



A new genus and new species of hermit crab (Crustacea: Anomura: Paguroidea: Diogenidae) from the eastern tropical Pacific

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Abstract

Tetralobistes **gen. nov.**, a presently monotypic genus of hermit crab of the family Diogenidae, is described to accommodate a new species, *Tetralobistes bicentenarius* **sp. nov.** In many characters, *Tetralobistes* **gen. nov.** is similar to *Areopaguristes* Rahayu & McLaughlin, 2010, *Paguristes* Dana, 1851, and *Pseudopaguristes* McLaughlin, 2002. However, it differs most significantly in the morphology of the male first pleopods and lacks male second and female first pleopods. The most conspicuous character separating *Tetralobistes* **gen. nov.** from the other three genera is the shape of the telson, with a typical subdivided (four-lobes) posterior margin.

Key words: Crustacea, Decapoda, Paguroidea, Diogenidae, new genus, new species, eastern Pacific

Introduction

During the last decade there has been a significant increase in the number of genera and species of hermit crabs described worldwide. Descriptions of new taxa were based on thorough revisions of the systematics of the group, combined with the examination of freshly collected and museum specimens (e.g., Lemaitre & McLaughlin 2006, McLaughlin & Rahayu 2008, Ayón-Parente & Hendrickx 2009).

Despite the fact that hermit crabs are usually very abundant in coastal ecosystems, particularly in the tropics, they are often small to medium-sized and superficially similar, thus making their correct identification difficult. During the study of the hermit crabs of the family Diogenidae from the Mexican Pacific, a small series of specimens of this family was collected in shallow water at Matanchen Bay, Nayarit, Mexico. The very small size and attractive color pattern set these specimens apart from previously collected species and clearly were of a new species. Furthermore, some characters of generic value were observed, indicating that this species did not fit within any of the currently recognized genera of Diogenidae. Although the specimens show some similarity to *Paguristes* Dana, 1851, *Pseudopaguristes* McLaughlin, 2002, and *Areopaguristes* Rahayu & McLaughlin, 2010 (a genus-group name recently proposed to replace the preoccupied name *Stratiotes* Thomson, 1899), they are so morphologically different that a new monotypic genus is justified for this new species.

Material and methods

The material was obtained in June 2005, November 2006 and October 2010, from hand-collected samples from Matanchen Bay, Nayarit, Mexico. McLaughlin (1974, 2003) is followed for general terminology. Shield length (SL in mm) was measured from the tip of the rostrum to the midpoint of the posterior margin of shield. Specimens are deposited in the Regional Collection of Invertebrates (EMU) in the Laboratorio de Invertebrados Bentónicos, ICML, UNAM, in Mazatlán, Mexico, in the Crustacean Collection of Los Angeles

County Museum of Natural History (LACM-CR), and in the National Collection of Crustacean, Instituto de Biología (CNCR) UNAM, Mexico, D.F., Mexico.

Taxonomy

Family Diogenidae

Tetralobistes gen. nov.

(Fig. 2)

Diagnosis. Thirteen pairs of biserial gills; shield well calcified; rostrum short, subtriangular. Ocular acicles well developed, terminating in strong multifid projection, mesial margins contiguous. Antennal peduncles with supernumerary segmentation; acicles short, spinose. Antennal flagella of medium length, longer than carapace, with long setae ventrally. Mandible with unarmed mesial margin, palp 3-segmented. Endopod of maxillule (Fig. 2A) with well developed, recurved external lobe. Maxilla (Fig. 2B) with elongate endopod. First maxilliped (Fig. 2C) with well developed epipod. Second maxilliped (Fig. 2D) without distinguishing characters. Third maxilliped (Fig. 2E) with basal segments approximate; crista dentata well developed; no accessory tooth.

Chelipeds subequal, right usually slightly longer than left, similar in armature; fingers opening in horizontal plane, fingertips acuminate. Fourth pereopods simple, without preungual process at base of claw. Fifth pereopods chelate.

Males with paired gonopores; paired pleopods modified as gonopods on first pleonal somite; no pleopods on the second somite; unpaired, well developed, uniramous left pleopods on somites 3–5.

Females with paired gonopores; first pleonal somite without modified pleopods; following 3 pleomeres with unequally biramous left pleopods; fifth pleopod uniramous; brood pouch represented by row of setae.

Uropods asymmetrical. Telson asymmetrical, with lateral indentation; posterior margin divided into four lobes (tetralobular); external lobes unequal, larger than symmetrical, inner lobes.

Type species. *Tetralobistes bicentenarius* n. sp., by present designation.

Etymology. The name of the genus refer to the posterior margin of the telson which is divided into four lobes (tetralobular), and is a combination of the Greek words *tetra* (four) and *lobos* (lobe), and the Greek suffix *-istes*. Gender, masculine.

Distribution. Matanchen Bay, Nayarit, Mexico; 0.5–1.5 m.

Remarks. Diogenidae have long been considered as evolutionarily more primitive than Paguridae. In her review of characters used to define affinities among hermit crabs, de Saint Laurent (1970) recognised the importance of the presence and number of pleurobranchiae on pereopods, the modification of pleopods into gonopods in males, the presence or absence of first (males and females) and second (males only) pleopods, and relative lengths of the endo- and exopodites of the pleopods. Additionally, the presence, reduction or absence of the brood pouch in females has also been considered an important phylogenetic character (McLaughlin & Hogarth 1998).

Considering the most significant characters that separate the genera of Diogenidae, *Tetralobistes* gen. nov. is more closely related to *Areopaguristes*, *Paguristes* and *Pseudopaguristes* than to other genera. For comparative purposes, 12 characters were selected and analysed (see Tab. 1). In *Tetralobistes* gen. nov., some of these characters are similar to one, two or all these three other genera, but other characters are clearly distinct or even unique. In *Tetralobistes* gen. nov., for example, the presence of 13 pairs of phyllobranchiate biserial gills is unique among these four genera.

In her review of *Paguristes* sensu lato Rahayu (2005) considered reduction of the number of gills (branchiae) as an evolutionary trend. On this basis, she suggested splitting *Paguristes* sensu lato into three genera: *Paguristes* sensu stricto, with 13 pairs of gills, *Areopaguristes* with 12 pairs, and *Pseudopaguristes* with only 8 pairs. This is also supported by Lemaitre *et al.* (2009), who considered *Paguroopsis* Henderson, 1888, and *Paguristes* (both with 13 pairs of gills) among the most primitive of diogenids. Species of these two

TABLE 1. Selected comparative characters observed in genera of Diogenidae closely related to *Tetralobistes* **gen. nov.**

	<i>Paguristes</i> Dana, 1851	<i>Areopaguristes</i> Rahayu & McLaughlin, 2010	<i>Pseudopaguristes</i> McLaughlin, 2002	<i>Tetralobistes</i> gen. nov.
Number of gills	13	12	8	13
Type of gills	Phyllobranchiate; bi or quadriserial	Phyllobranchiate; bi or quadriserial	Phyllobranchiate; bi or quadriserial	Phyllobranchiate; biserial
Ocular acicles	Well developed, often multispinous, more or less separated	Well developed or reduced, simple, bi or multidenticulate, contiguous or widely separated	Well developed, simple, bi or multidenticulate, widely separated	Well developed, multidenticulate, contiguous
Maxillules	External lobe of endopod well developed, recurved	External lobe of endopod prominently recurved	External lobe of endopod well developed, recurved	External lobe of endopod well developed, recurved
First maxillipeds	Epipod well developed	Epipod well developed or absent	Epipod well developed	Epipod well developed
Third maxillipeds	Crista dentata well developed, no accessory tooth	Crista dentata well developed, no accessory tooth	Crista dentata consisting of row of quite small teeth, no accessory tooth	Crista dentata well developed, no accessory tooth
Chelipeds	Usually subequal; claws with fingers opening in horizontal plane	Equal, subequal or unequal; claws with fingers opening in horizontal or oblique plane	Subequal or unequal; claws with fingers opening in horizontal or oblique plane	Subequal; claws with fingers opening in horizontal plane
Fourth pereopods	Simple, with or without preungual process at base of claw	Subchelate or weakly semichelate, with or without preungual process at base of claw	Simple, with or without preungual process at base of claw	Simple, without preungual process at base of claw
Male first pleopods	Modified as gonopod	Modified as gonopod	Modified as gonopod	Modified as gonopod
Male second pleopods	Modified as gonopod	Modified as gonopod	Modified as gonopod or absent	Absent
Female first pleopods	Modified as gonopod	Modified as gonopod or absent	Modified as gonopod	Absent
Brood pouch	Usually well developed or absent	Usually well developed, occasionally entirely absent	Present or absent	Absent
Telson	Posterior margin divided into two subequal to markedly unequal lobes	Posterior margin divided into two subequal to markedly unequal lobes	Posterior margin divided into two slightly to markedly asymmetrical lobes	Posterior margin tetralobular; external lobules unequal, larger than symmetrical, inner lobules

genera have first and second pairs of males pleopods modified as gonopods, a character considered by McLaughlin & Lemaitre (1997) to be a plesiomorphic condition that evolved into a more advanced, apomorphic condition in which reduction and ultimate loss are eventually observed. The first and second pairs of pleopods (modified as gonopods) are also conserved in *Areopaguristes*. However, this is not true in some species of *Pseudopaguristes* [e.g., *P. hians* (Henderson, 1888), *P. asper* Rahayu, 2005] and in *Tetralobistes* **gen. nov.** Rahayu (2005) concluded that *Areopaguristes* and *Pseudopaguristes* (12 and 8 pairs of gills, respectively; first and second pair of gonopods usually present in males) are more derived than *Paguristes* and also suggested that a well developed brood pouch, as is found in *Paguristes*, denotes a primitive state.

Although in *Tetralobistes* **gen. nov.** the absence of the female brood pouch (reduced to a tufts of setae) is a distinctive character, the latter can be occasionally absent or also reduced to tufts of setae in some species of *Areopaguristes* [e.g., *A. tuberculatus* (Rahayu, 2005) and *A. mclaughlinae* (Ayón-Parente & Hendrickx, 2006)], *Paguristes* (e.g., *P. anomalus* Bouvier, 1918 and *P. fagei* Forest, 1954), and *Pseudopaguristes* [*P. janetkae* (Rahayu, 2005)] (see also McLaughlin 2002, Rahayu 2005). Female first pleopods are always present and modified as gonopods in *Paguristes* and *Pseudopaguristes*, but in *Areopaguristes* these are either present or absent [e.g., *Areopaguristes hummi* (Wass, 1955) and *Areopaguristes mclaughlinae* (Ayón-Parente & Hendrickx 2006)], as in *Tetralobistes* **gen. nov.** With 13 pairs of gills, *Tetralobistes* **gen. nov.** would appear to be more primitive than *Areopaguristes* and *Pseudopaguristes*, but more derived than *Paguristes* and *Paguropsis*. This would also be supported by the loss of the males' second pair and females' first pair of pleopods, and of the brood pouch in *Tetralobistes* **gen. nov.**. These characters would set *Tetralobistes* **gen. nov.** in an intermediate position between these two pairs of genera.

The size, armature and distance separating the ocular acicles in the hermit crabs had been considered a generic diagnostic character. In *Tetralobistes* **gen. nov.**, ocular acicles are contiguous, as in some species of *Areopaguristes*, but are well, or more or less separated in *Paguristes* and *Pseudopaguristes*.

De Saint Laurent (1970) and McLaughlin (1974) mentioned that the preungual process is an important diagnostic character at genus level. The presence or absence of this preungual process in the fourth pereopod appears to be a highly variable character in *Paguristes*, *Areopaguristes* and *Pseudopaguristes*; in *Tetralobistes* **gen. nov.**, so far a monotypic genus, the value of this character is difficult to assess.

The shape of the telson, including the depth of lateral constriction and posteromedian cleft, the type of armature, and the pilosity of posterior lobes, are important characters used to define relationships among hermit crab genera (de Saint Laurent 1970). Perhaps the most conspicuous character separating *Tetralobistes* **gen. nov.** from the other three genera of Table 1 is the shape of its telson: posterior margin typically divided into four lobes, the two inner lobes much smaller than the two outer lobes. Actually, no genus of Diogenidae features a four-lobed posterior margin. In the case of *Paguristes frontalis* H. Milne Edwards, 1836 and *P. purpureantennatus* Morgan, 1987, the telson is four-lobed, but these correspond to anterior (two weakly marked lobes) and posterior (two lobes) sections of the telson, not to the posterior margin. As seen here, the combination of several characters set *Tetralobistes* **gen. nov.** apart from the three other genera, and supports the recognition of a distinct, new genus.

A comprehensive revision of the “*Paguristes*” (sensu lato) species occurring in the western Atlantic might reveal an amphi-American distribution of *Tetralobistes* **gen. nov.**, as it is known to occur with many decapod crustacean genera (see Boschi 2000). A careful review of species of *Paguristes*, *Areopaguristes* and *Pseudopaguristes* from other regions (including both coasts of Central and South America) that share some apomorphic characters with *Tetralobistes* **gen. nov.** (e.g., absence of paired second male and female first pleopods; absence of brood pouch; presence or absence of epipod on first maxilliped) is also needed to define more clearly the affinities of the later genus with the other three.

***Tetralobistes bicentenarius* sp. nov.**

(Figs 1–4)

Type material. Holotype: female (SL 2.10 mm), Matanchen Bay, Nayarit, Mexico, 21°28.83' N, 105°12.02' W, 1.0–1.5 m, snorkel, 04 Nov 2006 (EMU-8730). **Paratypes:** Matanchen Bay, Nayarit, 21°28.83' N, 105°12.02' W, 0.5–1.5 m, snorkel, 3 males (SL 0.95–1.36 mm), 1 female (SL 1.20 mm), 26 June 2005 (EMU-8731); 5 males (SL 0.90–1.90 mm), 1 female (SL 1.40), 1 ovig. female (SL 1.60 mm), 04 Nov 2006 (EMU-8732); 1 male (SL 1.89 mm), 04 Nov 2006 (LACM CR 2006-022.1); 1 male (SL 1.78 mm), 04 Nov 2006 (CNCR 26182); 3 males (SL 0.88–1.68 mm), 07 Oct 2010 (EMU-8866).

Description. Biserial phyllobranchiae. Shield (Fig. 1A) longer than broad; anterolateral margins sloping; anterior margin between rostrum and lateral projections concave; posterior margin truncate, slightly convex; dorsal surface anteriorly rugose and with short transversal rows of denticles or spines accompanied by tufts of long setae. Rostrum short, bluntly triangular or ending in small spine, equal or slightly exceeding lateral

projections, not reaching bases of ocular acicles. Lateral projections bluntly triangular, each armed with small or moderately large marginal spine. Branchiostegites with small spines or spinules on dorsal and distal margins, concealed by tufts of long setae.

Ocular peduncles long (Fig. 1A), 0.60 length of shield, broader basally; cornea weakly dilated, width about 0.60 basal width of cornea. Ocular acicles long, subtriangular or subrectangular, broader basally, contiguous along their mesial margin and ending in large spines, lateral margin armed with 3 to 6 spines, mesial margin unarmed.

Antennular peduncles (Fig. 1A) long, when totally extended, exceeding by 0.75–0.80 length of ocular peduncles; ultimate and penultimate segments unarmed, with few tufts of long setae; basal segment armed with 1 large spine at ventromesial distal margin, distal and subdistal lateral margins with moderately large spines and tufts of long setae.

Antennal peduncles (Fig. 1A) long, equaling or slightly exceeding ocular peduncles; fifth segment with few tufts of moderately long setae; fourth segment with dorsodistal spine and few tufts of setae; third segment with large spine at mesiodistal margin, distal margin with tufts of long setae; second segment with dorsolateral distal angle produced, ending in large acute spine, lateral margin with small subdistal spine, mesial margin unarmed, dorsomesial distal angle with one large or moderately large spine, mesial margin setose; first segment unarmed, ventral margin produced. Antennal acicles triangularly truncated, with terminal spine and spines on mesial margin, reaching to distal margin of fourth segment; mesial margin armed with row of 3 or 4 (juveniles) or 5 or 6 (adult) large, corneous-tipped spines, partially concealed by long setae, lateral margin unarmed. Antennal flagella moderately long, usually not exceeding tip of chelipeds; articles each with very long setae on ventral margin.

Third maxilliped (Fig. 2E) with basis-ischium fusion incomplete; basis usually with one small spine; ischium with crista dentata composed of 23–25 corneous denticles; merus with 2 or 3 large spines on ventral margin, dorsodistal margin with 1 moderately large spine; carpus, propodus and dactyl unarmed.

Chelipeds (Fig. 1B, C) similar, each with dactyl moderately long, 1.25 longer than palm, terminating in moderately large or large corneous-tipped claw, overlapped by fixed finger; cutting edge with row of calcareous teeth; dorsomesial margin with 2 or 3 rows of large, corneous-tipped spines and tufts of plumose setae; dorsal surface with 1 row of spines and tufts of plumose setae; mesial surface with irregular vertical rows of single or bifid corneous spines accompanied by pinnate setae; ventromesial margin with row of large, corneous-tipped spines; ventral surface with tufts of setae. Palm moderately long, equaling length of carpus; dorsomesial margin with 4 or 5 prominent corneous-tipped spines, dorsolateral margin with row of strong corneous-tipped spines increasing in size distally on the fixed finger; dorsal surface slightly concave on middle surface, with 3 rows of large corneous-tipped bifid or trifid spines, accompanied with tufts of plumose setae, 1 row extending on fixed finger; mesial surface with spine-like or denticulate tubercles, and corneous spines accompanied with tufts of setae; lateral and ventral surfaces with scattered denticulate or spine-like tubercles, accompanied with tufts of setae; fixed finger with calcareous teeth on cutting edge, terminating in long corneous claw. Carpus moderately short, about 0.50 length of merus; dorsomesial margin with 6 large, corneous-tipped spines accompanied with tufts of long stiff setae; dorsal surface with 2 irregular longitudinal rows of large or moderately large spines, distal margin with 1 to several small, corneous-tipped spines and tufts of long plumose setae; dorsolateral margin not noticeably delimited; mesial surface with scattered granules or spine-like tubercles and tufts of short setae; lateral surface with numerous spine-like tubercles accompanied by tufts of long setae; ventral surface unarmed. Merus subtriangular; dorsal face with row of small spines increasing in size, becoming transverse rows of moderately large spines distally, often corneous-tipped spines distally, accompanied by tufts of long setae, distal margin with row of moderately large corneous-tipped spines extending on lateral and mesial margins; lateral face granulose and spiny subdistally and distally, ventral margin with row of corneous-tipped spines and tufts of long plumose setae; mesial face with few spinules on distal and subdistal margins and scattered tufts of short setae, ventromesial margin with row of small, corneous-tipped spines and tufts of long plumose setae; ventral surface with tufts of long plumose setae. Ischium with row of small spines on ventromesial and dorsolateral margins, distal margin with long plumose setae. Coxa with 1 large, sharp spine at ventromesial angle and tufts of long stiff setae.

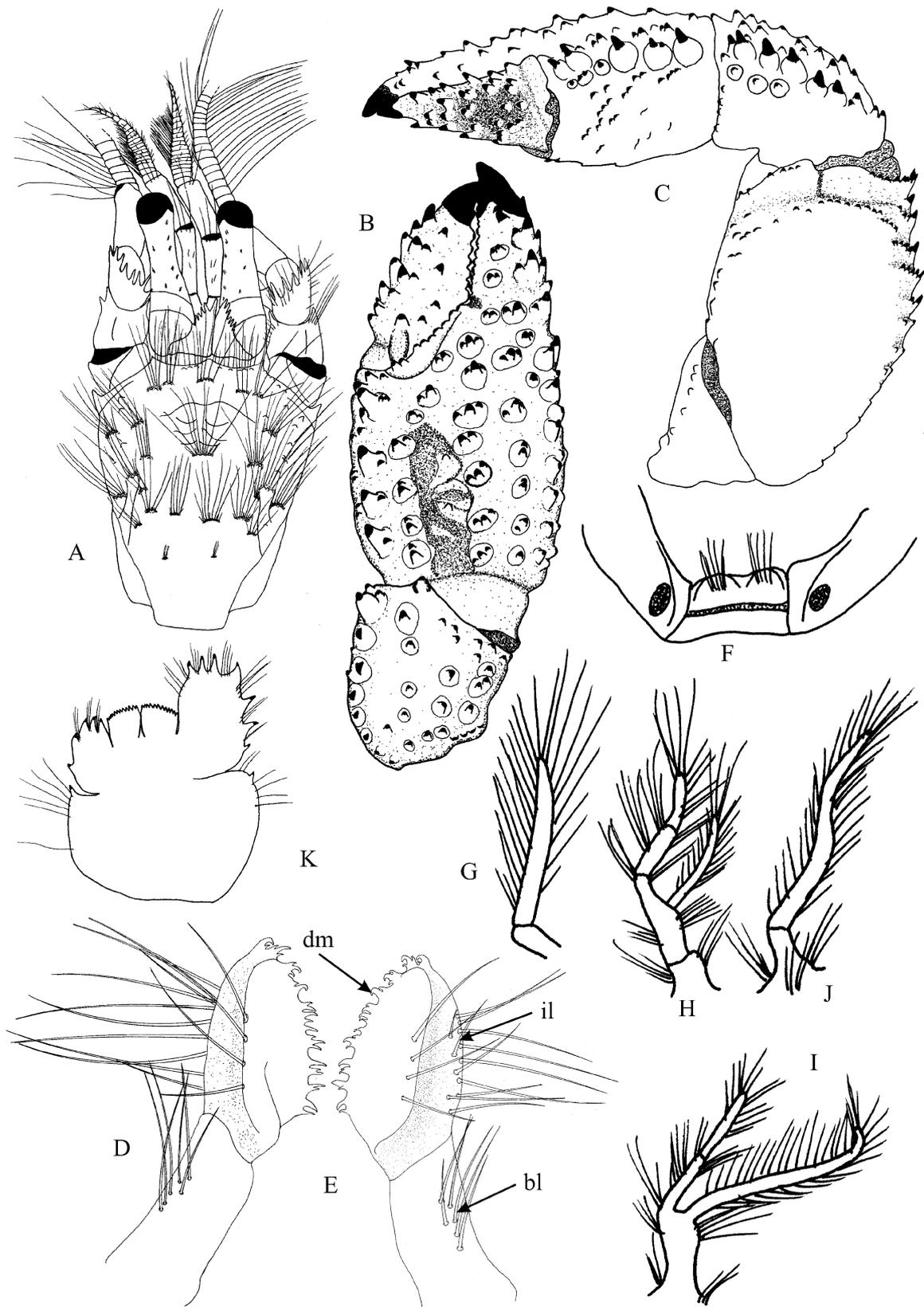


FIGURE 1. *Tetralobistes bicentenarius* gen. nov. and sp. nov., A–C, F, H–K, holotype female (SL, 2.10 mm) (EMU-8730), D, E, G, paratype male (SL, 1.90 mm) (EMU-8732). A, shield and cephalic appendages, dorsal view; B, chela and carpus of right cheliped, dorsal view, omitted setae; C, right cheliped, mesial view, omitted setae; D, left first pleopod, lateral inner view; E, same, lateral outer view; F, sternite of third pereopods (thoracic somite XII); G, left third pleopod; H, left second pleopod; I, left fourth pleopod; J, left fifth pleopod; K, telson. Arrows: il, internal lobe; dm, distal margin; bl, basal lobe.



FIGURE 2. *Tetralobistes bicentenarius* **gen. nov.** and **sp. nov.**, A–E, holotype female (SL, 2.10 mm) (EMU-8730). Left mouthparts, inner view. A, maxillule; B, maxilla; C, first maxilliped; D, second maxilliped; E, third maxilliped.

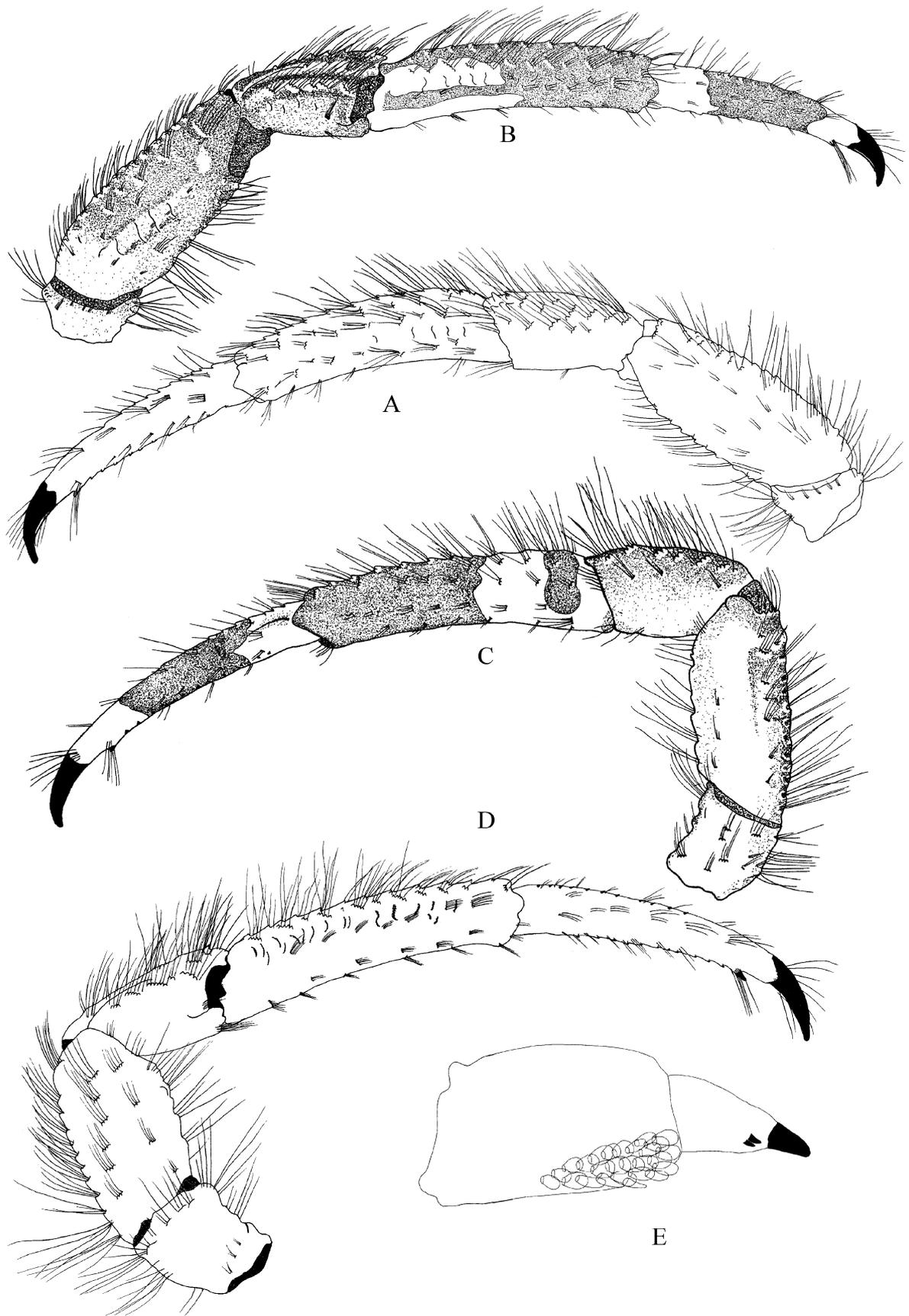


FIGURE 3. *Tetralobistes bicentenarius* gen. nov. and sp. nov., A–E, holotype female (SL, 2.10 mm) (EMU-8730). A, second right pereopod, mesial view; B, same, outer view; C, third right pereopod, mesial view; D, same, outer view; E, fourth right pereopod, propodus and dactyl, outer view, omitted setae.

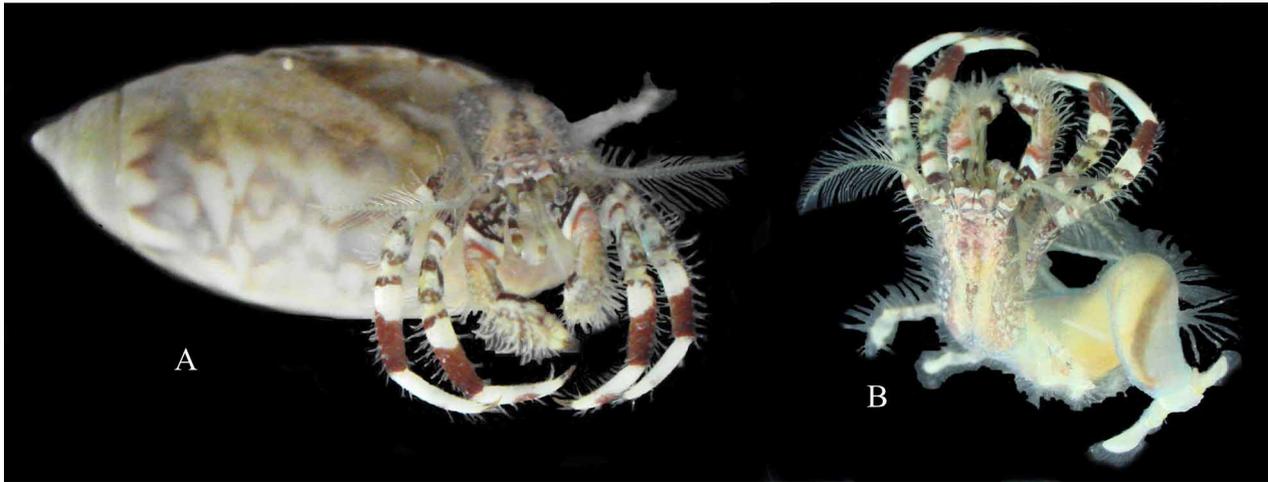


FIGURE 4. *Tetralobistes bicentenarius* **gen. nov.** and **sp. nov.**, A–B, paratype male (SL, 1.68 mm) (EMU-8866). A, live specimen in shell; B, same, removed from shell, dorsal view.

Left and right pereopods 2 and pereopods 3 similar (Fig. 3A–D), differing somewhat in armature. Dactyls 1.00–1.08 length of propodi; dorsal margins each with row of small corneous spines on proximal 0.50 and tufts of long plumose setae; mesial and lateral faces each with shallow longitudinal groove proximally, and 1 or 2 irregular longitudinal rows of tufts of short setae; ventral margins each with row of 10–13 minute corneous spines increasing in size distally. Propodi 1.48–1.92 length of carpi; dorsal surfaces each with 2 longitudinal rows of flattened denticles accompanied by tufts of long plumose setae; lateral surface with 2 rows of tufts of short setae, 1 middle row usually bearing denticulate, flattened tubercles, and another row ventrally; mesial surfaces each with 3 longitudinal rows of denticulate, flattened tubercles accompanied by tufts of short setae; ventral surfaces each with 2 longitudinal rows of tufts of short setae. Carpi 0.63–0.80 length of meri; dorsal surfaces each with 2–4 irregular rows of moderately large, corneous-tipped spines accompanied by tufts of long setae (second) or with 2 or 3 rows of denticulate tubercles, and 1 or 2 moderately large, corneous-tipped spines distally (third); mesial surfaces naked; lateral surfaces each bearing shallow longitudinal groove, ventrally flanked by short, transverse rows of denticles accompanied by tufts of long setae. Meri flattened laterally; dorsal surfaces with spinules partially concealed with tufts of long plumose setae (second) or with only tufts of long plumose setae (third); mesial and lateral surfaces with some flattened denticulate tubercles and tufts of short setae; ventral margins each with double irregular row of denticles and tufts of long plumose setae (second) or only tufts of setae (third). Ischia (second) with 2 small spines on ventromesial margin and 3 or 4 dorsodistal spinules, or with some denticulate tubercles on mesial face (third).

Sternite XII (third pereopods) (Fig. 1F) with anterior lobe subrectangular, bearing pair of protuberances and tufts of long setae.

Fourth pereopods simple (Fig. 3E); dactyl short, about 0.77 length of propodus, setose, with 2 large corneous spines on ventrolateral margin posterior to claw; propodi each with 3 rows of ovate scales in propodal rasp; carpi as long as propodi, each with small dorsodistal spine.

Male first pleopod paired, modified as gonopods (Fig. 1D, E). Basal lobe (see arrow, bl) bearing tuft of long setae, mesial margin naked; inferior lamella with row of long setae on lateral margin, distal margin (see arrow, dm) with row of bifid and multifid corneous, curved spines extending down mesial face; internal lobe (see arrow, il) with marginal setae. Pleopods 2 absent, 3–5 unpaired (Fig. 1G), exopod very well developed, endopod absent. Female with paired gonopores, without first paired pleopods, pleopods 2–4 (Fig. 1H, I) with both rami well developed, pleopod 5 (Fig. 1J) as in male; brood pouch represented by row of setae.

Telson (Fig. 1K) with posterior margin divided in 4 lobes; outer left lobe longer than outer right, subrectangular, armed with 2 or 3 distal spines and 2–4 lateral spines; middle lobes subquadrate, each with 11–13 small spines; outer right lobe subrectangular, distal and lateral margins each with 2 or 3 strong spines;

anterior section of telson separated from posterior section by indentation, weakly bilobate, lobes unarmed or each with 1–3 small spines and long stiff setae.

Color (Fig. 4 A, B). In life, abdomen orange with numerous red dots. Telson and uropods pale-yellow or white. Posterior and anterior portions of carapace reddish-brown over yellow-orange background. Ocular acicle pale-yellow to white, with middle reddish-brown band. Base of ocular peduncles with 1 reddish-brown oblique band, 1 rose and 1 reddish-brown band; distal 0.66 light olive. Cornea golden. First, second, third and proximal 0.50 of antennal segments reddish, distal 0.50 of fourth and fifth segments light olive. Antennal acicles whitish-rose proximally, reddish-brown in middle, and olive distally. Antennal flagella light olive, ventral setae transparent. In juveniles, dactyls and fixed fingers of chelipeds white; chelae dark-brown; palms yellow-orange with small reddish-brown spots on dorsal, lateral and ventral surfaces; mesial faces each with oblique longitudinal reddish-brown band; carpi yellow-orange with small reddish-brown spots on dorsal faces; meri reddish-brown, each with middle whitish-rose band. Walking legs with white dactyls. Claws amber; propodi white on proximal halves and reddish-brown distally; carpi white each with brown band on proximal third; meri brown, each with white band; ischia reddish-brown dorsally, ventrolateral and ventromesial faces yellow-orange. In adults specimens chelipeds reddish-brown with small white spots; dactyls and fixed fingers each with white band posterior to claw; carpi reddish-brown; meri reddish-brown each with whitish-rose subdistal band; dactyls of ambulatory legs reddish-brown each with 2 white bands, 1 proximal other distal; propodi reddish-brown, each with 2 short, white, longitudinal bands proximally on lateral surface and 1 white band on mesial surface; carpi and meri reddish-brown with small white spots.

Etymology. The species is named in commemoration of the 200 years of the independence of Mexico (“bicentenario”), and is a combination of the Latin prefix, *bi* (two), and Latin word, *centenarius* (centenary), in the masculine.

Distribution. Known only from the type locality.

Habitat. Specimens were captured on rock covered with green algae, in 0.5–1.5 m depth. The species occupied different types of gastropods shell, among them *Costoanachis varia* (Sowerby, 1832), *Olivella* cf. *aureacincta* Carpenter, 1857, *Stramonita biserialis* (Blainville, 1832), *Mitrella* sp., and *Terebra* sp.

Variation. Small differences were observed in armature of chelipeds between juvenile and adult specimens. In juveniles the dorsal surface of the palm bears single spines, whereas in adults corneous-tipped-bifid or trifid spines are present. As noted earlier, the color pattern also varies between juveniles and adults.

Remarks. There is a superficial resemblance between *Tetralobistes bicentenarius* **gen. nov.**, **sp. nov.** and *Areopaguristes mclaughlinae* from the Mexican Pacific. Both species have a short rostrum, multispinous, contiguous ocular acicles, antennular and antennal peduncles of comparable length, antennal flagella bearing long setae ventrally, and subequal chelipeds with tipped fingers. Both species also feature modified male first pleopods with distal margin of the inferior lamella bearing a row of simple, bifid and multifid corneous, curved spines. In the females of both species the first pleopods and brood pouch are absent. However, in addition to the generic differences (see above), their color pattern is different, the antennal acicles are broader and shorter in *T. bicentenarius* **gen. nov.** and **sp. nov.** than in *A. mclaughlinae*, and the armature of chelipeds and ambulatory legs is different between the two species.

Acknowledgements

We thank students of the Laboratorio de Invertebrados Bentónicos for the help provided during the collection of hermit crabs. One of us (MAP) thanks CONACyT, Mexico for the grant received during his study (125847). We also thank José Salgado Barragán for identifying the gastropod shells, and Mercedes Cordero for editing the final version of this manuscript.

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