

A new species of *Uristes* Dana, 1849 (Amphipoda: Lysianassoidea: Uristidae) from the Beagle Channel, Argentina

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Abstract.—A new species of *Uristes* Dana, 1849 (Uristidae) collected from shallow waters in the Beagle Channel, Argentina, is described and illustrated. *Uristes yamana* n. sp., the third species of this genus reported for the Magellan area, is closely related to *U. serratus* Schellenberg 1931, principally by the possession of an unusual stout gnathopod 1 propodus. Both species can be separated by telson shape and relative setosity of uropod 3. The geographical distribution of *U. gigas* Dana 1849 is also emended.

The subfamily Uristidinae was created by Hurley (1963) to include the genera of Lysianassidae that had gnathopod 1 subchelate or imperfectly subchelate; Hurley pointed out that this was the unique morphological feature that separated this subfamily from Lysianassinae Hurley, 1963. Bousfield (1983) elevated the Uristidinae to the family rank, but he did not redefine it. De Broyer (1985) gave a new definition of Uristidae, adding other diagnostic characters.

The genus *Uristes* Dana, 1849 comprises 22 known species distributed from the Arctic to Antarctica. They are found in a bathymetric range from 1 to 3015 m, predominating in cold deep seas (Barnard & Karaman 1991). Seven species from the Southern Ocean are present in the Antarctic and/or subantarctic islands (De Broyer & Jażdżewski 1993). Lowry & Bullock (1976) indicated that *U. gigas* Dana, 1849 had been reported from Antarctica and subantarctic islands. They

mentioned as well that this species had been recorded from Paramo (53°01'S, 68°16'W) in the Magellanic area by Schellenberg; however, neither of Schellenberg's records nor other amphipod publications list *U. gigas* as occurring in the Magellanic area.

Two species, *Uristes serratus* Schellenberg, 1931 and *U. subchelatus* (Schellenberg 1931) are only known from the Magellan area. The first species was reported from southern Chile and Islas Malvinas, and the second from southern Chile. Both species were recorded in shallow waters. A new species of *Uristes* is described and illustrated herein from the Beagle Channel, Argentina. Its relationships with the Magellanic species are noted and, in addition, it is compared morphologically with type material of *U. serratus*, its most closely related taxon.

Materials and Methods

This study is based upon materials obtained from the Beagle Channel, in

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the Argentine sector. The specimens from Isla Lucas and Península Ushuaia were collected from shallow depths with a snapper dredge and a Van Veen dredge, respectively. One specimen was obtained from a kelp holdfast of *Macrocystis pyrifera* (Linnaeus) C. Agardh, 1820.

The type material of *Uristes serratus* Schellenberg, 1931 was borrowed from the Swedish Museum of Natural History, Stockholm, Sweden (SMNH) for taxonomic comparisons. An ovigerous female and three juveniles from Hope Harbour (54°08'S, 71°01'W), Chile, from 11–18 m depth, only loaned for general examination, were observed with a Leica MZ8 stereo microscope.

The specimen associated with *Macrocystis pyrifera* was prepared for SEM.

The lower lip of the holotype was damaged during dissection, thus it was not figured. The right pereopod 7 of the holotype was broken, so the appendage from the left side was illustrated.

The terminology of setae adopted in this contribution follows that of Watling (1989) and Lowry & Stoddart (1995).

The holotype, from Isla Lucas, six paratypes from Península Ushuaia and the paratype from the holdfast are deposited in the Museo Argentino de Ciencias Naturales "Bernardino Rivadavia," Buenos Aires, Argentina (MACN-In). One paratype from Isla Lucas and three paratypes from Península Ushuaia are deposited in the Museo de La Plata, Argentina (MLP).

Superfamily Lysianassoidea Dana, 1849

Family Uristidae Hurley, 1963

Genus *Uristes* Dana, 1849

Uristes yamana, new species

Figures 1–6

Uristes serratus: Chiesa, et al., 2005:170 (non *Uristes serratus* Schellenberg, 1931).

Holotype.—Ovigerous female 8.2 mm (MACN-In 37099), Beagle Channel, Isla Lucas, 54°50'S, 68°19'W, 17 m depth, 10 Dec 1997, coll. G. Lovrich.

Paratypes.—1 immature male, 6.9 mm (MLP 26111), same data as holotype; 3 specimens of unknown sex 2.7–3.9 mm (MLP 26112), Beagle Channel, Península Ushuaia, 54°51'S, 68°19'W, 5–10 m depth, 27 Oct 1996, coll. D. Roccatagliata; 2 immature males, 4.7–6.5 mm, 1 immature female, 5.0 mm, 3 specimens of unknown sex 4.6–5.8 mm (MACN-In 37100), Beagle Channel, Península Ushuaia, 54°51'S, 68°19'W, 5–10 m depth, 27 Oct 1996, coll. D. Roccatagliata; 1 ovigerous female 9.3 mm (MACN-In 37101), Canal Beagle, north of Isla Despard, 54°52'S, 68°10'W, 8–12 m depth, associated with *Macrocystis pyrifera* holdfast, 29 May 2000, colls. D. Aureliano and A. Ferlito, don. G. Lovrich.

Diagnosis.—Head length subequal to that of pereonite 1. Eyes absent. Lateral cephalic lobe subtriangular. Antenna 1 without callynophore; accessory flagellum with 7 articles. Antennae 1 and 2 bearing calceoli. Maxilliped, outer plate bearing 10 nodular setae. Gnathopod 1, carpus short, cup-like, embracing base of following article; propodus much more longer, subovate, with distinct palm. Pereopods 5–7, basis with crenellate posterior margin. Epimeron 3, posteroventral corner produced; posterior margin oblique, bearing symmetrical serrations on distal part and an asymmetric arrangement above. Uropod 3, inner ramus with only 1 simple seta proximally. Telson, apices lobate, rounded.

Description.—Based on ovigerous female holotype, body length 8.2 mm and ovigerous paratype, body length 9.3 mm. Body laterally compressed, smooth dorsally. Color light yellow in alcohol. Head deeper than long, subequal in length to pereonite 1, without rostrum; lateral cephalic lobe subtriangular, with apex rounded. Eyes absent (Figs. 1B, 6H).

Antenna 1 (Fig. 1A1) shorter than 2, reaching flagellum article 2 of the latter, without callynophore. Peduncular article

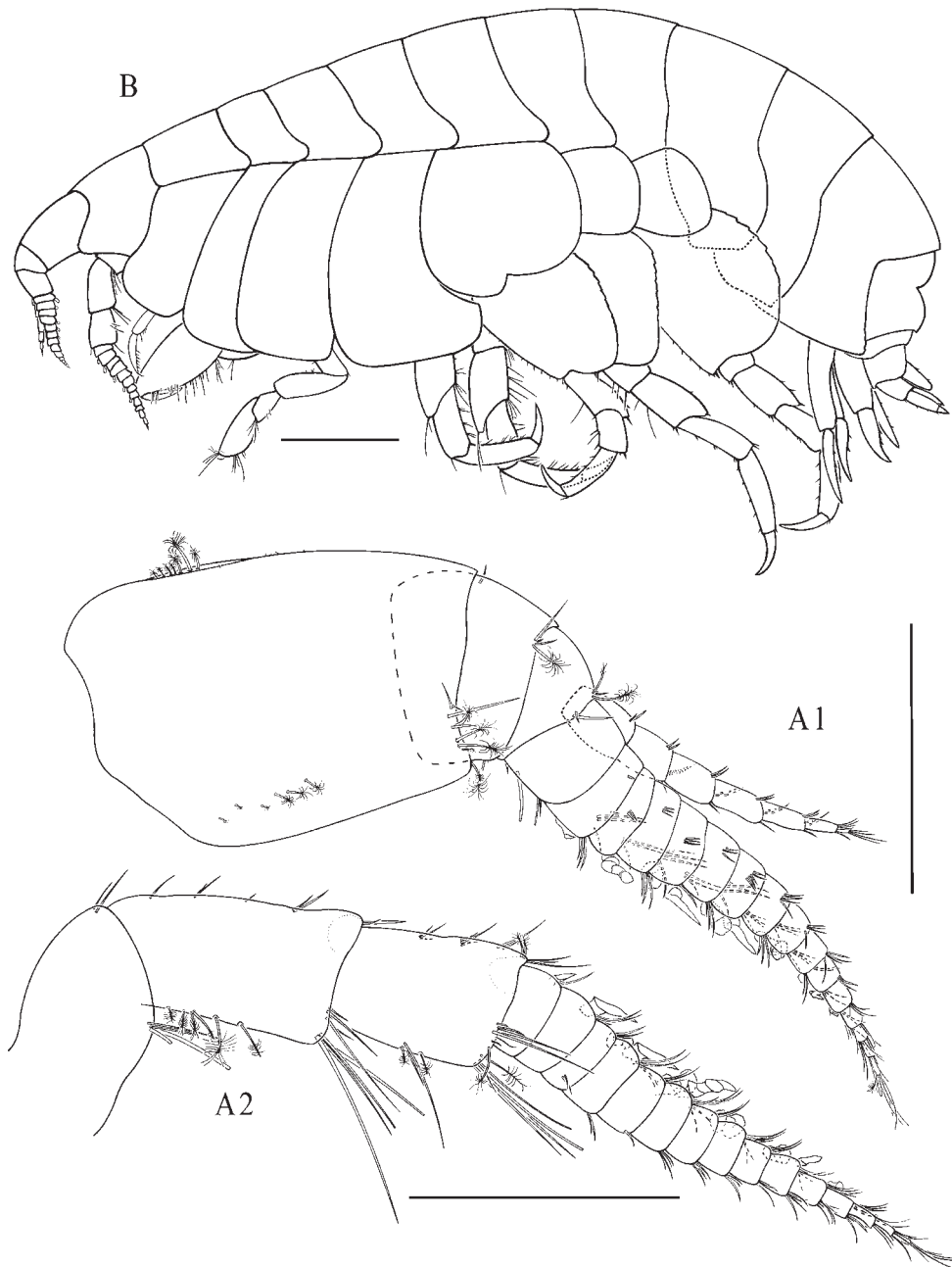


Fig. 1. *Uristes yamana*. Holotype, female 8.2 mm. B, lateral view. A1, antenna 1. A2, antenna 2. Scales: 1 mm (B); 0.5 mm (A1, A2).

1 long, 1.5 times as long as wide, anterior margin bearing penicillate setae on proximal part, posterior surface with penicillate setae on proximal half, posterodistal corner with penicillate and simple setae,

one of latter very long, reaching distal margin of following article; article 2 short, 0.2 times as long as preceding article, twice as wide as long, with short proximal simple seta on anterior margin,

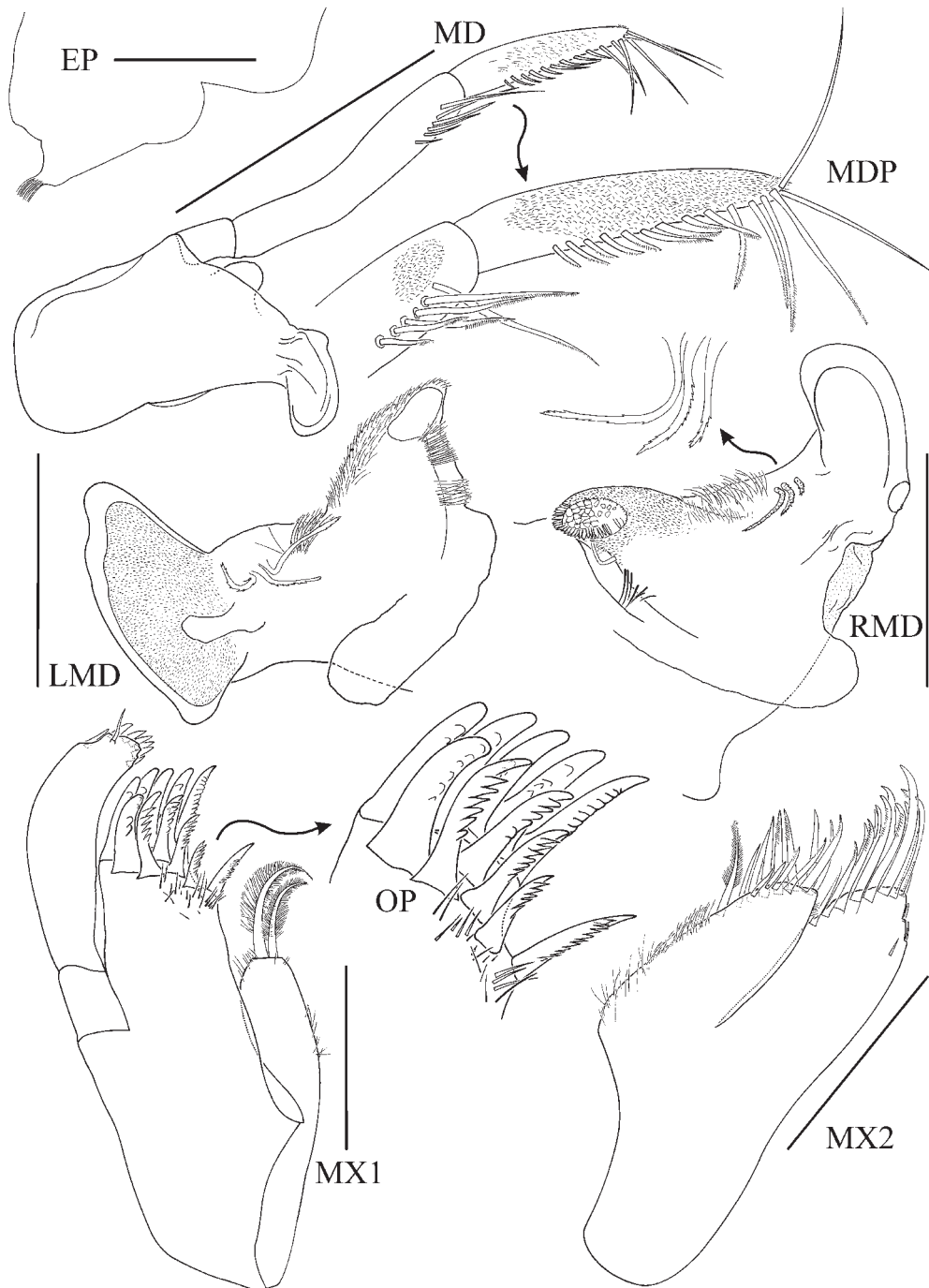


Fig. 2. *Uristes yamana*. Holotype, female 8.2 mm. EP, epistome. MD, general view of right mandible. MDP, palp of right mandible. LMD, left mandible. RMD, right mandible. MX1, maxilla 1. OP, outer plate of maxilla 1. MX2, maxilla 2. Scales: 0.5 mm (MD); 0.2 mm (EP, LMD, RMD, MX1, MX2).

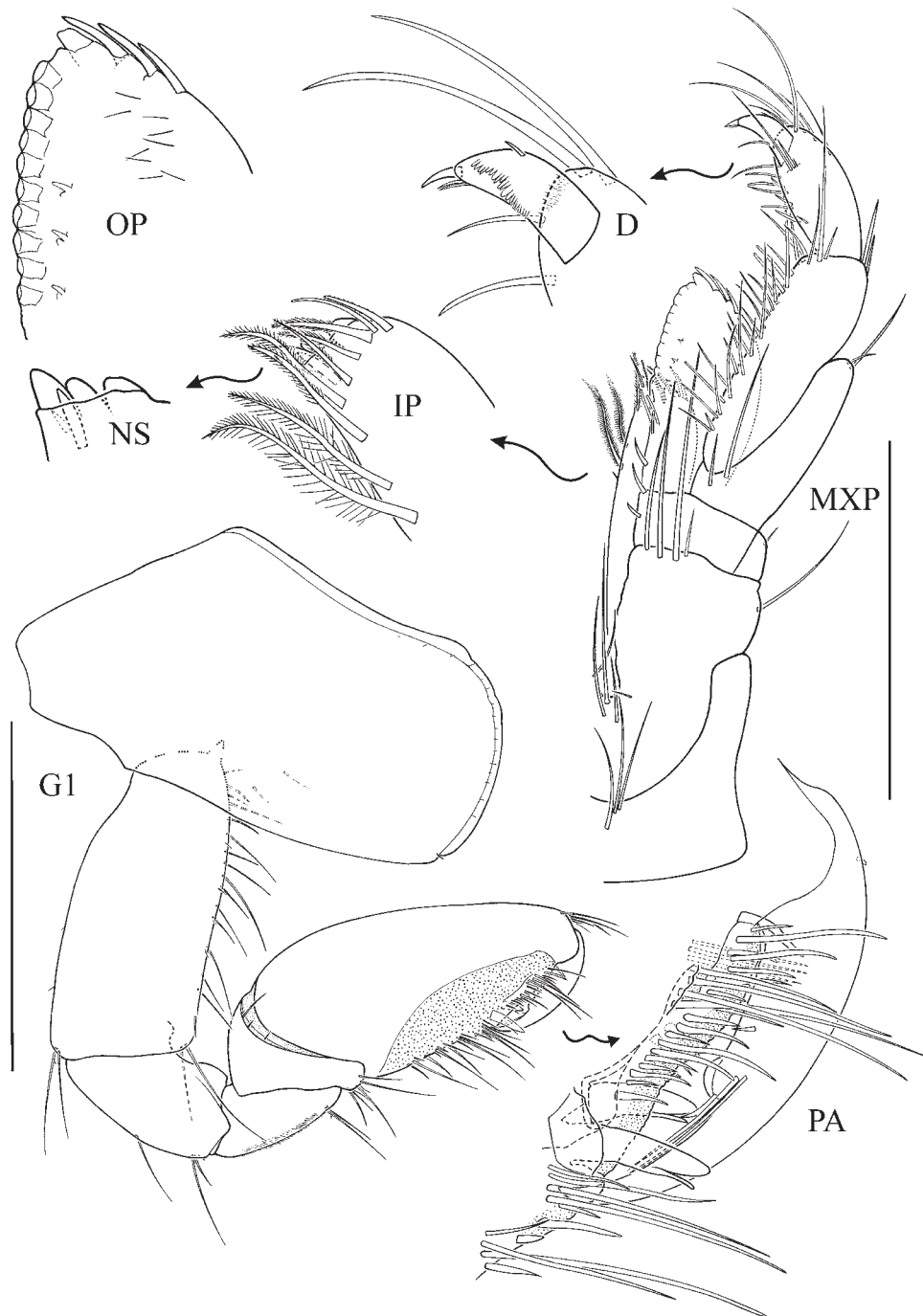


Fig. 3. *Uristes yamana*. Holotype, female 8.2 mm. MXP, maxilliped. IP, inner plate of maxilliped. OP, outer plate of maxilliped. NS, nodular setae of inner plate. D, dactylus of maxilliped. G1, gnathopod 1. PA, palm of gnathopod 1. Scales: 1 mm (G1); 0.5 mm (MXP).

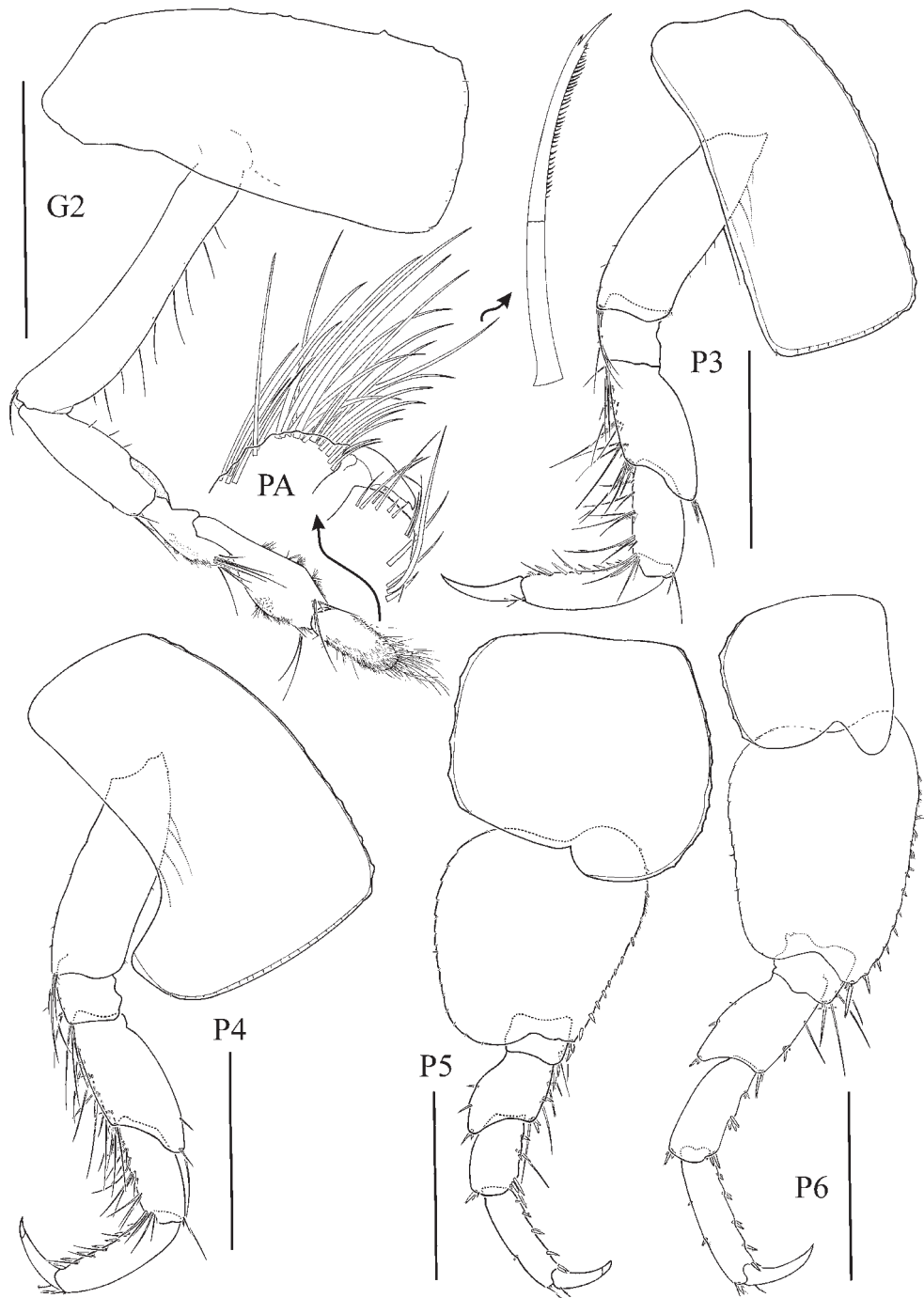


Fig. 4. *Uristes yamana*. Holotype, female 8.2 mm. G2, gnathopod 2. PA, palm of gnathopod 2. P3, pereopod 3. P4, pereopod 4. P5, pereopod 5. P6, pereopod 6. Scales: 1 mm (G2, P3–P6).

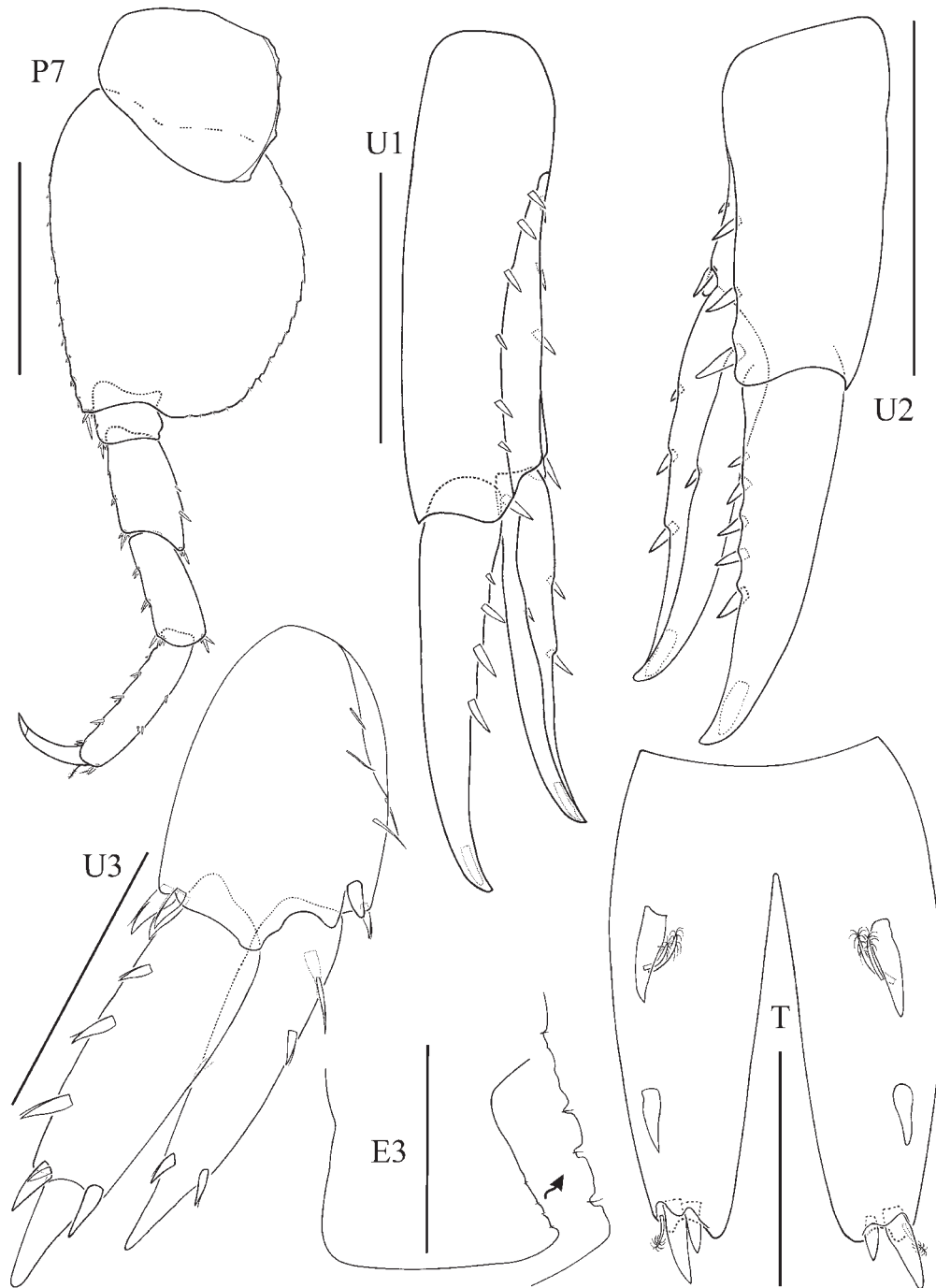


Fig. 5. *Uristes yamana*. Holotype, female 8.2 mm. P7, pereopod 7. U1, uropod 1. U2, uropod 2. U3, uropod 3. E3, epimeron 3. T, telson. Scales: 1 mm (P7, E3); 0.5 mm (U1, U2); 0.3 mm (U3); 0.2 mm (T).

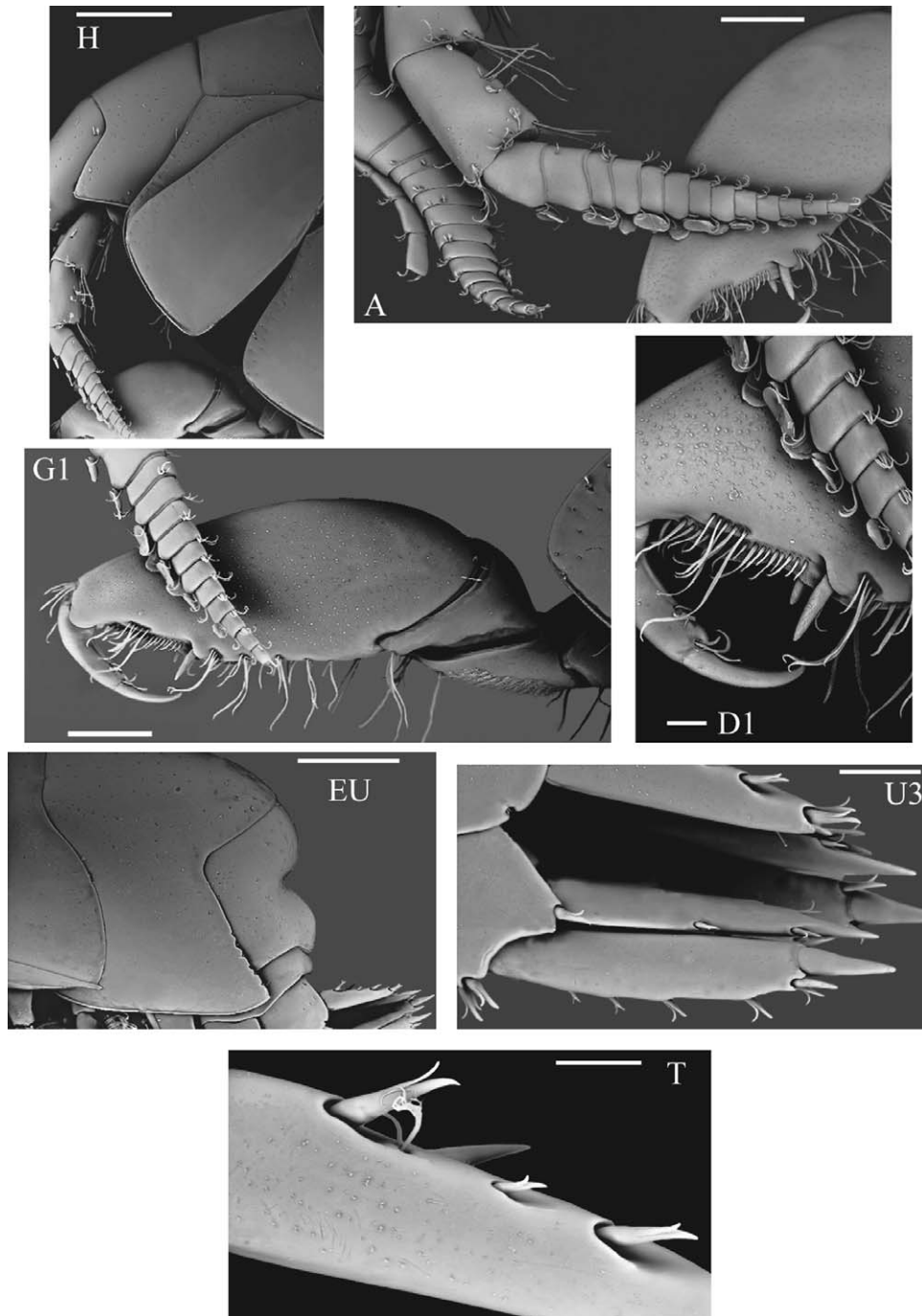


Fig. 6. *Uristes yamana*. Paratype, female 9.3 mm. H, head. A, antennae 1 and 2. G1, gnathopod 1. D1, dactylus of gnathopod 1. EU, epimera (1 and 2) and urosome. U3, uropod 3. T, telson. Scales: 500 μm (H, EU); 200 μm (A, G1); 100 μm (U3); and 50 μm (D1, T).

1 penicillate seta and simple setae on anterodistal corner, posterior margin with 1 penicillate seta; article 3 subtriangular, with anterior margin slightly shorter than that of article 2 and posterior margin covered by this latter article, anterodistal corner with 3 setae (1 plumose, 1 simple and 1 penicillate), distal margin with simple setae, posterodistal angle bearing 1 small simple seta; accessory flagellum with 7 articles; primary flagellum composed of 16 setose articles; article 1 with 1 aesthetasc on posterior margin, last article bearing 1 terminal aesthetasc; articles 2–12, each bearing one calceolus on posterior margin (Fig. 6 A). Antenna 2 (Fig. 1A2) as long as two first and half of following pereonites combined; article 4 of peduncle 1.2 times as long as article 5, both articles slightly broadened on distal part, article 4 bearing penicillate and plumose setae on posterior margin; article 5 with penicillate setae on posterodistal and anterodistal angles, and on posteromedial margin; articles 4 and 5 with short simple setae on anterior margin and long simple setae on posterodistal corner; flagellum composed of 15 articles; articles 1–11, each bearing 1 calceolus on anterior margin (Fig. 6A, G1).

Mouthpart bundle subquadrate. Epistome and upper lip of medium size, separated by a sinus; upper lip rounded, epistome dominant (Fig. 2EP). Mandibles prominent (Fig. 2MD); incisors broad, with apical margin convex and smooth; left lacinia mobilis digitiforme (Fig. 2LMD), right absent (Fig. 2RMD); accessory setal row with 3 serrate robust setae; molar subconical, finely setose, slightly triturative; palp attached opposite molar (Fig. 2MDP), article 2 elongate, 1.6 times as long as article 3, bearing 6 posterodistal setae, article 3 with posterior margin ornamented by 9 medial setae, 3 subapical setae and 3 long apical setae, anterior margin with patch of minute setae distally. Maxilla 1 (Fig. 2MX1), inner plate subrectangular, narrow, with

2 terminal pappose setae of different lengths; outer plate (Fig. 2OP) with fine setae over distal surface of inner margin and 11 apical toothed setae, arranged into a $7/4$ crown; palp biarticulate, large, overreaching setae of outer plate, with 6 terminal robust setae, 1 subterminal simple seta and 1 narrower robust seta on distolateral corner. Maxilla 2 (Fig. 2MX2) large; inner plate slightly shorter than outer, ornamented by medium length and shorter terminal and medial setae, and 1 larger medial pappose seta; outer plate broader, bearing many apical setae of different lengths and width, and 2 small apicolateral setae on outer margin. Maxilliped (Fig. 3MXP), inner plate subrectangular with 3 apical nodular setae (Fig. 3NS), oblique row of 7 pappose setae and 2 apicolateral simple setae (Fig. 3IP); outer plate large, sub-oval, bearing 10 small nodular setae medially and 3 min setae among the proximal first 5 nodular setae, 1 tooth-like apical robust seta, and 3 long and narrow apical setae, curved over the distal margin of the plate (Fig. 3OP); palp stout, 4-articulate; article 2 elongate, 1.7 times as long as article 3, inner margin moderately setose; article 3 with lateral, apical and facial setae; dactylus small, narrow, curved, 0.4 times as long as article 3, facially scabrous, bearing terminal unguis and 2 small subapical simple setae on inner margin (Fig. 3D).

Gnathopod 1 subchelate (Figs. 3G1, 6G1); coxa subrectangular, 1.8 times as long as wide, partially covered by coxa 2, anterior margin slightly concave, posterior margin almost straight, ventral margin convex bearing minute setae, posteroventral margin with 1 small seta in notch; basis 0.6 times as long as coxa, twice as long as wide, slightly expanded distally, anterior margin with simple setae of different lengths, posterior margin almost naked, distal corners bearing long setae; ischium 0.6 times as long as basis, posterior margin scarcely setose; merus

subtriangular, shorter than ischium, posterior margin finely setose, with subdistal setae of different lengths; carpus short, cup-like, embracing base of propodus, with posterodistal margin lobed and setose; propodus stout, slightly longer than basis, anterior margin longer than posterior, naked, except distal angle with bunch of setae, posterior margin with groups of setae of different lengths, palm (Figs. 3PA, 6G1) somewhat oblique and sinuous, ornamented by groups of submarginal setae, 1 large robust seta on palmar corner and 1 medium size robust seta situated near and distal to it; dactylus stout (Fig. 6D1), fitting on palmar corner, inner margin with hump-like medial process and 3 simple setae in close proximity. Gnathopod 2 (Fig. 4G2), coxa longer than coxa 1, partially covered by coxa 3, twice as long as wide, ventral margin almost straight with minute setae, posteroventral corner with small seta in notch; basis narrow, 0.7 times as long as coxa, anterior margin setose, posterodistal corner with 2 setae; ischium 0.5 times as long as basis, anterior margin and posterodistal corner bearing few setae; merus shorter than ischium, posterior margin finely setose and with few long setae on distal corner; carpus almost as long as ischium, anterior margin with 3 groups of many short setae and submarginal setae on its distal corner, posterior margin finely setose, with few small and longer setae on distal part; propodus subrectangular, 0.6 times as long as carpus, both margins and surface densely setose, each seta distally bifid and with minute setae on inner margin, palm (Fig. 4PA) oblique, minutely denticulate, with submarginal setae; dactylus small, bearing facial setae, inner margin crenellate, with subdistal broad process.

Pereopod 3 (Fig. 4P3), coxa slightly larger than coxa 2, partially covered by coxa 4, twice as long as wide, ventral margin almost straight, bearing minute setae, posteroventral margin with 1 small

seta in notch; basis almost half length of coxa, anterior margin setose, posterior margin with short subdistal setae and long setae on distal corner; merus 0.7 times as long as basis, expanded anteriorly, anterodistal lobe somewhat produced over following article, bearing setae of different sizes, posterior margin setose; carpus slightly shorter than merus, anterodistal and posterodistal corners with setae, posterior margin bearing groups of setae; propodus 0.7 times as long as basis, posterior margin with short robust setae all along its length and 2 simple setae on distal half; dactylus long, with proximal penicillate seta on anterior margin. Pereopod 4 (Fig. 4P4), coxa somewhat larger than coxa 3, with posteroventral lobe, ventral margin almost straight with minute setae; remaining articles similar to those of pereopod 3, but with posterior margins ornamented by more numerous setae. Pereopod 5 (Fig. 4P5), coxa somewhat wider than long, anterior margin expanded, with broad ventral lobe; basis slightly longer than wide, anterior margin straight, oblique, finely setose on proximal part and with short robust setae all along its length, posterior margin expanded, crenellate, bearing 1 min seta in each notch; merus expanded posteriorly with lobe covering part of carpus, posterior margin bearing short robust setae, anterior margin with short robust and long simple setae; carpus slightly shorter than merus, anterior margin with short robust setae and 1 long medial simple seta, posterodistal corner bearing robust setae; propodus 0.7 times as long as carpus and merus combined, with 1 small medial seta on posterior margin, posterodistal setae and robust setae on anterior margin; dactylus elongate, but shorter than on pereopods 3 and 4, with proximal penicillate seta on outer margin. Pereopod 6 (Fig. 4P6), coxa quadrate, smaller than coxa 5, anterior margin almost straight, bearing ventral lobe; basis 1.3 times as long as wide, anterior margin finely setose

proximally and with short robust setae all along its length, posterior margin crenellate, bearing setae in notches; remaining articles similar to those of pereopod 5 but slightly longer and with merus anterior margin less setose. Pereopod 7 (Fig. 5P7), coxa small, subrounded; basis 1.3 times as long as wide, anterior margin almost straight with short robust setae, posterior margin expanded, evenly rounded, bearing more well-defined crenellations than on preceding two pairs of appendages, provided with minute setae inserted in notches; remaining articles like those of pereopods 5 and 6, but merus less expanded posteriorly and posterodistal lobe smaller.

Gills present on coxae 2–7. Oostegites on coxae 2–5.

Pleopods 1–3 subequal in length; peduncle with pair of locking spines; outer and inner rami with 15 and 13 articles, respectively.

Epimera 1–3 gradually increasing in size (Fig. 1B). Epimeron 1 posteriorly rounded. Epimeron 2 subrectangular, ventral margin slightly rounded, with posteroventral corner acute (Fig. 6EU). Epimeron 3 subquadrate, produced posteroventrally into an obtuse corner; whole posterior margin oblique, bearing 3 symmetrical crenellations on distal part with 1 small seta each, and slight undulations somewhat irregularly situated medially (Figs. 5E3, 6EU).

Urosomite 1 with sinus on medial dorsal part and distal dorsal hump (Figs. 1B, 6EU). Uropod 1 longer than uropod 2 and this latter longer than uropod 3 (Fig. 1B). Uropod 1 (Fig. 5U1), peduncle 1.3 times as long as outer ramus, with 6 dorsolateral robust setae, 1 larger apicolateral robust seta, 3 dorsomedial and 1 apicomедial robust setae; outer ramus a little longer than inner ramus, bearing 4 dorsolateral robust setae; inner ramus with 2 dorsolateral and 1 dorsomedial robust setae. Uropod 2 (Fig. 5U2), peduncle somewhat shorter than outer

ramus, with 2 dorsolateral robust setae, 1 larger apicolateral robust seta, 1 dorsomedial and 1 apicomедial robust setae; outer ramus slightly longer than inner ramus, bearing 5 dorsolateral robust setae; inner ramus with 3 dorsolateral and 1 dorsomedial robust setae. Uropods 1 and 2, outer and inner rami with terminal unguis apparently immersed. Uropod 3 (Fig. 5U3), peduncle shorter than inner ramus, 1.5 times as long as wide, with 4 dorsomedial simple setae, 2 apicomедial robust setae, 1 apicolateral and 2 distoventral robust setae; outer ramus biarticulate, article 1 with 3 lateral robust setae, 2 apicolateral and 1 apicomедial robust setae; article 2 medium length, 0.4 times as long as article 1, naked; inner ramus with 3 lateral robust setae, 1 proximal dorsolateral simple seta and 2 dorsomedial robust setae (Fig. 6U3).

Telson (Fig. 5T) extending to half length of uropod 3 inner ramus, 1.4 times as long as wide, deeply cleft, 77% of total length; each lobe with two dorsal medial penicillate setae and 2 dorsal robust setae, proximal robust seta the largest; apices lobate, excavate medially, each one bearing 1 lateral penicillate seta and 2 robust setae of different lengths. Paratype 9.3 mm length, telson with each lobe bearing 3 dorsal robust setae, middle one the smallest (Fig. 6T).

Paratypes immature males as females, without callynophore in antenna 1 or other sexual dimorphic morphological characters.

Etymology.—The specific name, a noun in apposition, refers to the Yámana aborigines, who lived in the Fuegian channels.

Remarks.—Barnard (1962) pointed out that among *Uristes* species there are intergrades in the slope of the palm of gnathopod 1, from completely transverse, through intermediate grades of obliquity, to poorly defined palm or palm absent. He added that *Uristes serratus* Schellen-

berg, 1931 probably belonged to some other genus because of the expanded propodus of gnathopod 1, a feature absent in the remaining known species of *Uristes*. However, since then (Barnard 1962), no more revisions of *Uristes* have been made, and *U. serratus* is still considered a valid member of the genus. The new species, *Uristes yamana*, is closely related to *U. serratus* principally by the large size of propodus gnathopod 1, almost identical in shape and size in both species.

The new species herein described had been identified as *Uristes serratus* by Chiesa et al. (2005). Subsequently, based upon the examination of the type material of *Uristes serratus*, we noted that our species was different from it. Moreover, we also observed that the palm and posterior margin of propodus gnathopod 1 of *U. serratus* are distinct, whereas Schellenberg (1931) indicated in his description and illustrations that both palm and posterior margin were not distinguishable.

The type ovigerous female of *Uristes serratus* has gnathopod 1 palm of propodus slightly oblique, somewhat undulated with two teeth defining the palmar angle. *Uristes yamana* displays a similar palm. Other similarities between the species are: head with lateral cephalic lobe subtriangular, antennae 1 without callynophore, antennae 1 and 2 with calceoli, and general shape of epimeron 3 quadrate and with posteroventral corner produced.

Uristes yamana can be separated from *U. serratus* by the following morphological features: the epimeron 3 has the whole posterior margin more oblique, and the posteroventral crenellations are more symmetrical and noticeable. The inner ramus of uropod 3 bears only one dorsolateral simple seta on its proximal part, whereas in *U. serratus* all the margin is covered with long setae. The telson in the holotype and in almost all the

paratypes of *U. yamana* is characterized by the presence of two dorsal robust seta on each lobe and two on each apex; in *U. serratus* the telson has three dorsal and three apical robust setae; only one paratype, body length 9.3 mm (prepared for SEM), had three dorsal robust setae on each lobe. Another important difference between the species is the shape of the telsonic apices, which are shallowly excavated, forming two lobes in *U. yamana*, whereas these are truncated and incised in *U. serratus*. The ovigerous female described herein is rather smaller than the ovigerous female of *U. serratus* described by Schellenberg (1931), which would indicate that *U. yamana* has a smaller maximum size.

Uristes yamana is distinguished from the other Magellanic species, *U. subchelatus* (Schellenberg 1931), because this latter has propodus gnathopod 1 small, with palm more oblique; carpus gnathopod 1 elongate; pereopod 5, basis with posterior margin showing a strong slope; epimeron 3 with posterior margin rounded on distal half and smooth, and telson elongate and ornamented by different numbers of robust setae.

The shape of gnathopod 1 and the absence of callynophore in antenna 1 of *Uristes yamana* and *U. serratus* ovigerous females, are, perhaps, sufficiently distinct morphological character states to include these two species in a new genus. However, the redescription of *U. serratus*, which must be based on newly collected material as the types cannot be dissected, and a general revision of *Uristes* are both needed before the designation of a new genus should be undertaken.

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