081' S 72°39.801' W, prov. Osorno, 75 m a.s.l., 14 Dec. 2018.

Distribution. Colombia (Lundblad 1954), Argentina, Chile.

***Oxus (Flabellifrontipoda) polyplacophorus* (Cook, 1980)**

New record. 0/1/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018.

Distribution. Argentina, Chile.

***Oxus (Flabellifrontipoda) unoka* (Cook, 1988)**

New record. 1/1/0, Río Pudeyi at Puente Santana, prov. Chiloé, 41°54.721' S 73°57.565' W, 10 m a.s.l., 20 Dec. 2018.

Remarks. Dave Cook usually didn't explain where the epithet came from, and often these were fantasy names. This is very likely the case with the current species, and it is considered here a noun in apposition.

Distribution. Chile.

***Oxus (Oxus) valdiviensis* Besch, 1964**

New record. 2/2/1, Lago Blanco, Pumalín NP, prov. Palena, 42°45.076' S 72°36.265' W, 119 m a.s.l., 17 Dec. 2018.

Distribution. Chile.

***Oxus (Oxus) vicinus* (Cook, 1988)**

New record. 0/1/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018.

Distribution. Chile.

Family Sperchontidae Thor

Sufamily Apeltosperchontinae Cook

***Apeltosperchon schmitzi* Besch, 1964**

New records. 0/1/0, Río Lircay, Reserva Nacional Altos de Lircay, prov. Talca, 35°35.667' S 71°02.199' W, 1342 m a.s.l., 5 Dec. 2018; 1/0/0, small stream flowing into Lago Negro,

Pumalín NP, prov. Palena, 42°42.899' S 72°34.896' W, 155 m a.s.l., 18 Dec. 2018; 0/2/0, Río Puntra, prov. Chiloé, 42°07.180' S 73°48.708' W, 16 m a.s.l., 20 Dec. 2018; 0/1/0, small stream crossing road W-480, W of Pidpid, prov. Chiloé, 42°23.545' S 73°51.911' W, 100 m a.s.l., 21 Dec. 2018.

Distribution. Chile.

Subfamily Sperchontinae Thor

Genus *Notosperchonopsis* Besch, 1964

A genus with three species known from Argentina, Chile and Peru.

***Notosperchonopsis pauciscutata neuquenensis* Cook, 1980**

New records. 0/1/0, upper course of tributary of Río Palguin, prov. Cautín, 39°26.237' S 71°47.411' W, 934 m a.s.l., 9 Dec. 2018; 0/1/0, Río Tinquilco near outflow in Lago Tinquilco, prov. Cautín, 39°09.493' S 71°43.179' W, 761 m a.s.l., 10 Dec. 2018; 1/3/2, unnamed stream, Pumalín NP, prov. Palena, 42°48.550' S 72°40.490' W, 121 m a.s.l., 17 Dec. 2018; 0/6/0, Río Puntra, prov. Chiloé, 42°07.180' S 73°48.708' W, 16 m a.s.l., 20 Dec. 2018; 0/2/2, Río Butalcura at crossing with Ruta 5, prov. Chiloé, 42°16.793' S 73°42.500' W, 52 m a.s.l., 20 Dec. 2018; 2/6/2, unnamed stream, Parque Andino Juncal, prov. Los Andes, 32°53.988' S 70°07.237' W, 2345 m a.s.l., 27 Dec. 2018.

Distribution. Argentina, Chile.

Genus *Illiesiella* Besch, 1964

A genus occurring in Argentina and Chile, with six species known.

***Illiesiella cataphracta* Cook, 1988**

New record. 1/3/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018.

Distribution. Chile.

***Illiesiella circularis* Besch, 1964**

New records. 1/0/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018; 2/1/0, Río Tinquilco near outflow in Lago Tinquilco, prov. Cautín, 39°09.493' S 71°43.179' W, 761 m a.s.l., 10 Dec. 2018.

Distribution. Chile.

***Illiesiella weberi* (Besch, 1964)**

New records. 1/0/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018; 1/1/1, Río Tinquilco near outflow in Lago Tinquilco, prov. Cautín, 39°09.493' S 71°43.179' W, 761 m a.s.l., 10 Dec. 2018.

Distribution. Chile.

Family Omartacaridae Cook

Genus *Omartacarus* Cook, 1963

Several species known from North-, Central- and South-America.

***Omartacarus (Omartacarus) ferradasae* Cook, 1988**

(Figure 2A-B)

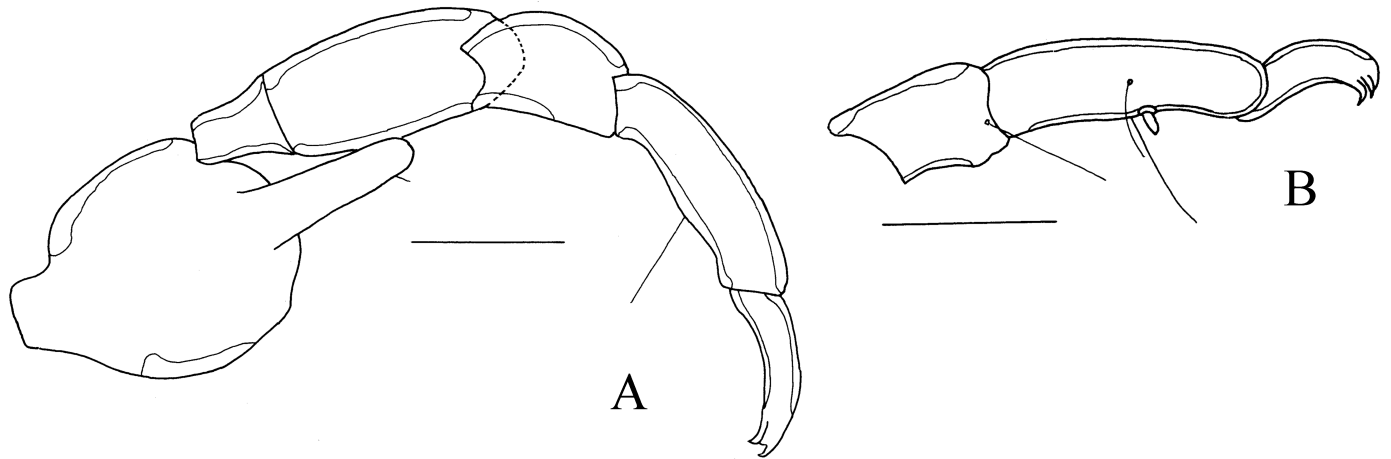


Figure 2 *Omartacarus ferradasae* Cook, female. A – palp + gnathosoma; B = P3-5. Scale bars = 50 μ m.

New record. 0/1/0, Río San Pedro, interstitial, at Puente Puchagran, prov. Chiloé, 42°23.676' S 73°52.568' W, 91 m a.s.l., 21 Dec. 2018.

Description. Female: Total length cannot be measured, but coxal field 231 long and 172 wide. Gnathosoma with a long rostrum (Figure 2A). Genital field 40 long with ten pairs of acetabula. Length of P1-5: 26, 34, 54, 86, 58. P4 with a short, stout seta and two hair-like setae, P5 slender (Figure 2B). First leg cannot be measured, length of IV-leg-4-6: 140, 152, 90. Swimming setae absent.

Remarks. The female matches the description of Cook (1988) well in the gnathosoma with a long rostrum and P4 with a short, stout seta.

Distribution. Thus far, known from the holotype male only from the interstitial of a stream near Lago Chapo, Llanquihue Province, Chile.

Family Ferradasiidae Cook

Genus *Ferradasia* Cook, 1980

A monotypic genus, previously known from Argentina only (Cook 1980).

Ferradasia musicola Cook, 1980

New record. 0/1/0, Río Tinquilco near outflow in Lago Tinquilco, prov. Cautín, 39°09.493' S 71°43.179' W, 761 m a.s.l., 10 Dec. 2018.

Remarks. The female of this study is not completely sclerotized, the dorsal platelets are not yet visible.

Distribution. Previously reported from a stream near Bariloche, Argentina (Cook 1980) and here reported for the first time from Chile.

Family Frontipodopsidae K. Viets

Genus *Frontipodopsis* Walter, 1919

The genus occurs worldwide, most species of the subgenus *Frontipodopsis* are known from the southern hemisphere.

***Frontipodopsis (Frontipodopsis) chilensis* Cook, 1988**

New record. 0/1/0, unnamed stream at Puente Zargazo, tributary of Río Chamiza, prov. Llanquihue, 41°28.717' S 72°39.700' W, 126 m a.s.l., 15 Dec. 2018.

Distribution. Chile.

Family Hygrobatidae Koch

Genus *Andesobates* Smit, 2002

A monotypic genus, known from Argentina and Chile (Smit 2002; Tuzovskij & Stolbov 2016a).

***Andesobates longipalpis* Smit, 2002**

Paratetrahygrobatella magellanicus Tuzovskij & Stolbov, 2016 – new syn.

New records. 1/0/0, Río Blanco affluent to Río Enco, 39°55'9.53" S 72°50.85" W, prov. Cautín, 12 Nov. 1984, leg. T. Gonser; 1/0/0, Río Futangue, affluent to Lago Ranco Sud, 5 km W Riñinahue, prov. El Ranco, 40°20'1.48" S 72°16'4.31" W, 25 Nov. 1984, leg. T. Gonser; 3/23/5, Estero el Aguada o el Volcan, near National Park Laguna del Laje, 37°27.768' S 71°18.951' W, prov. Biobío, 1407 m a.s.l., 7 Dec. 2018; 0/1/0, Río Correntoso, E of Pucón, 39°19.256' S 71°52.967' W, prov. Cautín, 411 m a.s.l., 9 Dec. 2018.

Remarks. The genus *Paratetrahygrobatella* has been synonymized by Smit (2020) with *Andesobates*. However, also at the species level, there are no marked differences between *A. longipalpis* and *A. magellanicus* (males: both species with a large dorsal plate, Cx-IV large and more or less triangular, genital field with three pairs of widely separated acetabula). Therefore, I propose to synonymize the two species.

Distribution. Known from Argentina (Smit 2002) and Chile (Tuzovskij & Stolbov 2016a).

Genus *Australiobates* Lundblad, 1941

A genus with numerous species known from Australia, New Zealand, New Guinea, South Africa and South America (Smit 2020).

***Australiobates (Australiobates) cekalovici* Besch, 1964**

New records. 0/3/0, Río Puntra, prov. Chiloé, 42°07.180' S 73°48.708' W, 16 m a.s.l., 20 Dec. 2018; 0/3/0, Río San Pedro at Puente Puchagran, prov. Chiloé, 42°23.676' S 73°52.568' W, 91 m a.s.l., 21 Dec. 2018.

Distribution. Chile and Argentina (Smit 2002).

Genus *Brevaturus* Schwoerbel, 1986

A genus with ten species known from Chile.

***Brevaturus (Brevaturus) gonseri* (Schwoerbel, 1986)**

New records. 0/2/0, Río Correntoso, E of Pucón, 39°19.256' S 71°52.967' W, prov. Cautín, 411 m a.s.l., 9 Dec. 2018; 2/2/0, unnamed stream, Pumalín NP, prov. Palena, 42°48.550' S 72°40.490' W, 121 m a.s.l., 17 Dec. 2018.

Distribution. Chile.

***Brevaturus (Paraspidiobates) lembus* Cook, 1988**

New record. 0/1/0, stream at Puente el León, tributary of Río Palguin, prov. Cautín, 39°25.055' S 71°46.022' W, 730 m a.s.l., 9 Dec. 2018.

Distribution. Chile.

***Camposea phreaticola* Schwoerbel, 1986**

New record. 0/1/0, small stream crossing road W-480, W of Pidpid, prov. Chiloé, 42°23.545' S 73°51.911' W, 100 m a.s.l., 21 Dec. 2018.

Distribution. Known from a handful of records from mainland Chile.

Genus *Dubiobates* Cook, 1988

A genus known from Chile only, with ten species known thus far.

***Dubiobates similis* Cook, 1988**

New record. 0/1/0, Río Puntra, prov. Chiloé, 42°07.180' S 73°48.708' W, 16 m a.s.l., 20 Dec. 2018.

Distribution. Chile.

***Dubiobates schwoerbeli* Cook, 1988**

New records. 1/0/0, Río Palgulil, S of Termas Palguin, prov. Cautín, 39°26.237' S 71°47.411' W, 809 m a.s.l., 9 Dec. 2018; 0/1/0, stream at Puente el León, tributary of Río Palguin, prov. Cautín, 39°25.055' S 71°46.022' W, 730 m a.s.l., 9 Dec. 2018; 0/1/0, small stream flowing into Lago Negro, Pumalín NP, prov. Palena, 42°42.899' S 72°34.896' W, 155 m a.s.l., 18 Dec. 2018.

Distribution. Chile.

Genus *Hygrobotella* K. Viets, 1926

A genus with several species from South America.

***Hygrobotella coriacea quiponensis* Cook, 1980**

(Figure 3A-B)

New record. 2/13/5, Estero del Aparejo o Morado, upstream of Embalse de Yeso, prov. Cordillera, 33°37.448' S 70°01.491' W, 2580 m a.s.l., 3 Dec. 2018.

Description. Male: Integument papillate, lineated; platelets colour red. Idiosoma dorsally 1186 (1266) long and 1025 (1164) wide, ventrally 1196 (1284) long. Dorsum in most aspects as in female, but postocularia separate from the large pairs of platelets, the latter 227 long. Moreover, the illustrated male has some irregularities, i.e., in one of the small glandularia platelets the glandularium is lacking and there is one unpaired rounded platelet (Figure 3A). Venter as in female, apart from (red coloured) genital field. The latter is 235 long and 243 wide; gonopore 86 long. Genital field with numerous setae, posterior pair of acetabula larger than the two anterior pairs (Figure 3B). Length of P1-5: 70, 179, 170, 243, 84; palp as in female. Length of I-leg-4-6: 368, 356, 251. Length of IV-leg-4-6: 648, 652, 389. Legs without swimming setae.

Female: Idiosoma dorsally 925-1628 long and 770-1475 wide, ventrally 1005-1648 long.

Remarks. Previously known from the holotype female only. Therefore, some measurements of the female and a description of the male are given above.

Distribution. Argentina, Chile (this study).

***Hygrobotella puberula puberula* K. Viets, 1935**

New records. 2/0/4, Río Lircay, Reserva Nacional Altos de Lircay, prov. Talca, 35°35.667' S 71°02.199' W, 1342 m a.s.l., 5 Dec. 2018; 2/1/10, Estero el Aguada o el Volcan, near National Park Laguna del Laje, 37°27.768' S 71°18.951' W, prov. Biobío, 1407 m a.s.l., 7 Dec. 2018; 25/19/5, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018; 2/0/1, Río Palgulil, S of Termas Palguin, prov. Cautín, 39°26.237' S 71°47.411' W,

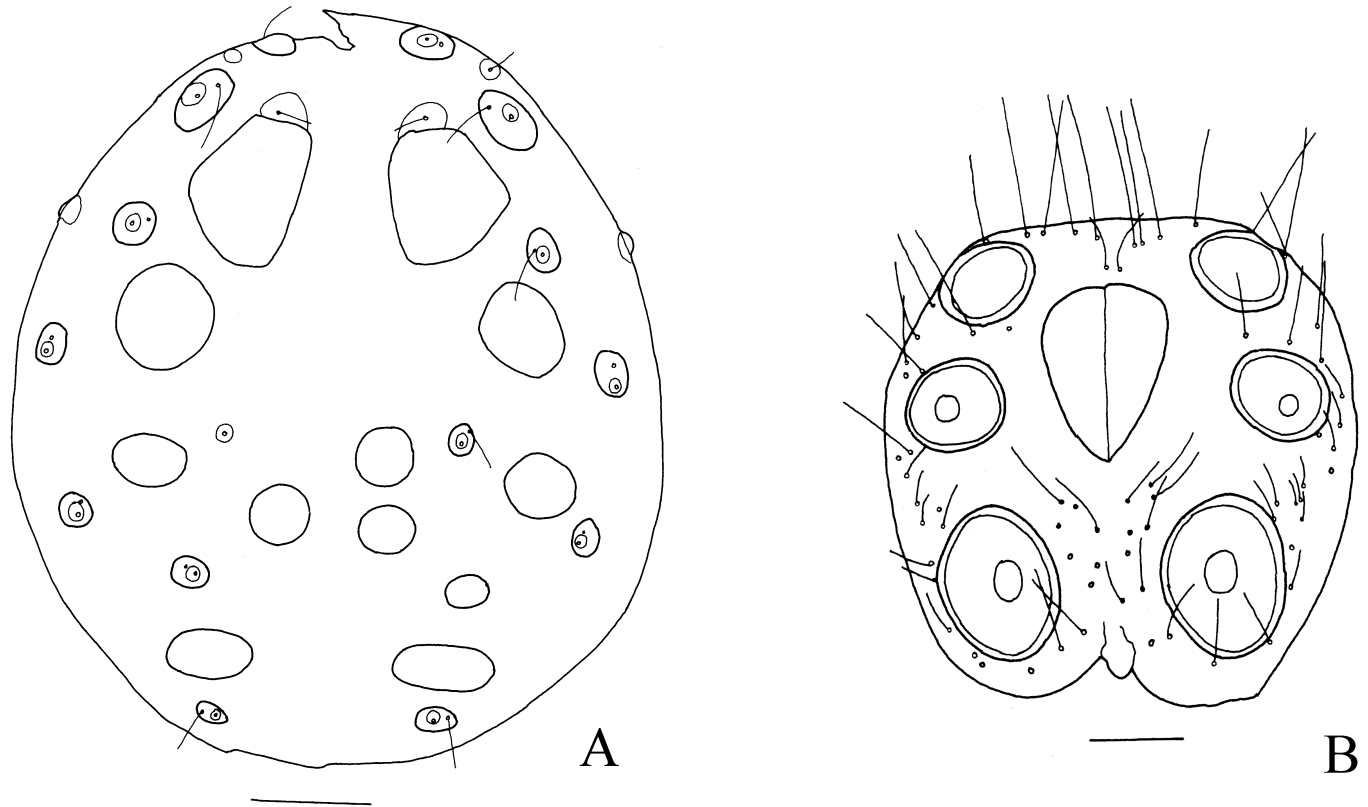


Figure 3 *Hygrobatella coriacea quiponensis* Cook, male. A – dorsum; B – genital field. Scale bars: A = 200 μ m; B = 50 μ m.

809 m a.s.l., 9 Dec. 2018; 1/1/6, Río Tinquilco near outflow in Lago Tinquilco, prov. Cautín, 39°09.493' S 71°43.179' W, 761 m a.s.l., 10 Dec. 2018; 0/1/0, Río Butalcura at crossing with Ruta 5, prov. Chiloé, 42°16.793' S 73°42.500' W, 52 m a.s.l., 20 Dec. 2018; 3/1/0, Estero Pellahue at Puente Cude, prov. Chiloé, 42°22.503' S 73°48.413' W, 97 m a.s.l., 21 Dec. 2018.

Distribution. Argentina, Chile. According to Besch (1963b) one of the most abundant water mite species in Chile.

Genus *Rhynchaturus* Besch, 1964

A genus known from Argentina and Chile with eight species known thus far (Cook 1988; Tuzovskij & Stolbov 2017b).

Rhynchaturus dispar n. sp.

Zoobank: [3F196885-9CB1-44A9-BABA-D83868441D76](https://zoobank.org/3F196885-9CB1-44A9-BABA-D83868441D76)

(Figure 4A-C)

Material examined. Holotype female, small stream crossing road W-480, W of Pidpid, prov. Chiloé, Chile, 42°23.545' S 73°51.911' W, 100 m a.s.l., 21 Dec. 2018 (RMNH). Paratypes: two females, same data as holotype (RMNH).

Diagnosis. Dorsum with two pairs of lateral platelets and three pairs of medial platelets; idiosoma with distinct posterolateral tubercles; genital field with three pairs of acetabula.

Description. Female: Integument rugose, idiosoma dorsally 575 (591) long and 535 (543-551) wide, ventrally 688 (705-709) long, with a pair of large posterolateral glandularia

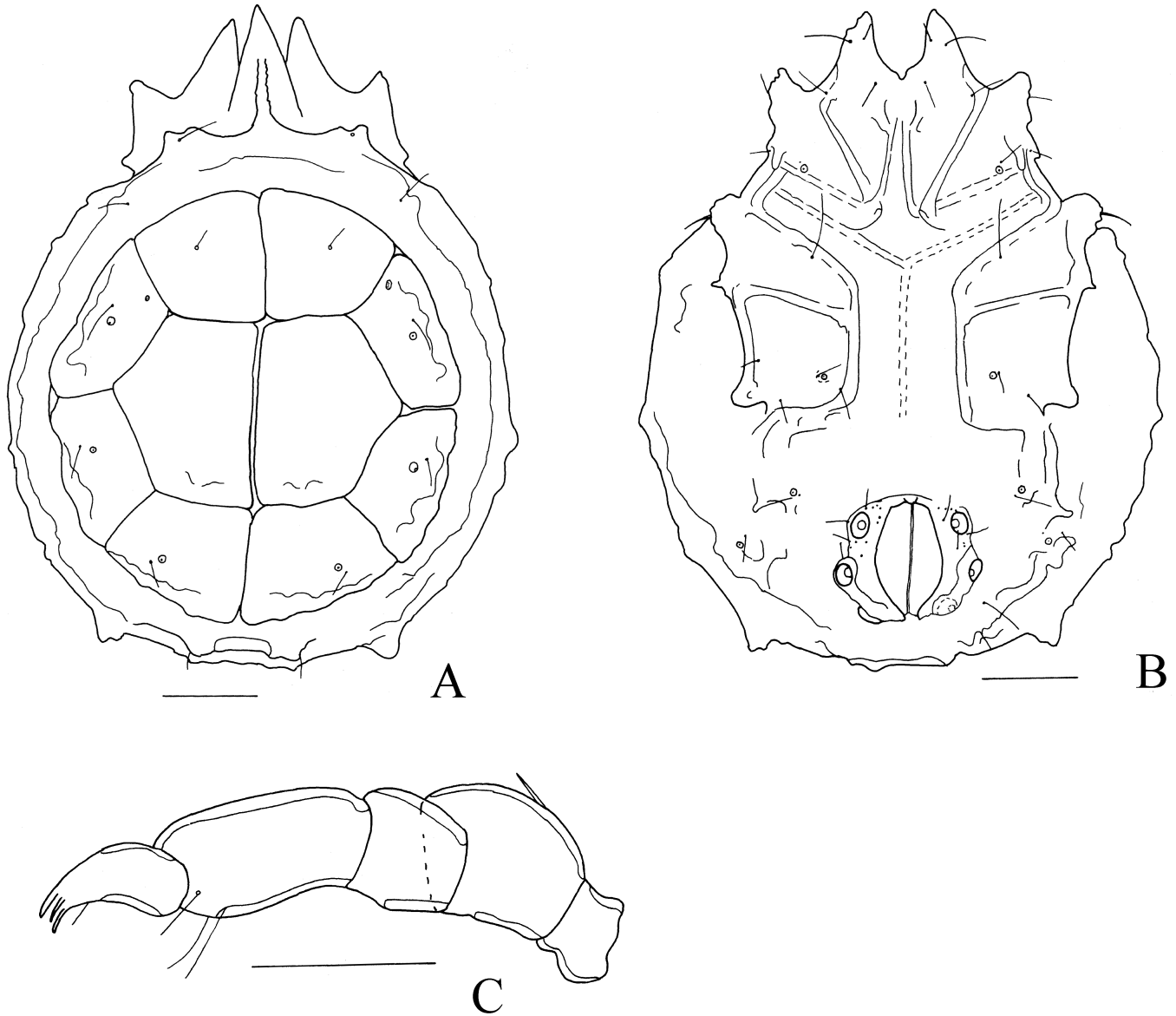


Figure 4 *Rhynchaturus dispar* n. sp., holotype female. A – dorsum; B – venter; C – palp. Scale bars: A-B = 100 μ m; C = 50 μ m.

tubercles. Dorsal shield with a pair of anteromedial platelets with the postocularia, a pair of posteromedial platelets each with a glandularium, a pair of large central platelets without glandularia and two pairs of lateral platelets, each with a glandularium (Figure 4A). Dorsal projection of camerostome pointed, extending just beyond the tips of Cx-I. Gnathosomal bay U-shaped, with a short posterior cleft. Gnathosoma attached to a long protrusible tube. Suture lines of coxae indistinct. Between the coxae a chitinized area, interrupted by a narrow lined non-chitinized area. Cxgl-4 lying on Cx-IV. Genital field with three pairs of acetabula, the posterior pair partly lying under a sclerotized bar (Figure 4B). Gonopore 188 long, genital field approximately 140 wide. Length of P1-5: 14, 50, 34, 60, 42. Palp stocky, especially P4 (Figure 4C); P4 anteroventrally with two fine setae and one anteromedial seta. Length of I-leg-4-6: 132, 128, 76. Length of IV-leg-4-6: 161, 160, 120. Leg claws with large dorsal and ventral clawlets, legs without swimming setae.

Male: Unknown.

Etymology. The epithet *dispar* comes from the Latin, and means unlike or dissimilar (see below).

Remarks. The female of the new species lacks a pair of small platelets posterior to the pair of large central platelets. This pair of small platelets is present in all known females of the genus except for *R. projectus* Cook, 1988, described below. The female of *R. projectus* Cook, 1988 lacks also such a pair of small platelets, but this species has four pairs of acetabula instead of three pairs.

***Rhynchaturus hexaporus* Besch, 1964**

New records. 0/1/0, small stream flowing into Lago Negro, Pumalín NP, prov. Palena, 42°42.899' S 72°34.896' W, 155 m a.s.l., 18 Dec. 2018; 1/1/0, Río San Pedro at Puente Puchagran, prov. Chiloé, 42°23.676' S 73°52.568' W, 91 m a.s.l., 21 Dec. 2018.

Distribution. Argentina, Chile.

***Rhynchaturus octoporus* Schwoerbel, 1986**

New record. 0/1/0, Río Rucue, W of Antuco, prov. Biobío, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018.

Distribution. Known previously from two localities in Valdivia Province, Chile.

***Rhynchaturus projectus* Cook, 1988**

(Figure 5A-B)

New record. 0/3[one young]/0, tributary of Río Tinquilco, N of Lago Tinquilco, prov. Cautín, 39°09.432' S 71°43.113' W, 770 m a.s.l., 12 Dec. 2018.

Description. Female: Integument rugose, idiosoma dorsally 660 (705) long and 583 (624) wide, ventrally 770 (802) long. Dorsal shield with a pair of anteromedial platelets with the postocularia, a pair of posteromedial platelets each with a glandularium, a pair of large central platelets without glandularia and two pairs of lateral platelets, each with a glandularium (Figure 5A). Central platelets 235 (219) long. Dorsal projection of camerostome pointed, extending well beyond the tips of Cx-I. Venter as in male, apart from genital field. Gonopore 124 long, genital field 180 wide, with four pairs of acetabula (Figure 5B). Length of P1-5: -, 44, 30, 65, 44; palp as in male. Length of I-leg-4-6: 146, 144, 120. Length of IV-leg-406: 114, 128, 86. Leg claws with large dorsal and ventral clawlets, legs without swimming setae.

Remarks. The female was unknown thus far, and is, therefore, described above.

Distribution. Previously known only from the type locality in Valdivia Province, Chile.

***Rhynchaturus rucuensis* n. sp.**

Zoobank: [505AC1E6-1E16-4370-92E5-998F214D47D1](https://doi.org/10.5053/505AC1E6-1E16-4370-92E5-998F214D47D1)

(Figure 6A-D)

Material examined. Holotype male, Río Rucue, W of Antuco, prov. Biobío, Chile, 37°20.588' S 71°47.817' W, 452 m a.s.l., 8 Dec. 2018 (RMNH). Paratype: one male, same date as holotype (RMNH).

Diagnosis. Male: Dorsal shield with a pair of small platelets posterior to the large central platelets, Cxgl-4 lying in the posteromedial corner of Cx-IV, idiosoma with a pair of large posterolateral glandularia tubercles, genital field with three pairs of acetabula.

Description. Male: Integument less rugose compared to other species of the genus. Idiosoma dorsally 470 (454) long and 397 (413) wide, ventrally 559 (567) long. Dorsal shield with six paired platelets, the anteromedial pair with the postocularia, the posteromedial pair and the two lateral pairs each with a glandularium (Figure 6A). The large central pair is 176 long and is without glandularia, as is the pair of small platelets posterior to the large central platelets. Dorsal projection of camerostome as long as Cx-I. Idiosoma with a pair of large

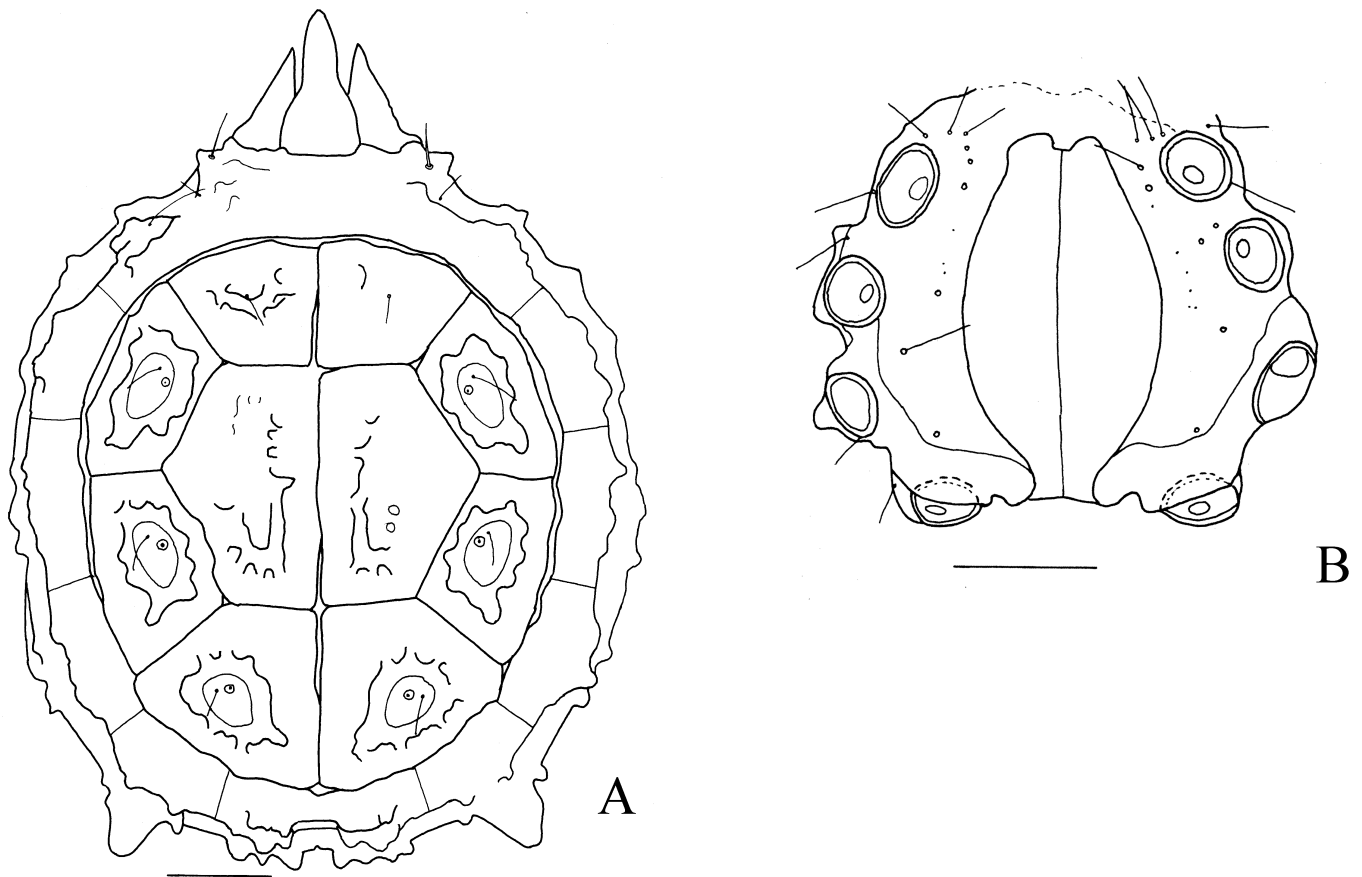


Figure 5 *Rhynchaturus projectus* Cook, female. A – dorsum; B – genital field. Scale bars: A = 100 µm; B = 50 µm.

posterolateral glandularia tubercles. Integument less rugose compared to other species of the genus. Gnathosomal bay U-shaped. Gnathosoma attached to a long protrusible tube. Area between the coxae chitinized. Cxgl-4 in posteromedial corner of Cx-IV. Genital field with three pairs of acetabula. Gonopore occupying only a small area of genital field (Figure 6B), 34 long; genital field 92 long and 120 wide. Length of P1-5: 12, 42, 34, 50, 34. Palp stocky, especially P4; P4 with two anteroventral fine setae, claws of P5 large (Figure 6C). Length of I-leg-4-6: 110, 102, 78. Length of IV-leg-4-6: 130, 162, 120. Leg claws with large ventral and dorsal clawlets, legs without swimming setae (Figure 6D).

Female: Unknown.

Etymology. Named after the type locality, the Rucue River.

Remarks. The species keys out with the key in Cook (1988) as *R. circularis* Cook, 1988, known in the female sex only. Females of the latter species have Cxgl-4 lying in the middle of Cx-IV and the idiosoma shape is circular (more elongated in the new species). The position of Cxgl-4 in the new species differs from all other species, which have these glandularia in the middle of Cx-IV.

***Rhynchaturus tricornis* Cook, 1988**

New record. 0/1/0, unnamed stream at Puente Zargazo, tributary of Río Chamiza, prov. Llanquihue, 41°28.717' S 72°39.700' W, 126 m a.s.l., 15 Dec. 2018.

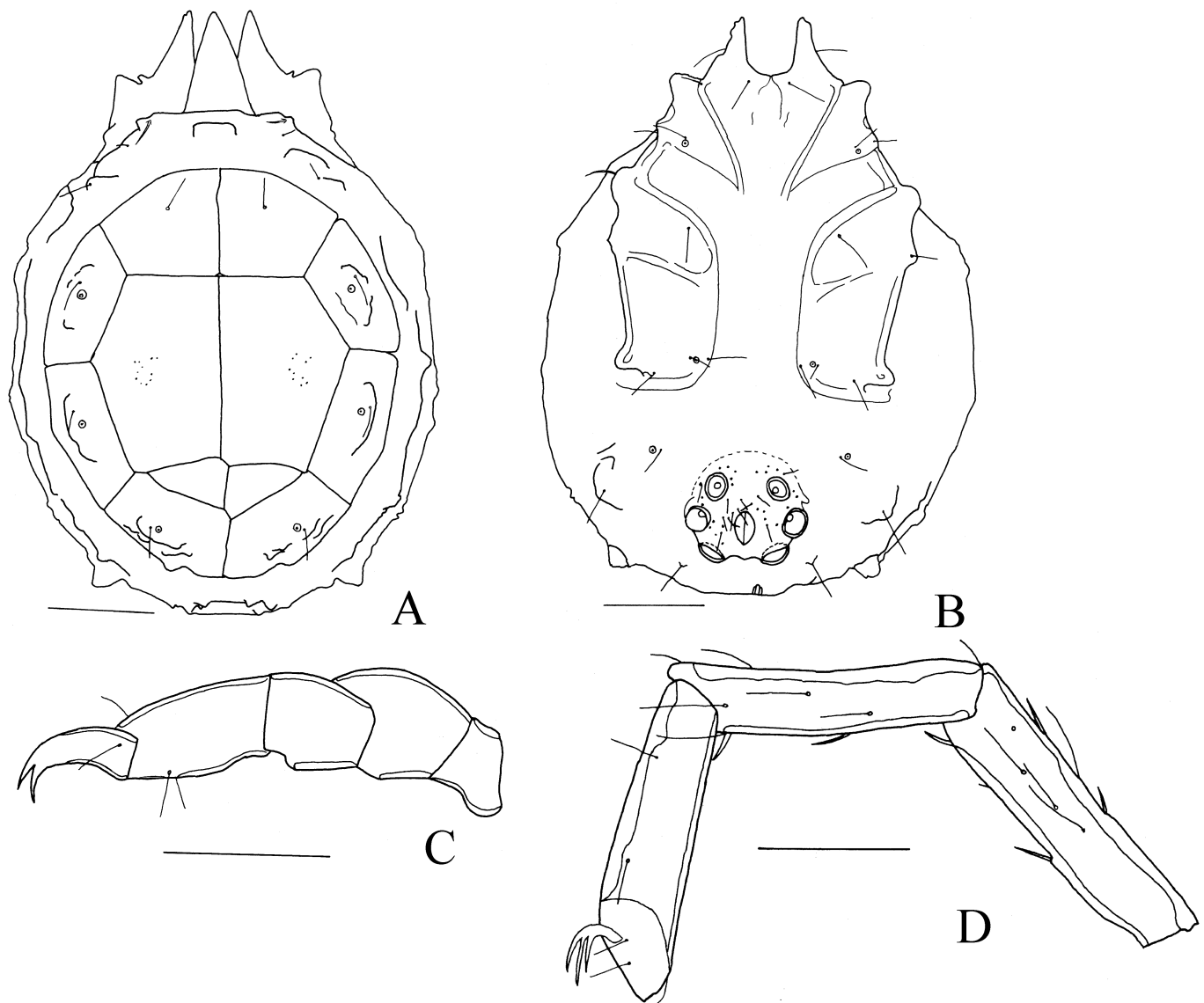


Figure 6 *Rhynchaturus rucuensis* n. sp., holotype male. A – dorsum; B – venter; C – palp; D – I-leg-4-6. Scale bars: A-B = 100 μ m; C-D = 50 μ m.

Remarks. The dorsal projection of the camerostome is irregularly shaped in the specimen of this study. The tip of the projection is bifid and also one of the lateral projections is bifid.

Distribution. Previously known only from the type locality in Valdivia Province, Chile.

Genus *Schizobates* Thor, 1927

A monotypic genus, known from Argentina and Chile.

Schizobates disjunctus (Walter, 1925)

New record. 5/6/0, Lago Blanco, Pumalín NP, prov. Palena, 42°45.076' S 72°36.265' W, 119 m a.s.l., 17 Dec. 2018.

Distribution. Argentina (Cook 1980), Chile (Besch 1964, as *S. meyerusscai* Besch).

Genus *Tetrahygrobatella* Lundblad, 1954

Several species known from Colombia, Argentina and Chile.

***Tetrahygrobatella chilensis* (Besch, 1964)**

New records. 0/2/0, Río Correntoso, E of Pucón, 39°19.256' S 71°52.967' W, prov. Cautín, 411 m a.s.l., 9 Dec. 2018; 0/2/0, stream at Puente el León, tributary of Río Palguin, prov. Cautín, 39°25.055' S 71°46.022' W, 730 m a.s.l., 9 Dec. 2018; 0/5/1, Río Blanco Arenal, at Puente Blanco Arenales, E of Lago Llanquihue, 41°03.081' S 72°39.801' W, prov. Osorno, 75 m a.s.l., 14 Dec. 2018; 0/1/0, Río Puntra, prov. Chiloé, 42°07.180' S 73°48.708' W, 16 m a.s.l., 20 Dec. 2018; 1/6/0, Río Butalcura at crossing with Ruta 5, prov. Chiloé, 42°16.793' S 73°42.500' W, 52 m a.s.l., 20 Dec. 2018; 1/0/1, small stream, Parque Andino Juncal, 32°54.728' S 70°05.833' W, 2425 m a.s.l., 26 Dec. 2018; 1/1/14, unnamed stream, Parque Andino Juncal, prov. Los Andes, 32°53.988' S 70°07.237' W, 2345 m a.s.l., 27 Dec. 2018.

Distribution. Chile, Argentina.

Genus *Zabobates* Cook, 1988

A genus confined to Chile, with three species known.

***Zabobates alphas* Cook, 1988**

New record. 7/8/0, Río Lircay, Reserva Nacional Altos de Lircay, prov. Talca, 35°35.667' S 71°02.199' W, 1342 m a.s.l., 5 Dec. 2018.

Distribution. Chile.

Family Pionidae Thor

Subfamily Pioninae Thor

Genus *Piona* Koch, 1842

A genus occurring worldwide with numerous species known.

***Piona chilensis* K.O. Viets, 1968**

New record. 1/1/0, Lago Blanco, Pumalín NP, prov. Palena, 42°45.076' S 72°36.265' W, 119 m a.s.l., 17 Dec. 2018.

Distribution. Previously known from ponds on Isla Teja near Valdivia (K.O. Viets 1968).

Family Unionicolidae Oudemans

Subfamily Pionatacinae K. Viets

Genus *Koenikea* Wolcott, 1900

A widespread genus with many species known, most species described from South America and Australia. Not known from the Palaearctic.

***Koenikea (Notomideopsis) chilensis* Cook, 1988**

New record. 4/11/0, pool in Estero Granizo, La Campana NP, prov. Marga Marga, 33°00.158' S 71°07.112' W, 437 m a.s.l., 25 Dec. 2018.

Distribution. Previously known from the type locality only in the Cauquenes Province, Chile.

Family Momoniidae K. Viets

Subfamily Momoniinae K. Viets

Genus *Notomomonía* Cook, 1988

A genus restricted to Chile, with three species known.

Notomomonía anchista Cook, 1988

New records. 0/1/0, small stream crossing road W-480, W of Pidpid, prov. Chiloé, 42°23.545' S 73°51.911' W, 100 m a.s.l., 21 Dec. 2018; 5/2/1, Río San Pedro at Puente Puchagran, interstitial, prov. Chiloé, 42°23.676' S 73°52.568' W, 91 m a.s.l., 21 Dec. 2018.

Distribution. Chile.

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