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### On two allied species of the genus *Diastylis* from southern South America: *D. granulata* Zimmer, and *D. argentata* Calman, (Crustacea: Cumacea: Diastylidae)

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# On two allied species of the genus *Diastylis* from southern South America: *D. granulata* Zimmer, 1921 and *D. argentata* Calman, 1912 (Crustacea: Cumacea: Diastylidae)

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## Abstract

The adult male and female of *Diastylis granulata* Zimmer, 1921 are herein described on the basis of specimens collected near its type locality. This species was previously known from a single subadult male collected south of the Río de la Plata mouth (Argentina) during the Swedish *Eugenie* Expedition (1851–53), and has not been reported again since its original description. An allied species, *Diastylis argentata* Calman, 1912, is briefly redescribed and its northern limit of distribution extended to Puerto Montt (Chile). These two species can be easily distinguished by the arrangement of their carapace sculptures: *D. granulata* bears an arched row of teeth that ends on each anterolateral horn, whereas in *D. argentata* this row of teeth extends backwards without reaching the anterolateral horn. SEM photographs showing the carapace sculpturing of these two species are provided.

**Keywords:** Argentina, Chile, Cumacea, *Diastylis argentata*, *Diastylis granulata*

## Introduction

The original description of *Diastylis granulata* Zimmer, 1921 is based on a partially damaged subadult male obtained south of the Río de la Plata mouth (Argentina) at 94 m depth, during the voyage of the Swedish frigate *Eugenie* around the world (1851–53). This species has not been recorded again since then.

A few years before Zimmer's 1921 publication, Calman (1912) had described *Diastylis argentata* on the basis of many males and females obtained in the Golfo de Penas (Chile) at 112 m depth by the Fisheries Commission Steamer *Albatross*. More recently, specimens of *D. argentata* were collected mainly in the Beagle Channel at 110–665 m during the Magellan *Victor Hensen* campaign in 1994 (see Brandt et al. 1999; Mühlenhardt-Siegel 1999).

Zimmer (1921) stated that *D. granulata* and *D. argentata* are two closely allied species and that the carapace sculpture is more developed in the latter. However, the lack of adult

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males and ovigerous females of *D. granulata* prevented Zimmer from clearly defining the differences between these two species.

Further specimens of *D. granulata* (including three adult males and one ovigerous female) collected more than a century after the original description, also off the Argentinean coast, are now available, and a detailed description of the adults of this species is provided. In addition, to facilitate comparisons, a brief redescription of *D. argentata* based on recently collected specimens from Chile is presented in this study.

## Materials and methods

This study is based on specimens collected in the Magellan Straits by the RV *Victor Hensen* during the Joint Magellan Campaign in 1994, and also on specimens obtained during cruises carried out in the Argentine Sea by the FRVs *Shinkai Maru* and *Walther Herwig* in 1978, and the RV *Cap. Oca Balda* in 1995. Some additional material obtained in the Beagle Channel (Argentina) and off Puerto Montt coast (Chile) by individual researchers was also examined.

The sample collected by the RV *Victor Hensen* was returned to the Zoological Museum of Hamburg (ZMH), all the remaining specimens herein studied were deposited in the invertebrate collection of the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” (MACN).

The illustrated specimens were stained with Chlorazole Black E®. Habitus drawings were prepared using a Leica MZ8 stereomicroscope equipped with a camera lucida. After dissection, appendages were mounted in glycerin and drawn using a Carl Zeiss Axioscop compound microscope, also equipped with a camera lucida.

Specimens for scanning electronic microscopy were cleaned with 0.5% nonionic detergent Triton® X100, ultrasound, dehydrated through a graded series of ethanol, critical-point dried, gold-palladium sputter coated, and observed with a Philips XL30 TMP microscope.

Total length was measured from the tip of the pseudorostrum to the end of the telson. The telsonic preanal and postanal parts were measured with the specimen in ventral view: the former includes the anal valves and in the latter the distal setae were omitted. For the sake of clarity, in the exopods of maxilliped 3 and pereopods 1–3 only one row of setae is shown and, in turn, the setules of only one of these setae are illustrated.

We applied the following terminology for the different types of setae: *simple setae* completely lack outgrowths on their setal shaft; *setulate setae* have setulae along their shafts that may show different arrangements: two strict rows on opposite sites of the shaft (giving the setae a feather-like appearance), emerging randomly around the shaft, or presenting an array in between these two forms; *serrate setae* have one or two rows of denticles in their distal half; *setuloserrate setae* have setules on their proximal half and denticles on their distal half; *serrulate setae* have one or two rows of short and extremely thin setules in their distal half; *cuspidate setae* are spine-like; *broom setae* are tiny, have a pedestal and extremely thin setules distally; and *annulate setae* are simple (rarely barely setulate) and have a distinct internal spiral structure in their distal half.

### *Diastylis granulata* Zimmer, 1921

(Figures 1–8B, 9A–C)

*Diastylis granulata* Zimmer 1921, p 5–8, Figures 4–6 (original description; type locality: Argentina, “südlich der Platomündung aus einer Tiefe von 94 m”); Băcescu 1992, p 291–292 (catalogue).

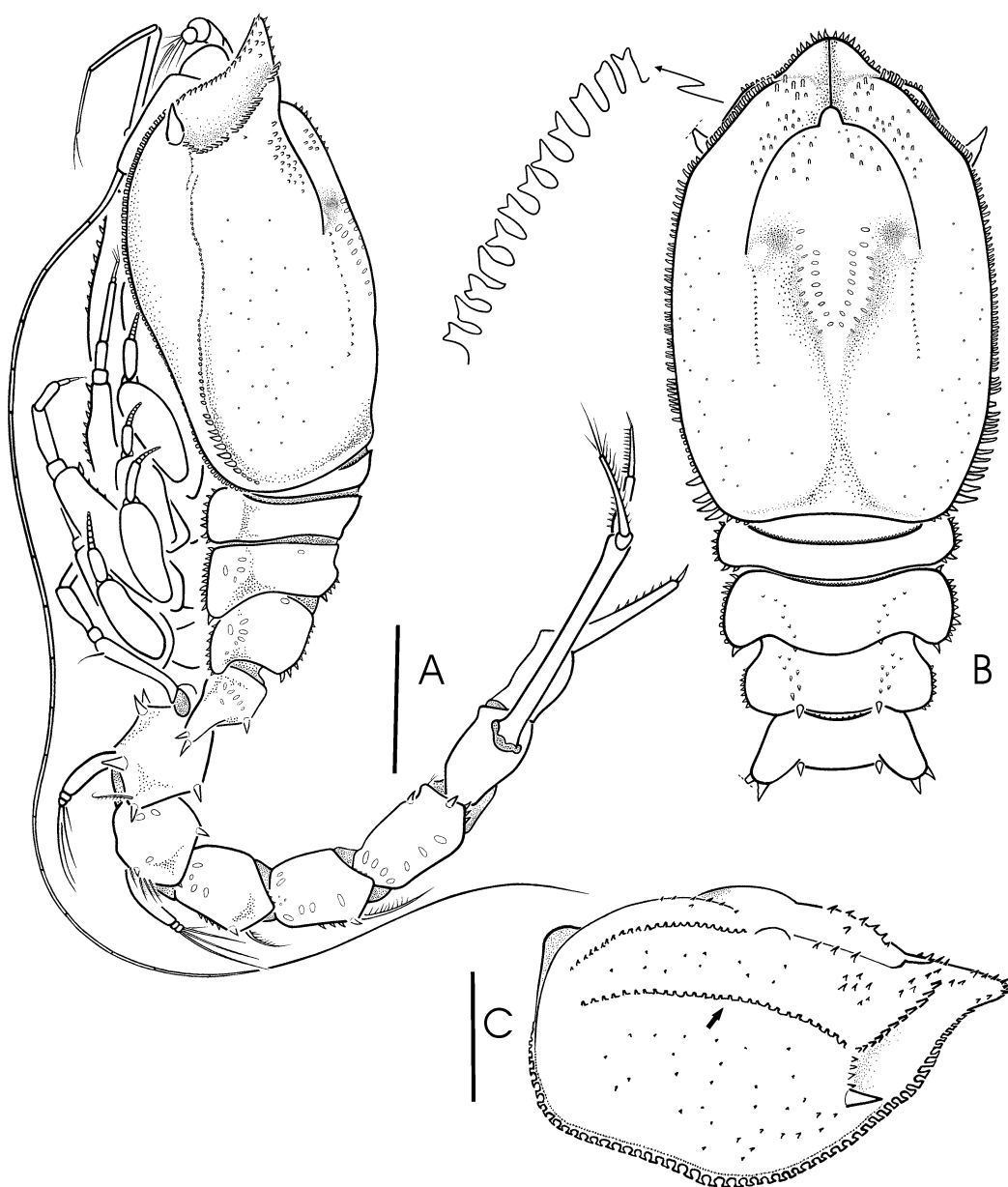


Figure 1. *Diastylis granulata* Zimmer, 1921. (A, B) Adult male (MACN-In 37152a): (A) habitus in lateral view; (B) carapace and pereon in dorsal view, and a detail of the arched row of teeth. (C) Juvenile (MACN-In 37154): carapace in lateral view, arrow points to the "supplementary" row of teeth. Scale bars: 1 mm (A–C).

#### Material examined

Argentina: FRV *Walther Herwig*, Sta. WH I-691, 40°27.3'S, 58°12.5'W, 85 m, 25 June 1978, three adult ♂♂ (MACN-In 37152a, b, c). FRV *Shinkai Maru*, Sta. SM V-19, 40°30.5'S, 58°30.0'W, 88 m, 27 August 1978, one ovigerous ♀ (MACN-In 37153); Sta. SM VI-18, 41°59.0'S, 61°58.5'W, 61 m, 27 September 1978, two juveniles (MACN-In

37154); RV *Cap. Oca Balda*, OB-03/95, Sta. 206 (Sta. Nackthai 57), 45° 01'S, 62° 46'W, 92 m, 21 February 1995, one subadult ♂ (mounted on a stub for SEM, MACN-In 37155); Sta. SM X-59, 46°30.0'S, 61°30.0'W, 122 m, 24 January 1979, two subadult ♂♂, one preparatory ♀ (MACN-In 37156).

*Description of the adult male (MACN-In 37152a, b)*

Total length 9.3 mm (this measure is rather unsatisfactory because the pleon is arched).

*Carapace* (Figure 1A, B). Surface whitish and brittle, with small tubercles all over, more abundant and developed on frontal and pseudorostral lobes. Width approximately two-thirds its length. Inferior margin with a row of teeth, resembling a crenellated parapet. Sides of carapace with: (1) an anterolateral horn (cornu), (2) an arched row of teeth (similar to those of inferior margin, see detail) extending from pseudorostrum to each horn, (3) an inferolateral row of teeth running from each horn to posterior margin of carapace, posterior teeth the largest, and (4) a row of minute teeth extending backwards from each frontal lobe fissure and reaching approximately two-thirds of the carapace length. Eyelobe small and rounded, as long as wide, without lenses. Antennal notch shallow. Pseudorostrum approximately three times as long as ocular lobe.

*Pereonites*. Pereonites 2–4 with marginal teeth; pereonites 3 and 4 with two poorly defined dorsolateral rows of teeth, distal tooth the largest; pereonite 5 with two dorsolateral teeth, and two large teeth on each posterolateral angle.

*Pleonites*. Pleonite 1 with one dorsolateral, one lateral and one ventrolateral tooth on each side, and two (only one in other two specimens examined) contiguous medial teeth ventrally. Pleonite 2 (pleonites 2–4 in other two specimens examined) with two dorsolateral teeth distally. Pleonites 3 and 4 with serrations on ventral margins (most distal tooth the largest). Pleonite 5 with one middorsal tooth at three-quarters of its length and serrations on ventrolateral margins (most distal tooth the largest); the other two specimens examined have one or two additional dorsolateral teeth on each side, one of these specimens lacks middorsal tooth (compare Figures 1A and 7A).

*Telson* (Figure 7A). Telson approximately 2.1 times as long as pleonite 6, preanal part 0.65 times as long as postanal part, with 11 cuspidate setae on each side, and two divergent cuspidate setae, larger than lateral ones, distally.

*Antenna 1* (Figure 2A). Peduncle, article 1 longer than remaining two articles together, with one stout tooth, one setulate and one annulate setae distally. Main flagellum shorter than peduncle, article 1 the widest, article 2 slightly shorter than article 4, article 3 the longest, articles 3–6 gradually decreasing in length; article 1 with numerous slender non-jointed aesthetascs (one fully drawn, only basal articulation indicated for the others), articles 2–4 with rows of one or more simple setae along their length (only one seta fully illustrated on each article), article 5 with one aesthetasc, article 6 with one aesthetasc and one jointed seta. Accessory flagellum almost reaching distal end of article 3 of main flagellum, articles 1–3 gradually increasing in length, article 4 minute with one long annulate seta distally.

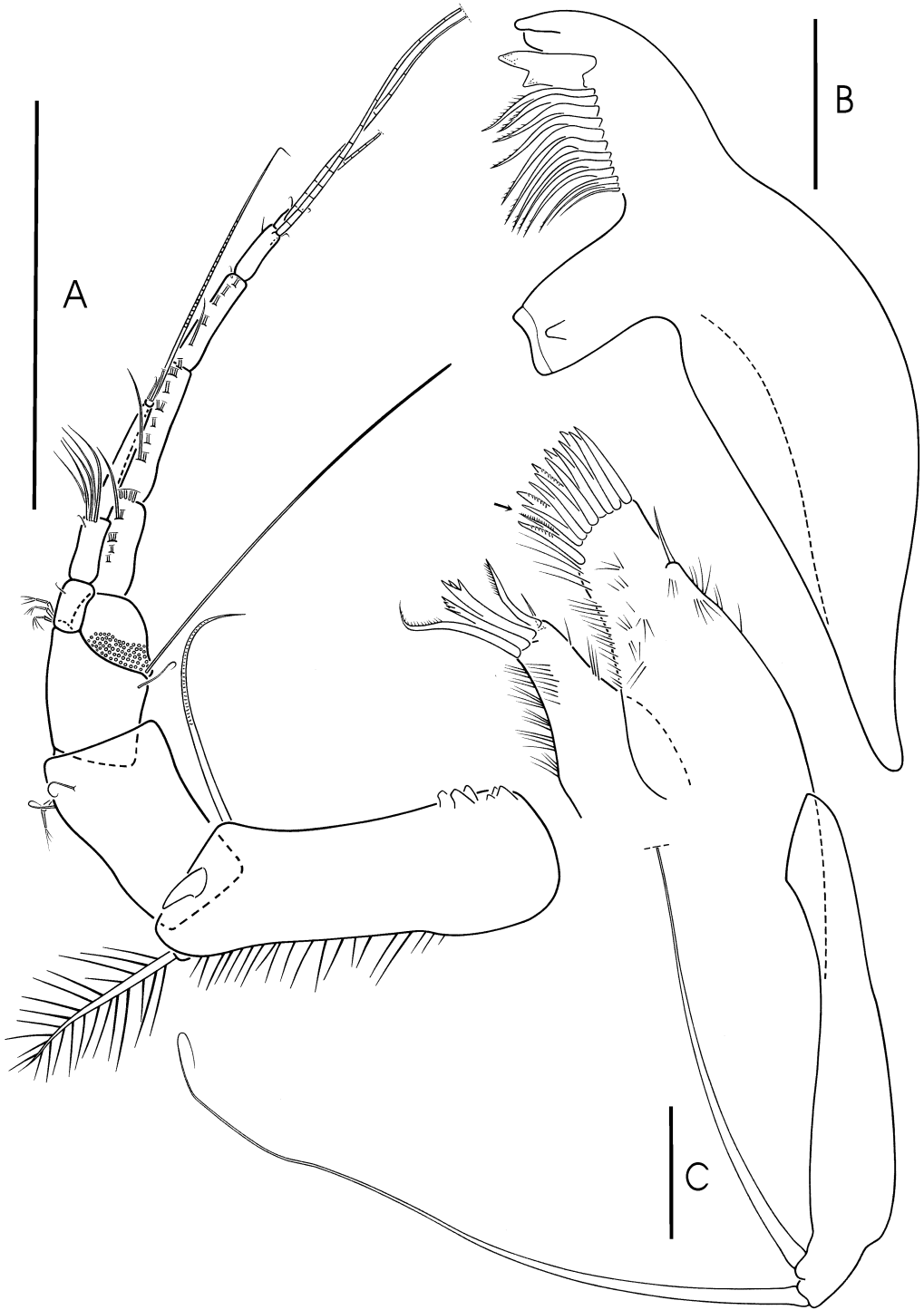


Figure 2. *Diastylis granulata* Zimmer, 1921, adult male (MACN-In 37152b). (A) Antenna 1; (B) left mandible; (C) maxilla 1 (arrow points to thinnest cuspidate seta of outer endite). Scale bars: 0.1 mm (A–C).

*Left mandible (Figure 2B).* Pars incisiva with a well-developed lacinia mobilis and a row of 12 spines.

*Right mandible.* Right mandible also with 12 spines but with a rudimentary lacinia mobilis.

*Maxilla 1 (Figure 2C).* Outer endite, with 14 cuspidate setae (one thinner than the others) distally and one small simple seta near distal end. Inner endite with four unequal serrate setae and one small simple seta distally. Palp with two long simple setae.

*Maxilla 2 (Figure 3A).* Protopod, inner margin with three setuloserrate setae and a row of setae that fully agree with the *plumose* type described by Garm 2004 (setules hardly visible, depicted only in one seta), distal end with setuloserrate setae, barely setulate setae, and a dense mat of simple setae (with terminal pore, only a few drawn). Endite, outer lobe with three slender setae (the longest one serrulate, the other two appear to be simple) and three stout serrate setae, inner lobe with three serrate and one simple setae.

*Maxilliped 1 (Figure 3B).* Basis with a row of six serrate (with a few setules on the basal half, see detail) setae near inner margin. Endite with setulate and serrate setae, one short oval structure (with setules basally and teeth distally, see detail) and one stout trilobated structure (one lobe finger-like, the other two shorter; see detail). Merus with three setulate setae (only one drawn). Carpus, inner margin with a row of seven setuloserrate setae (with setules and two to five teeth, see details), and some setulate setae distally; ventral surface with many simple setae; outer distal corner with one large setulate seta. Propodus with many simple setae (with terminal pore) on inner margin, and two serrate and two setulate setae distally. Dactylus, inner and distal margins with a row of short denticles, distal end with two simple and two serrate setae.

*Maxilliped 2 (Figure 4A).* Basis almost as long as remaining articles together, with short setae (two barely setulate, two simple) and four long setulate setae distally. Ischium with a row of three teeth. Merus with three setulate setae. Carpus almost as long as propodus and dactylus combined, with 11 barely setulate setae arranged in two rows on inner margin (only dorsal row drawn) and one barely setulate seta on outer distal corner. Propodus, inner margin with three rows of barely setulate setae (only most dorsal row drawn), outer margin with one long setulate seta at one-third of its length and one barely setulate seta distally. Dactylus with one stout simple seta, two faintly serrate and five simple setae on or near distal end (see detail).

*Maxilliped 3 (Figure 4B).* Basis almost twice as long as remaining articles together, with setulate setae and teeth (distal tooth the largest) on or near inner margin; distal outer corner with four long setulate setae (for the sake of clarity setules are depicted in one seta only). Ischium, inner margin with four setulate setae and one distal tooth, outer margin with a rounded projection (see detail). Merus, inner margin with two setulate setae and one tooth, outer margin with one long setulate seta and one tooth. Carpus approximately 0.8 times as long as propodus, with seven setulate setae. Propodus, inner margin with barely setulate setae, outer distal angle with one simple seta. Dactylus with simple setae on both margins and distally. Exopod, flagellum of seven articles.



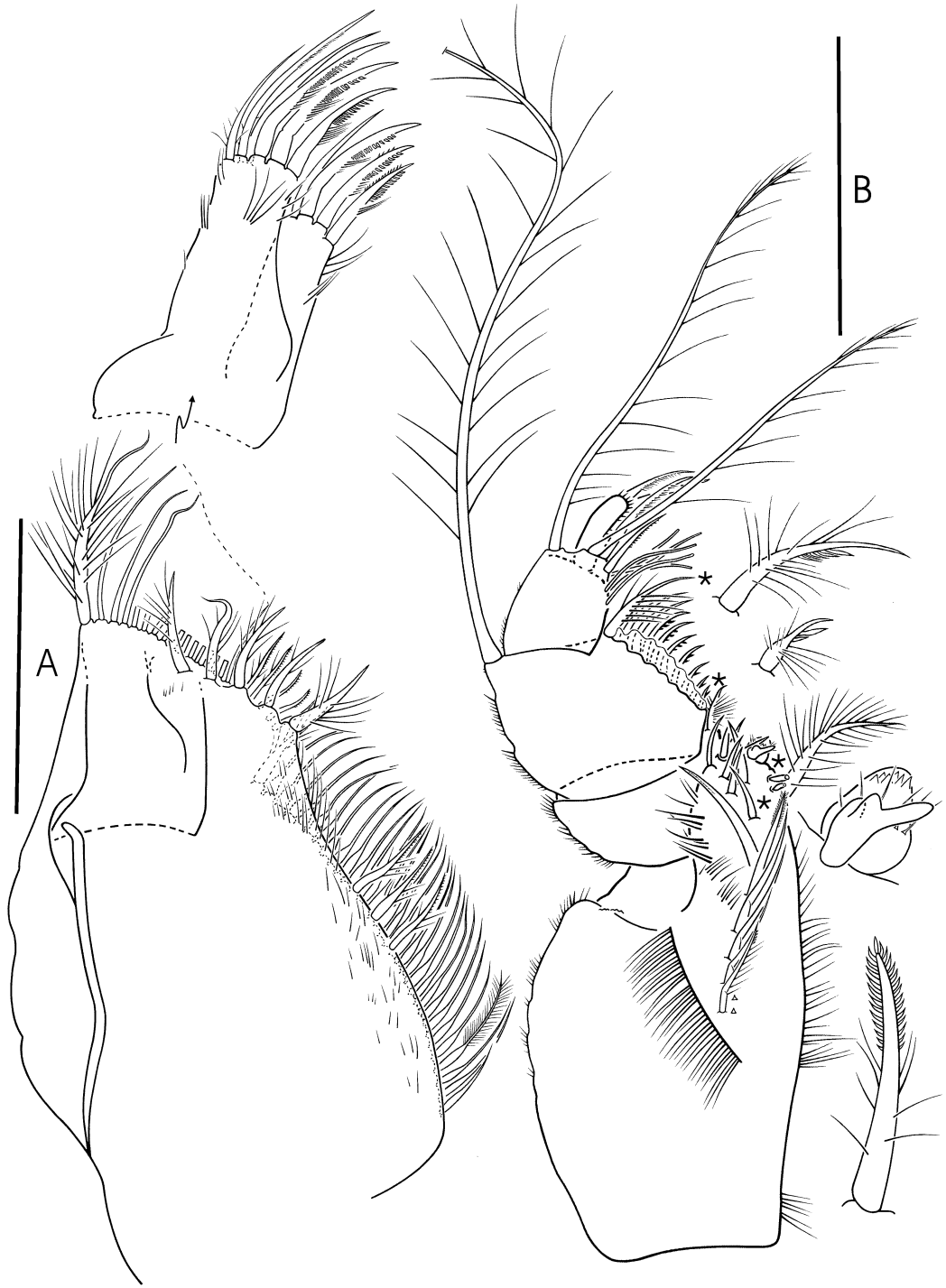


Figure 3. *Diastylis granulata* Zimmer, 1921, adult male (MACN-In 37152b). (A) Maxilla 2 (endite removed) and a detail of the detached endite; (B) maxilliped 1 and details of setae (indicated by asterisks). Scale bars: 0.5 mm (A); 0.3 mm (B).

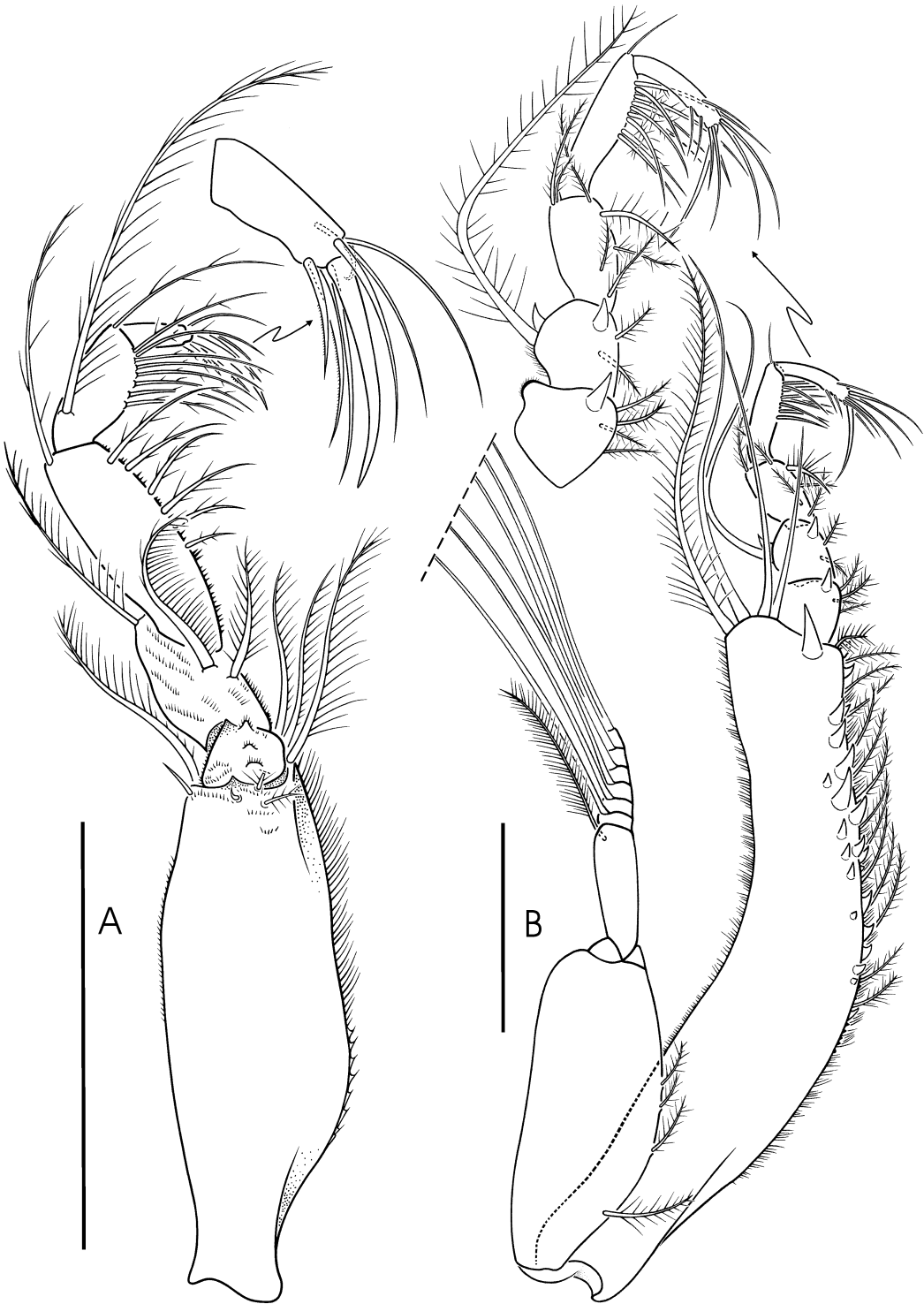


Figure 4. *Diastylis granulata* Zimmer, 1921, adult male (MACN-In 37152b). (A) Maxilliped 2 and detail of dactylus; (B) maxilliped 3 and detail of the five distal articles. Scale bars: 0.5 mm (A, B).

*Pereopod 1 (Figure 5A).* Basis almost as long as remaining articles together, both margins with setulate setae, inner and distal setae more profusely setulated than outer ones (setules depicted in one outer and one inner seta only); both margins with teeth (outer ones more abundant and larger); ventral surface with one tooth distally. Ischium bare. Merus with one barely setulate seta near distal end. Carpus approximately as long as propodus, with one short simple seta near distal end. Propodus with four simple setae on inner margin. Dactylus approximately 0.8 times as long as propodus, with simple setae on both margins and four longer ones distally. Exopod, flagellum of eight articles.

*Pereopod 2 (Figure 5B).* Basis approximately as long as remaining articles together, with a row of large teeth along its outer margin, inner margin with basal and distal teeth, both margins with setulate setae. Ischium wider than long, with one tooth on inner margin. Merus, both margins with denticles, inner and outer margins with three and one setulate setae, respectively. Carpus approximately twice as long as propodus and dactylus combined, inner margin with small teeth, eight serrulate setae and several simple setae, outer distal angle with two small setae—one setulate, one simple (see detail). Propodus and dactylus with simple setae on inner margin and distal end (see detail). Exopod, flagellum of eight articles.

*Pereopod 3 (Figure 5C).* Basis approximately 1.3 times as long as remaining articles together, with simple setae, setulate setae and one enormous tooth near inner distal corner. Ischium with four barely setulate setae on inner distal corner. Merus with two setae (one setulate, one simple) and teeth on inner margin. Carpus longer than propodus and dactylus combined, outer margin with a row of seven simple setae (proximal three short, distal four longer and annulate), inner margin with two simple setae and several teeth. Propodus with one long annulate seta and one broom seta (not drawn) distally. Dactylus with one simple seta distally. Exopod, flagellum of eight articles.

*Pereopod 4 (Figure 6A).* As pereopod 3 except for: basis approximately as long as remaining articles together; ischium, merus, and carpus with some additional setae, namely ischium with five barely setulate setae distally, merus with three barely setulate and two simple setae on inner margin, and carpus with a row of eight setae on outer margin (proximal setae longer than those of pereopod 3); teeth on merus and carpus less developed or absent. Exopod, flagellum of eight articles (setae omitted).

*Pereopod 5 (Figure 6B).* Basis approximately 0.6 times as long as remaining articles together, with four setulate setae, one simple seta, and several broom setae. Ischium with four barely setulate setae distally. Merus with simple setae, three long on inner margin and one short distally. Carpus longer than propodus and dactylus combined, with two setae on inner margin and a row of nine setae on outer margin (longer ones annulate). Propodus with one long annulate seta and one broom seta distally. Dactylus with one simple seta distally.

*Pleopod 1 (Figure 6C).* Peduncle with four short setuloserrate setae (teeth hardly visible) and 10 long setulate setae (only first and last setae fully drawn). Inner ramus of one article and with six long setulate setae, outer ramus of two articles and with four long setulate setae (only shortest seta fully drawn).



Figure 5. *Diastylis granulata* Zimmer, 1921, adult male (MACN-In 37152b). (A) Pereopod 1 (the four distal articles are rotated 180°); (B) pereopod 2 and details of last three articles; (C) pereopod 3. Scale bars: 1 mm (A–C).

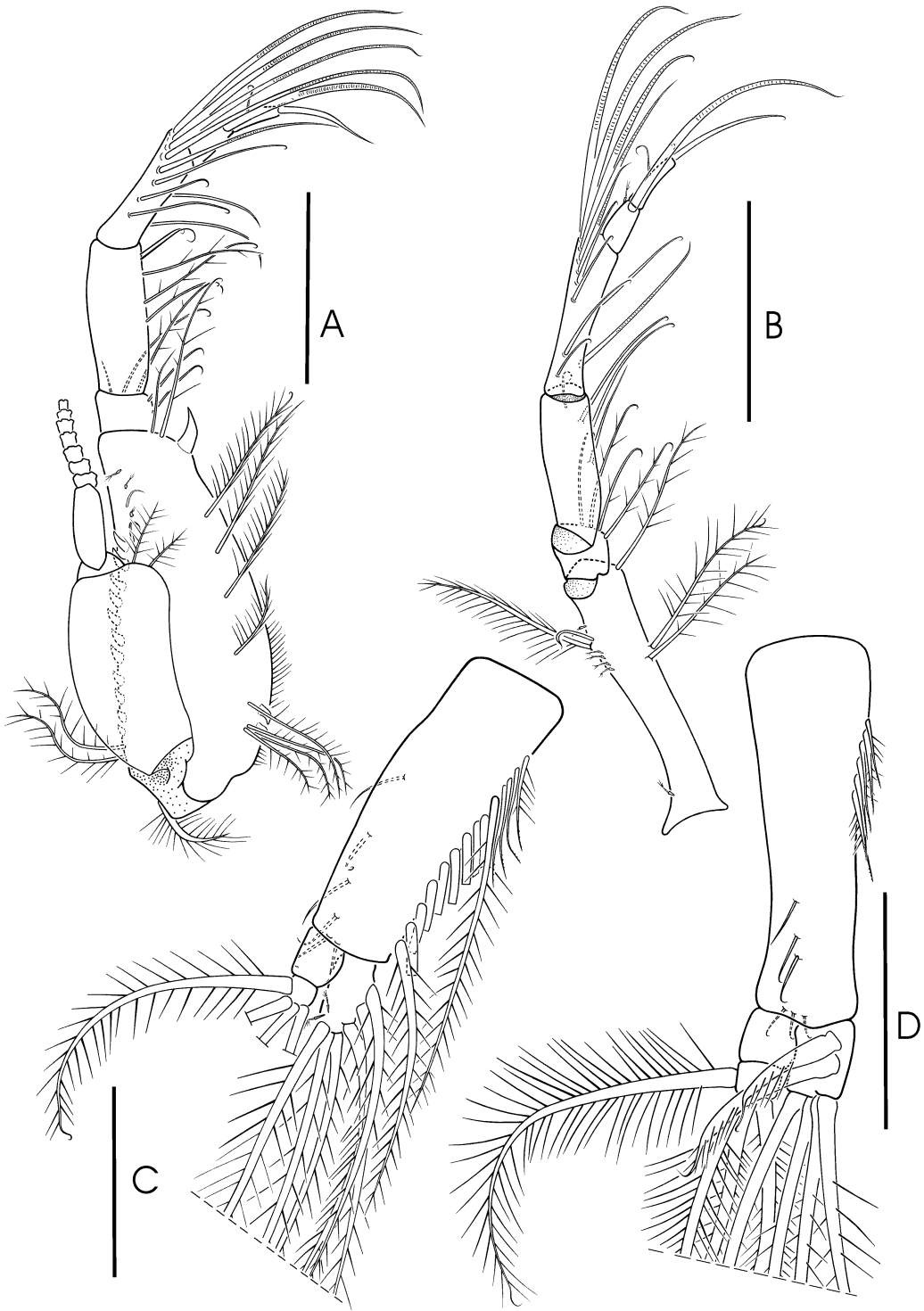


Figure 6. *Diastylis granulata* Zimmer, 1921, adult male (MACN-In 37152b). (A) Pereopod 4; (B) pereopod 5; (C) pleopod 1; (D) pleopod 2. Scale bars: 0.5 mm (A, B); 0.25 mm (C, D).

*Pleopod 2 (Figure 6D).* Peduncle with six short setuloserrate setae (teeth hardly visible). Inner ramus of one article and with six setulate setae (only shortest seta fully drawn); outer ramus of two articles and with four long setulate setae (only shortest seta fully drawn).

*Uropod (Figure 7A).* Peduncle slightly longer than telson, with 23 cuspidate setae (with two rows of teeth) on inner margin. Endopod slightly shorter than exopod; bi-articulated, article 1 shorter than article 2, with 10 cuspidate setae (with two rows of teeth) on inner margin; article 2 with 12 cuspidate setae (with two rows of teeth) on inner margin and one cuspidate seta distally. Exopod 0.57 times as long as peduncle, both margins with simple setae; distal end with two long simple setae. Small intercalary disk-like piece between peduncle and endopod; this may be understood to be a remnant of a third article of the endopod.

*Description of the ovigerous female (MACN-In 37153)*

Total length 8.6 mm (this measure is rather unsatisfactory because the pleon is arched).

*Carapace (Figure 8A, B).* Carapace as male except for: width 0.78 times its length, rows of minute teeth extending backwards from frontal lobe shorter, row of teeth running backwards from each anterolateral horn absent, eyelobe longer than wide.

*Pereonites.* Pereonite 3 with a transverse row of teeth dorsally. Pereonites 4 and 5 with two dorsolateral rows of teeth and two dorsolateral teeth, respectively.

*Pleonites.* Pleonites 1 and 5 with two dorsolateral teeth distally. Pleonites 1–5 with minute scattered denticles on lateral surfaces. Pleonite 5 with serrations on ventrolateral margins (most distal tooth the largest).

*Telson (Figure 7B, C).* Telson as male except for: approximately 1.7 times as long as pleonite 6, preanal part 0.78 times as long as postanal part, lateral margins with five or six cuspidate setae.

*Uropod (Figure 7B).* Peduncle approximately as long as telson, with six cuspidate setae on inner margin. Small intercalary disk-like piece between peduncle and endopod (a minimized article?). Endopod distinctly shorter than exopod, almost as long as exopod including distal seta; article 1 shorter than article 2, with three cuspidate setae on inner margin; article 2 with four cuspidate setae on inner margin and one cuspidate seta distally. Exopod approximately 0.6 times as long as peduncle, both margins with simple setae, distal end with two long simple setae.

*Brief description of juveniles (MACN-In 37154)*

Total length 5.0–5.3 mm.

Excluding secondary sexual characters, these specimens differ mainly from the ovigerous female in having (Figure 1C): body surface more tuberculated, the row of teeth running backwards from each frontal lobe fissure reaching almost posterior margin of carapace, a “supplementary” row of teeth extending from each arched row to posterior margin of

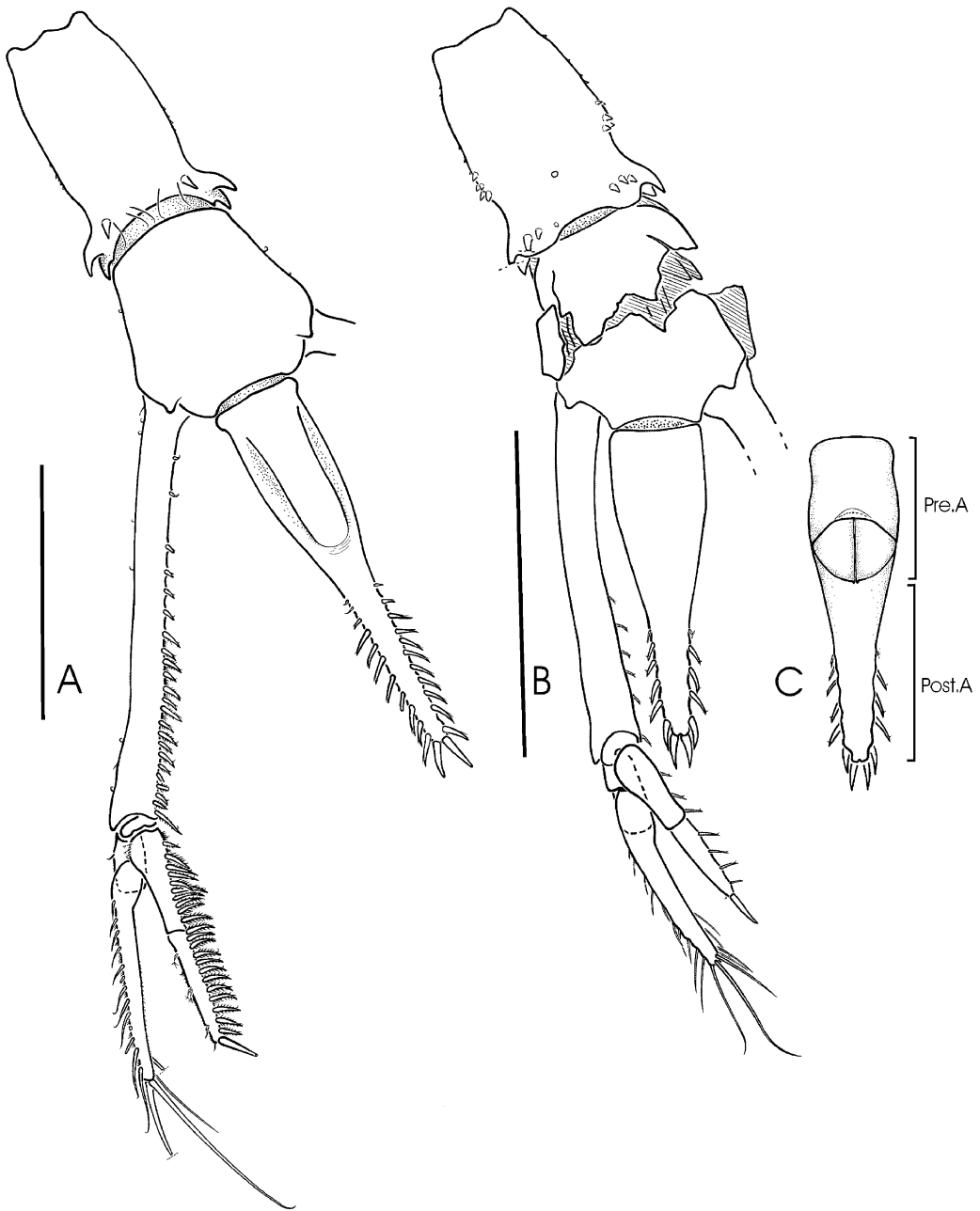


Figure 7. *Diastylis granulata* Zimmer, 1921. (A) Adult male (MACN-In 37152a): telson and uropod. (B, C) Ovigerous female (MACN-In 37153): (B) telson and uropod; (C) telson in ventral view. Pre.A, preanal part; Post.A, postanal part. Scale bars: 1 mm (A, B); (B and C share the same scale).

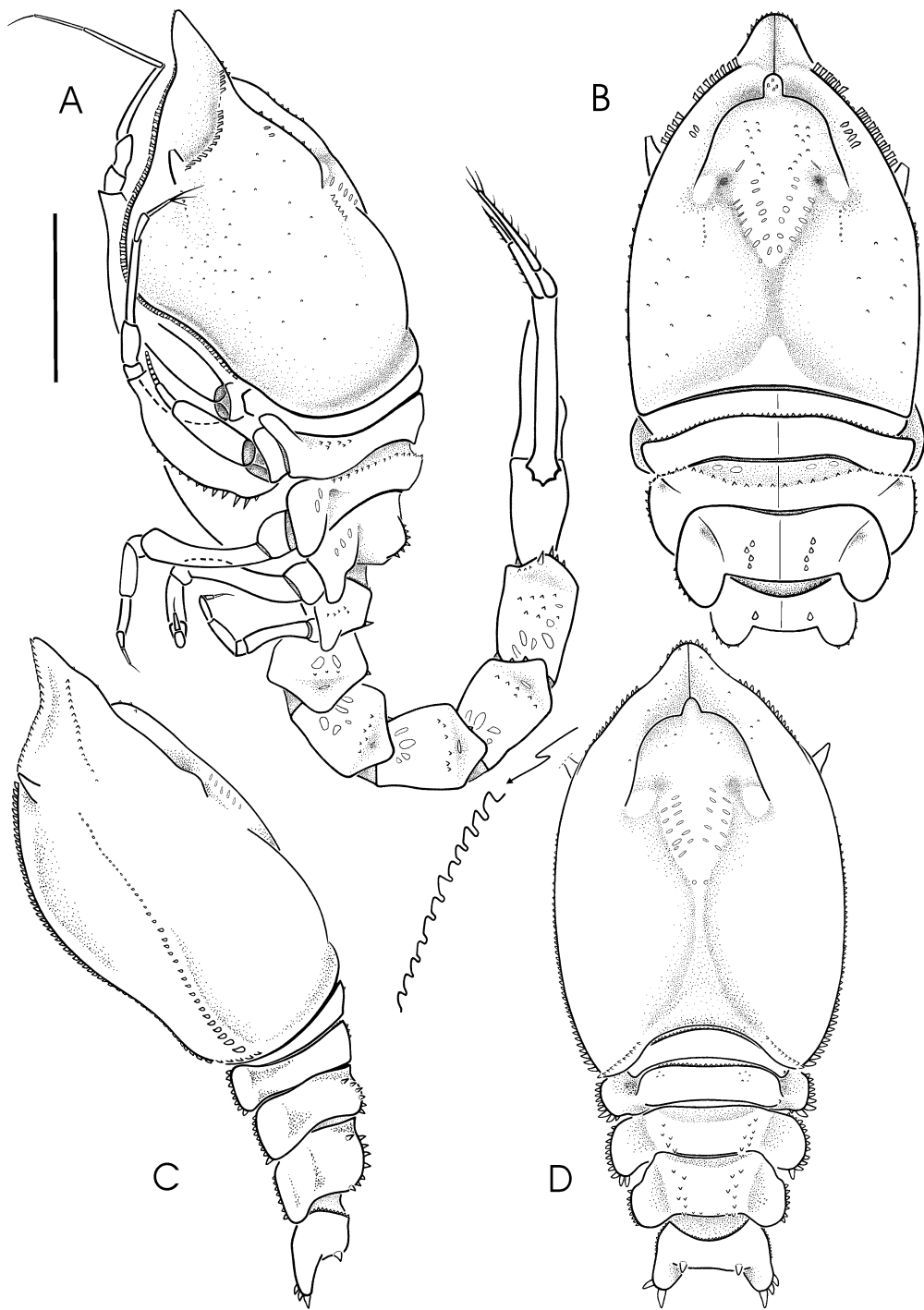


Figure 8. (A, B) *Diastylis granulata* Zimmer, 1921, ovigerous female (MACN-In 37153): (A) habitus in lateral view; (B) carapace and pereon in dorsal view. (C, D) *Diastylis argentata* Calman, 1912, adult male (MACN-In 37158): (C) habitus in lateral view; (D) carapace and pereon in dorsal view, and a detail of the longitudinal row of teeth, which are apparently worn out. Scale bar: 1 mm (A–D).



carapace, and pleonite 1 with two midventral teeth (these are absent in ovigerous female but present in adult male).

*Brief description of the subadult male with developing pleopods (MACN-In 37155)*

Total length 7.7 mm (this measure is rather unsatisfactory because the pleon is arched).

*Carapace.* Arched row, teeth somewhat more acute than in adult male (compare Figures 1B and 9B, C). “Supplementary” row reduced to a few teeth (reaching neither arched row nor posterior margin of carapace; Figure 9A, B). This abbreviated row of teeth is also depicted in Figure 4 presented by Zimmer (1921), and was observed in the other two subadult males and the preparatory female herein studied (MACN-In 37156).

*Pereonites 4 and 5.* Pereonites 4 and 5 with two dorsolateral rows of teeth and two dorsolateral teeth, respectively. In Figures 4 and 5, Zimmer (1921) depicted a pair of rounded mounds on pereonites 4 and 5 but he presumed that there could be teeth on them.

*Pleon.* Pleon differs mainly from ovigerous female by having four midventral teeth on pleonite 1 (posterior pair smaller). The three subadult males herein studied show dorsolateral teeth on pleonites 1, 2, and 5; however, in Figure 4 presented by Zimmer (1921) only the pleonite 1 is armed.

*Remarks*

The sculpture of the carapace varies over the successive developmental stages of *D. granulata*, i.e. in the juveniles the “supplementary” row of teeth is fully developed, whereas in the subadults this row is less evident, finally disappearing in the adults.

*Distribution*

Argentine continental shelf, 61–122 m depth.

***Diastylis argentata* Calman, 1912**

(Figures 8C, D, 9D, E)

*Diastylis argentata* Calman 1912, p 649–651, Figures 70–75 (original description, type locality: off Chile coast; 46°47'30"S, 75°15'00"W; 61 fathoms (= 112 m)); Brandt et al. 1999, p 545, Table 1 (Beagle Channel, new record); Mühlenhardt-Siegel 1999, p 297–300, Tables 2–4 (reproduced the record already mentioned by Brandt et al. 1999); Băcescu 1992, p 278 (catalogue).

*Ekdiastylis argentatus* Stebbing 1912, p 155; Stebbing 1913, p 137–138 (catalogue); Hale 1937, p 51–52.

*Diastylis argentatus* Day 1980, p 266 (key).

*Material examined*

Chile: Magellan Straits: RV *Victor Hensen*, Sta. 874 D, Bahía Voces, 53°43'S, 70°56.1'W, 335 m, 25 October 1994, three ovigerous ♀♀, four preparatory ♀♀, one preparatory ♂, four juveniles (ZMH K-41453a), one ovigerous ♀ (mounted on a stub for SEM, ZMH K-41453b). Off Puerto Montt coast: Metrencue, Calbuco, 41°44'00"S, 73°06'00"W, 25 m, ?

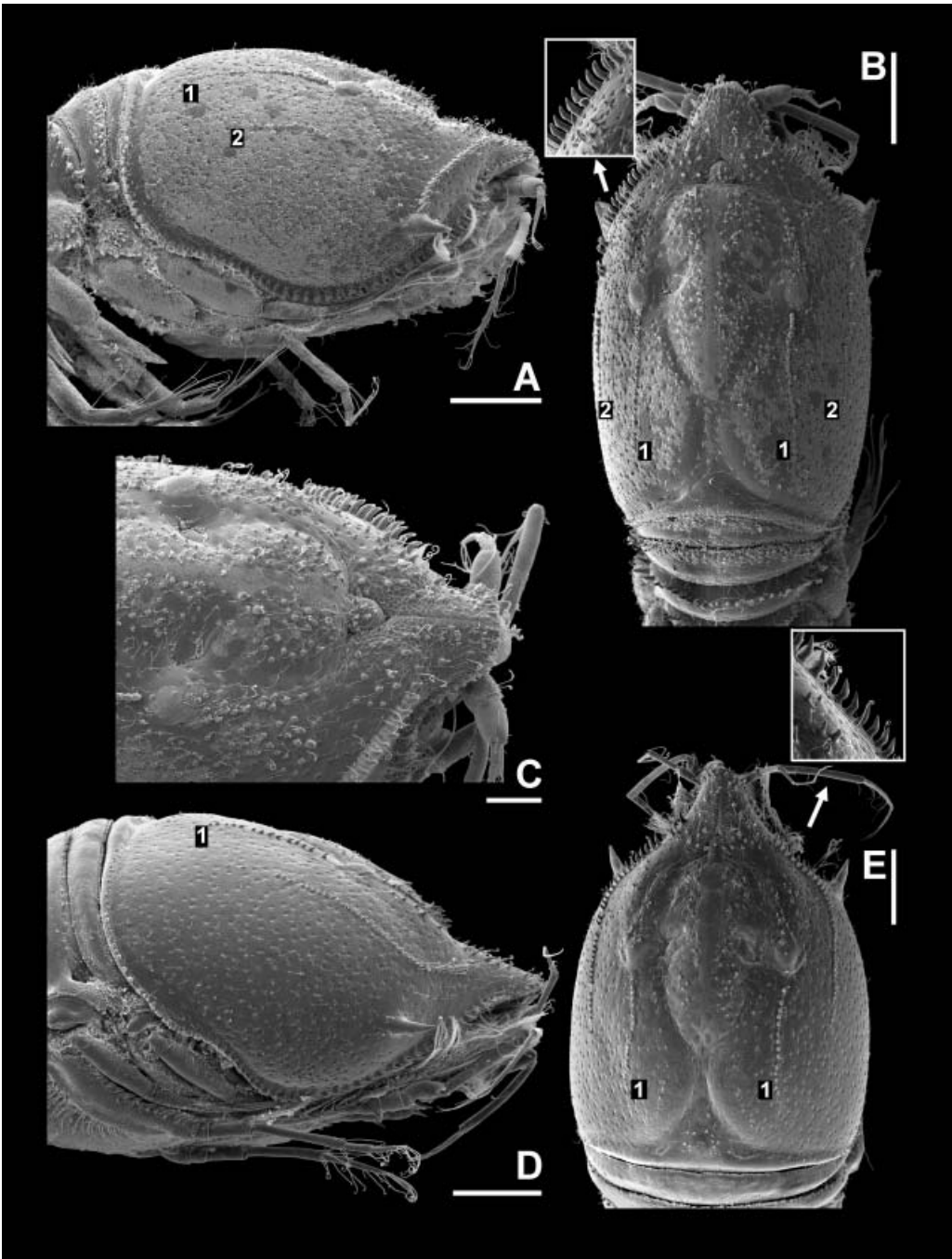


Figure 9. SEM photographs. (A–C) *Diastylis granulata* Zimmer, 1921, subadult male (MACN-In 37155): (A) anterior part of the body in lateral view; (B) anterior part of the body in dorsal view and a detail of the arched row of teeth; (C) enlarged view of anterior part of the carapace. (D, E) *Diastylis argentata* Calman, 1912, ovigerous female (ZMH K-41453b): (D) anterior part of the body in lateral view; (E) anterior part of the body in dorsal view and a detail of the anterolateral row of teeth. Number 1 stands for the rows of teeth running backwards from the frontal lobe; number 2 stands for the “supplementary” rows of teeth. Scale bars: 0.5 mm (A, B, D, E); 0.2 mm (C).

July 2006, coll. P. González Salvo, one adult ♂ (MACN-In 37158). Argentina: Beagle Channel: Bahía Lapataia, L-2, 54°87'S, 68°47'W, 120–140 m, 12 May 1999, coll. C. Romero, one juvenile (MACN-In 37157); Punta Segunda, 54°86'S, 68°03'W, 94–96 m, 17 May 1999, coll. C. Romero, one subadult ♀ (MACN-In 37159); Punta Segunda, 54°84'S, 68°06'W, 91–102 m, 6 September 1999, coll. C. Romero, one ovigerous ♀ (damaged) (MACN-In 37160).

*Brief redescription of adult male (MACN-In 37158)*

Total length approximately 8.3 mm.

*Carapace* (Figure 8C, D). Surface whitish, brittle, and polished, with a few small denticles scattered on pseudorostral and frontal lobes. Width approximately 0.4 times its length. Inferior margin with a row of teeth. Sides of carapace with: (1) a pair of anterolateral horns (cornua), (2) an anterolateral row of teeth ending at the level of each horn some distance above them, and (3) an inferolateral row of teeth starting near each horn and ending at posterior margin of carapace, posterior teeth the largest. Eyelobe small, subtriangular, without lenses. Antennal notch shallow. Pseudorostrum approximately three times as long as ocular lobe.

*Pereonites*. Pereonite 2 with few small teeth on dorsal surface; pereonites 2–4 with marginal teeth; pereonites 3 and 4 with one dorsolateral row of teeth on each side; pereonite 5 with one dorsolateral tooth on each side and two or three large teeth on each posterolateral angle.

*Pleonites*. Pleonite 1 with one dorsolateral, one lateral, and one ventrolateral tooth on each side, and two contiguous unequal medial teeth ventrally. Pleonites 2–4 with two dorsolateral teeth distally. Pleonite 4 with serrations on ventral margins (most distal tooth the largest). Pleonite 5 with one middorsal row of teeth that increase in size towards distal end, and two dorsolateral teeth and one ventrolateral serration on each side (most distal tooth the largest).

*Telson*. Preanal part approximately 0.75 times as long as postanal part.

*Brief description of an ovigerous female from Bahía Voces, Magellan Straits (ZMH K- 41453b)*

Total length 8.8 mm (this measure is rather unsatisfactory because the pleon is arched).

*Carapace* (Figure 9D, E). Carapace as male except for: width 0.72 times its length (0.78–0.84 in other three ovigerous females examined), longitudinal row of anterolateral teeth clearly surpassing frontal lobe, having a row of minute teeth running backwards from posterior end of each frontal lobe fissure, and lacking inferolateral row of teeth.

*Pereon and pleon*. Teeth and serrations as in ovigerous female of *D. granulata*.

*Telson*. Preanal part approximately as long as postanal part.

*Distribution*

From off Puerto Montt coast to the west mouth of the eastern entrance of the Beagle Channel, 94–335 m depth (Chile).

**Discussion**

*Diastylis* is the oldest genus of Cumacea and contains a large number of species (about 100). Besides, this genus is very variable, including species with two or three articles on the endopod of the uropods. Stebbing (1912) was aware of this variability and erected the monotypic family Ekdiastylidae to accommodate 10 diastylids with uropodal endopods of two articles occurring in both hemispheres, mainly in cold and deep waters. However, neither this family nor its genus have been widely accepted by later researchers.

To date, six species of the genus *Diastylis* having two articles on uropodal endopods have been described from the Southern Hemisphere, namely *D. fimbriata* Sars, 1873 (Brazil), *D. horrida* Sars, 1887 (Kerguelen Is.), *D. argentata* Calman, 1912 (Chile), *D. granulata* Zimmer, 1921 (Argentina), *D. zimmeri* Ledoyer, 1977 (Kerguelen Is.), and *D. geocostae* Băcescu and Petrescu, 1991 (Brazil). It is worth mentioning that the first three species listed above were formerly allotted by Stebbing (1912) to the genus *Ekdiastylis*.

The South American *D. granulata*, *D. argentata*, and *D. fimbriata* seem to be closely related. The former two species bear a pair of large horn-like teeth on the anterolateral corners of the carapace, which are apparently absent in *D. fimbriata*. In turn, *D. granulata* and *D. argentata* can be easily distinguished by the arrangement of their carapace sculptures: the former has an arched row of teeth that ends on each anterolateral horn, whereas in the latter this row of teeth extends backwards without reaching the anterolateral horn. Finally, *D. geocostae* can be rapidly separated from the three above-mentioned species by having two oblique ridges enclosing a flat anterior area or “plateau”, thus superficially resembling *D. planifrons* Calman, 1912.

Sars (1887) described *D. horrida* based on an ovigerous female from Kerguelen Is. that shows numerous unequal teeth all over the carapace. More recently, Ledoyer (1977) described *D. zimmeri*, a closely allied species also from Kerguelen. Neither of these two Subantarctic species has a pair of anterolateral horn-like teeth. However, Hale (1937) briefly described an adult male, also from Kerguelen, that has a small but well-defined tooth on each anterior corner of the carapace. Hale stated that this male “may be referable to *Ekdiastylis argentatus*” and provisionally designated it as “*Ekdiastylis horridus* (?)”. However, this male lacks the anterolateral row of teeth on the carapace and has a single tooth (not two or three) on the posterolateral angles of the pereonite 5, a fact that suggests that this male from Kerguelen does not belong to *D. argentata*.

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