Travaux du Muséum National d'Histoire Naturelle «Grigore Antipa»	Vol. LIV (2)	pp. 351–363	© 30 Décembre 2011

DOI: 10.2478/v10191-011-0022-2

LEPTOCHELIA VATULELENSIS (CRUSTACEA: TANAIDACEA), A NEW SPECIES FROM ANCHIALINE CAVES OF THE SOUTH-WESTERN PACIFIC

MODEST GUŢU, THOMAS M. ILIFFE

Abstract. *Leptochelia vatulelensis* n. sp., discovered on the small islands of Vatulele (Fijian group) and Ouvéa (Loyalty Islands, New Caledonia), is described and illustrated. The new species is distinguished from the others of the "*Leptochelia-dubia* group" (to which it is generally similar) by the following combination of morphological characteristics: (1) the presence of three to four distal setae on the maxilliped basis; (2) merus of pereopods III and IV with only a distosternal seta; (3) endopod of the uropods formed of four (rarely three) articles; (4) males with two (sometimes three) relatively short aesthetascs on the first five articles of the antennular flagellum; (5) male cheliped with a diminished dimorphism; (6) males with a vertical comb-row of setae on the cheliped propodus. Although it inhabits inland, anchialine caves, the new species lacks morphological features that are characteristic of some cave species.

Résumé. On décrit l'espèce *Leptochelia vatulelensis* n.sp. provenant des petits Îles Vatulele (groupe des Îles Fidji) et Ouvéa (Îles Loyalty, Nouvelle Calédonie), du sud-ouest de l'Océan Pacifique. La nouvelle espèce se distingue des autres espèces du „groupe *Leptochelia-dubia*" (auquelles elle ressemble) par la combinaison suivante de traits morphologiques: (1) présence de 3-4 sétes distales sur le basis du maxillipède; (2) le merus des péréopodes III et IV ayant chacun une sète disto-sternale; (3) l'endopode des uropodes formé de quatre (rarement de trois) articules; (4) les mâles ont deux (ou trois) aestetasques (courts) sur chacun des premiers cinq articules du flagellum de l'antenne; (5) le chélipède des mâles avec un dimorphisme reduit; (6) les mâles avec une rangée verticale de setae située sur le propode du chélipède. Bien que provenant de grottes sous-marines, la nouvelle espèce ne présente pas de traits morphologiques caractéristiques aux espèces cavernicoles.

Key words: Tanaidacea, Leptocheliidae, Fiji Islands, Loyalty Islands, *Leptochelia vatulelensis* n. sp.

Systematic studies over the last decade by Larsen & Rayment (2002), Bamber (2005, 2006, 2008, 2010), Bamber & Costa (2009), Bamber et al. (2009) and Guţu (2011 a, b), where several species of the genus *Leptochelia* Dana, 1849 are described or re-described, have pointed out both the confusion and the unexpected specific diversity present in this genus.

A new species of the genus *Leptochelia* ("*Leptochelia-dubia* group", sensu Lang, 1973), collected from anchialine caves in the islands of Vatulele (Fijian group) and Ouvéa (Loyalty Islands, New Caledonia) from the south-western Pacific Ocean, is described and illustrated. Although the described species inhabits inland, anchialine caves, it lacks morphological features characteristic to cave species.

The islands of Vatulele (18°33' S, 177°38' E) in Fiji and Ouvéa (20°36' S, 166°34' E) in New Caledonia are separated by 1,180 km. Vatulele is a 12.5 km long by up to 5 km wide, low lying island situated 31 km south of the main island of Viti Levu. Vatulele consists of uplifted reef limestone with notched cliffs on its western coast marking five periods of stable sea level. Naurambuta Pond is an anchialine limestone pond situated on the west coast of Vatulele, adjacent to Naurambuta Cave (Fig. 17 in Stock & Iliffe, 1991). This strongly tidal pool contains numerous brilliant red prawns, *Parhippolyte uveae* Borradaile, 1899, which are considered by the island's inhabitants as sacred and it is tabu to disturb them (Choy, 1987). The 80 m long, 10 m wide pool has a maximum depth of 6 m, but below 5 m, an opaque layer of H_2S exists. Surface salinity was 29 ppt at the time of sampling. Amphipods, copepods, tanaidaceans and ostracods were collected from 0-0.5 m depths of the pool with a 93 pm plankton net. A new species of cave adapted amphipod, *Liagoceradocus unciferus* Stock & Iliffe, 1991, was included in these collections.

Ouvéa, an uplifted atoll with a maximum elevation of 46 m, is part of the Loyalty Islands in New Caledonia. Trou Bleu d'Aben is a karstic blue hole located 50 m inland from the lagoon on the west coast of central Ouvéa. This 40 m diameter sinkhole has a 5 m vertical drop to water level and is at least 30 m or more in depth. The water is clear down to 25 m where patchy layers of H_2S reduce visibility. The bottom consists of thick silt and some vegetal remains. Large algal stalactites are present under overhanging ledges. Surface salinity was 14 ppt increasing to fully marine levels (34.5 ppt) at 30 m. Plankton net collections included copepods, amphipods, and tanaidaceans, as well as shrimp and bivalves collected by hand.

Family Leptocheliidae Lang, 1973
Genus *Leptochelia* Dana, 1849

Regarding the morphological features characteristic of males of *Leptochelia*, in the generic diagnosis presented by Lang (1973: 224), it is mentioned that the chelipeds of the females have a row of setae (comb-row), vertically oriented, on the propodus, while in the males, it is horizontally directed (*Chelipeden beim Weibchen normal, beim Männchen stark verlängert, Propus beim Weibchen mit vertickaler, beim Männchen mit horizontaler Borstenreihe,* …). From the literature, it appears that this morphological feature is present in all known males of the "*Leptochelia-minuta* group" (Lang, 1973: figs 6-11; Heard et al., 2004: fig. 144; Guţu, 2011 a: fig. 9 D; 2011 b: fig. 3 D, E), but not in all males of the "*Leptochelia-dubia* group". While males of some species of this "group" have the comb-row horizontally directed (Lang, 1973: fig. 14; Bamber & Bird, 1997: fig. 15; Dojiri & Sieg, 1997: fig. 3.10. Che; Bird & Bamber, 2000: fig. 5 H; Bamber 2008: figs 29 C, 32 C, 35 C; 2010: fig. 8 A; Guţu, 2011 a: fig. 3 C), the males of other species such as *L. vatulelensis* n. sp. (Fig. 3 D, E), *L. itoi*, from the Japanese waters (Ishimaru, 1985, fig. 2 B, D), *L. lusei*, from the South China Sea (Bamber & Bird, 1997, fig. 15 A) and *L. myora*, from the

Australian waters (Bamber, 2008: fig. 26 A) have it vertically oriented, as in the females. In a number of species males are not known, and in some species where males are known this row is not described (e. g. *L. nobbi* Bamber, 2005).

Besides the mentioned vertical comb-row of setae, the male cheliped of *Leptochelia vatulelensis* n. sp. resembles that of the species *L. lusei* Bamber & Bird, 1997, but also that of the species *Pseudoleptochelia antarctica* (cf. Lang, 1953: fig. 1 Y), by the configuration of the fixed finger and of the dactylus (short and thick).

Leptochelia vatulelensis n. sp.

(Figs 1-4)

Material: 40 specimens (3 females with eggs or remains of marsupium, 29 females without oostegites or eggs, 4 males and 4 mancas) collected from anchialine caves, as follows:

- 25 specimens (3 females with eggs or remains of marsupium, 20 females without eggs and 2 males), Naurambuta Pond, Vatulele Island (a small island in the Fijian group), Station 88-045, 15 May, 1988; leg. Dr. Şerban Sârbu;

- 15 specimens (9 females without oostegites or eggs, 2 males and 4 mancas), Trou Bleu d'Aben, Ouvéa Island (Loyalty Islands, New Caledonia), Station 88-068, 23 June, 1988; leg. Drs. Thomas Iliffe and Şerban Sârbu.

Holotype, female with remains of marsupium, from the Vatulele Island, preserved in the Collection of the "Grigore Antipa" National Museum of Natural History, Bucharest (Romania), No. 250498;

Allotype, male, from the Vatulele Island, in the same collection, No. 250499;

Paratypes: 2 adult females with eggs and 18 females without oostegites or eggs, from Vatulele Island, No. 250500 and 250501, respectively, and 2 males, 8 females without oostegites or eggs and 4 mancas from Ouvéa Island, No. 250502, 250503 and 250504, respectively.

Remarks. Four specimens (2 females without oostegites or eggs and 1 male from Vatulele Island, and 1 female without oostegites or eggs from Ouvéa Island) were destroyed by dissection.

Etymology. After the name of one island from which the new species was collected.

Description of the female

Body (Fig. 1 A) more or less cylindrical, six times as long as the maximum width of carapace; standard length approximately 2.5 mm.

Carapace, as long as pereonite three and four (together) and slightly narrower than the first pereonite, with two unequal short setae posterolaterally. Ocular lobes well defined, eyes pigmented (Fig. 1 A, C).

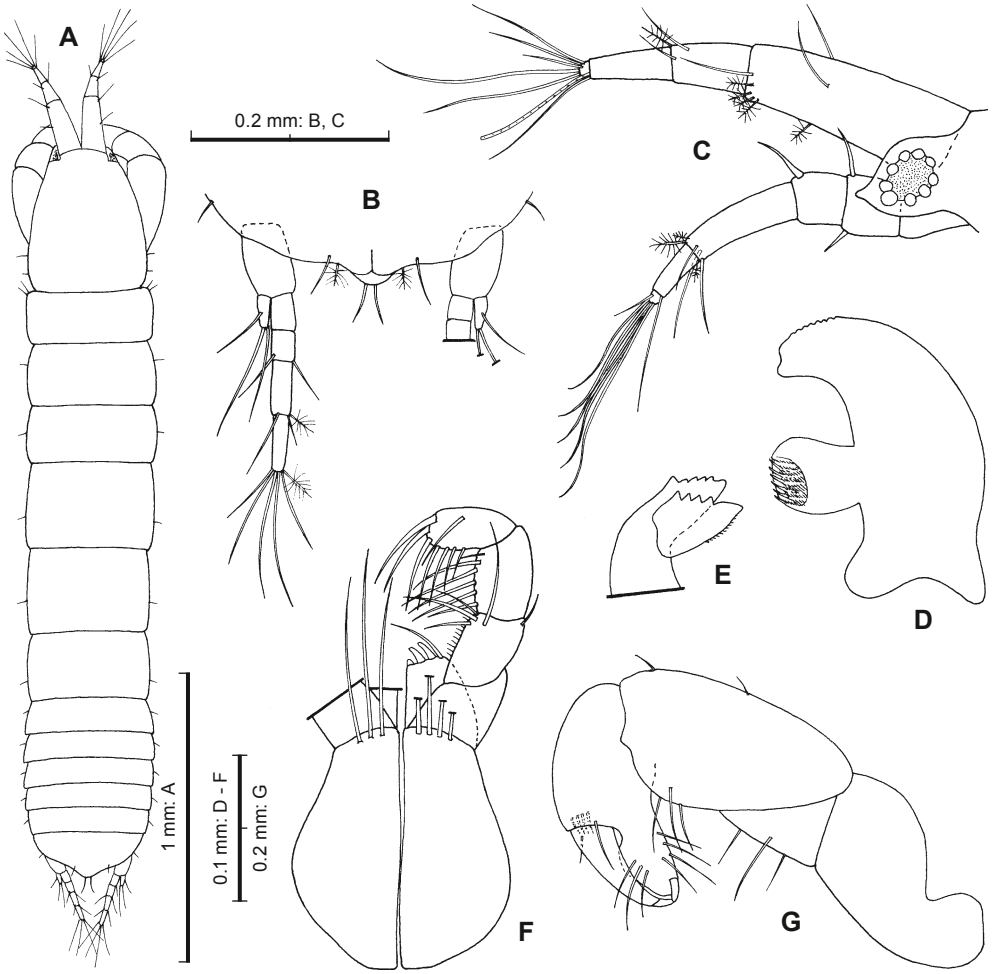

Fig. 1 - *Leptochelia vatulelensis* n. sp., female: A, body (dorsal); B, pleotelson (caudal part) and uropods (endopod of right uropod not shown); C, antennule and antenna (lateral); D, right mandible; E, pars incisiva and lacinia mobilis of left mandible; F, maxilliped (palp of left maxilliped not shown); G, cheliped (left, outer face).

Pereon about 2.8 times as long as carapace. First three pereonites together as long as following two, each pereonite wider than long. Pereonite six slightly longer than any of first three, but shorter than either of fourth or fifth pereonites. First pereonite with two short setae on anterolateral corners; pereonites two to six with small seta on each side (Fig. 1 A).

Pleon short, about as long as carapace and first pereonite. Each pleonite with one short seta on sides (Fig. 1 A). Pleotelson, longer than any pleonite, with one posterolateral seta on each side and four simple and two broom setae on caudal margin (Fig. 1 B).

Antennule (Fig. 1 C), shorter than the carapace, with three-articulated peduncle and one-articulated flagellum. First peduncular article, three times as long as wide and about 2.8 times as long as second article, with three simple and five or six broom setae. Second article with one broom and two simple setae distally. Third article as long as second article, with one simple seta and one aesthetasc. Flagellum (fourth article) very small (tuberculiform), ending in five unequal simple setae.

Antenna (Fig. 1 C) six-articulated. First three articles short and thick. Second and third articles with one slender distodorsal spine (as long as third article); second article with one short distoventral spine (half as long as distodorsal spine). Fourth article, as long as but narrower than previous two articles, with six distal setae, three of them simple. Fifth article narrow, as long as third article, ending in two unequal simple setae. Sixth article tuberculiform, with five long simple setae, the longest of them being as long as previous four articles.

Mandibles (Fig. 1 D, E) typical of genus. Pars incisiva of right mandible with outer margin slightly crenulated (Fig. 1 D). Pars incisiva of left mandible with six distal denticles; lacinia mobilis with five distal denticles (Fig. 1 E). Pars molaris of both mandibles well developed, having numerous small spinules on distal surface.

Maxilliped (Fig. 1 F). Basis, 2.2 times as long as broad, with three or four long simple setae on distal margin. Palp first article as long as wide, naked; second article, slightly longer than first, with one distoexternal and four distoinner simple setae; inner margin with numerous setules; third article, slightly longer than second, with six simple setae on inner margin; last article of palp as long as the second, with eight setae on distal and inner margin. Endite, longer than the first palp article, with one simple seta and three unequal spiniform denticles on the distal margin, innermost smallest.

Other *mouthparts* unstudied.

Cheliped (Fig. 1 G) similar to those of other species of the genus. Basis 1.8 times as long as its distal width. Merus small, triangular, with three sternal simple setae. Carpus, longer than basis, with three distosternal and two tergal simple setae. Propodus about as long as carpus, with three short setae on inner surface (near dactylus joint), and one longer seta on outer surface; fixed finger with three inner and four outer long simple setae; claw stout. Dactylus narrower and slightly shorter than fixed finger, with one small proximotergal seta.

Pereopod II (Fig. 2 A) slender and long. Basis 3.8 times as long as wide, with proximotergal prominence, and one simple and one broom seta. Ischium with one short sternal seta. Merus about half as long as basis, with one distosternal simple seta. Carpus shorter than merus, with two distosternal and two longer distotergal simple setae. Propodus, longer than merus or carpus, with four distal simple setae. Dactylus together with unguis longer than propodus, with one proximotergal seta; unguis shorter than dactylus.

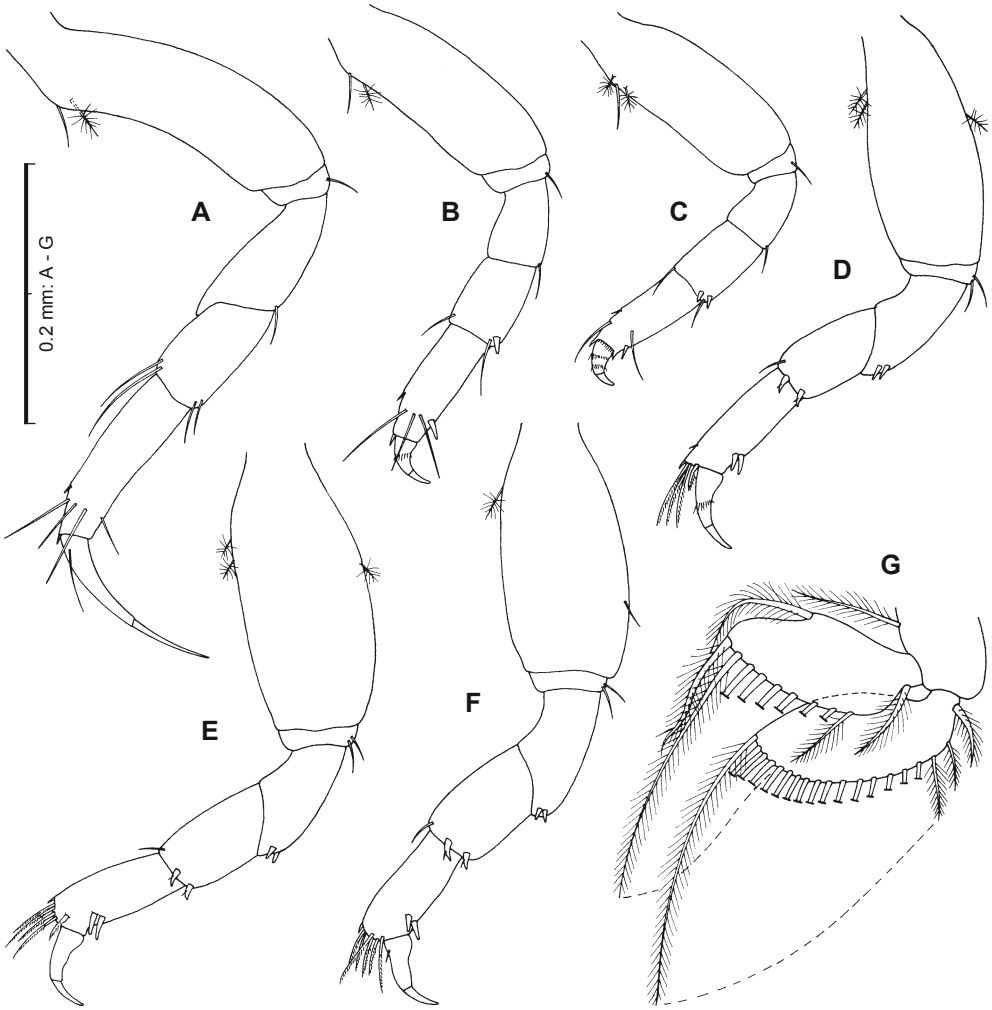

Fig. 2 - *Leptochelia vatulelensis* n. sp., female: A-F, pereopods II-VII, respectively; G, pleopod.

Pereopod III (Fig. 2 B) shorter than pereopod II. Basis 2.7 times as long as wide; proximotergally with one simple and one broom seta. Ischium with one sternal simple seta. Merus approximately one-third as long as basis, with one distosternal simple seta. Carpus as long as merus, with one spine and one simple seta in distosternal corner, and one distotergal seta. Propodus 1.5 times as long as carpus, with one distosternal spine and three distal simple setae. Dactylus curved, short and thick, with band of setules; unguis small, curved.

Pereopod IV (Fig. 2 C) similar to but shorter than pereopod III. Basis with one simple and two broom setae. Carpus with two small distosternal spines and two distal simple setae. Propodus with one distosternal small spine and two distal simple setae. Ischium, merus and dactylus as in pereopod III, but dactylus with two setule bands.

Pereopod V (Fig. 2 D) larger than pereopod IV. Basis swollen, 2.2 times as long as wide, with one sternal and two tergal broom setae. Ischium with two simple setae. Merus a little longer than carpus, with two distosternal spines. Carpus with two spines and one simple seta distally. Propodus, longer but narrower than merus or carpus, with two distosternal spines; distotergally with one short and three long ciliate setae. Dactylus stout, curved; unguis small.

Pereopod VI (Fig. 2 E) as pereopod V but with four ciliate setae on propodus.

Pereopod VII (Fig. 2 F) similar to pereopods V or VI, with six ciliate setae on propodus.

Pleopods (Fig. 2 G). Basal article with an inner plumose seta. Endopod well developed, about 2.3 times as long as maximum width, with one long midinner plumose seta; outer margin with ten unequal plumose setae, having a gap between most proximal seta and rest. Exopod approximately equal to endopod, with 19 unequal plumose setae.

Uropod (Fig. 1 A, B). Peduncle thick, as long as first two articles of endopod. Exopod uniarticulated, as long as first article of endopod, with one midlateral and two terminal simple setae. Endopod four-articulated; first two articles shorter than following two; second and third articles with two simple setae and the last article with five simple setae; the third and fourth article with one distoinner broom seta (Fig. 1 B).

Description of the male

Body (Fig. 3 A) similar to that of female; standard length, 2.3 mm.

Antennule (Fig. 3 A, C) onethird as long as body length. Peduncle three-articulated as long as carapace; first article, a little shorter than following two; second article shorter than first; third article half as long as second; each article of peduncle with one or two simple and two broom setae, distally. Flagellum six-articulated; each of the first five articles slightly shorter than the last peduncular article and with two aesthetascs; last article very small (tuberculiform), distally with six unequal simple setae and one aesthetasc.

Antenna (Fig. 3 C) six-articulated, as long as first two peduncular articles of antennule. First three articles equal, short and thick; second article with one distotergal and one distosternal setiform spine; third article with one distotergal setiform spine; fourth article thin, longer than the first three articles, with three long simple and two short broom setae; fifth article shorter than the preceding article, with one long simple seta; sixth article very sort, tuberculiform, distally with one short and three very long simple setae (the longest being longer than last three articles together).

Mouth parts, atrophied.

Cheliped (Fig. 3 D, E) similar to that of female except propodus with two tuberculiform prominences on inner margin. Propodal comb-row of setae vertical, near dactylus attachment (Fig. 3 E).

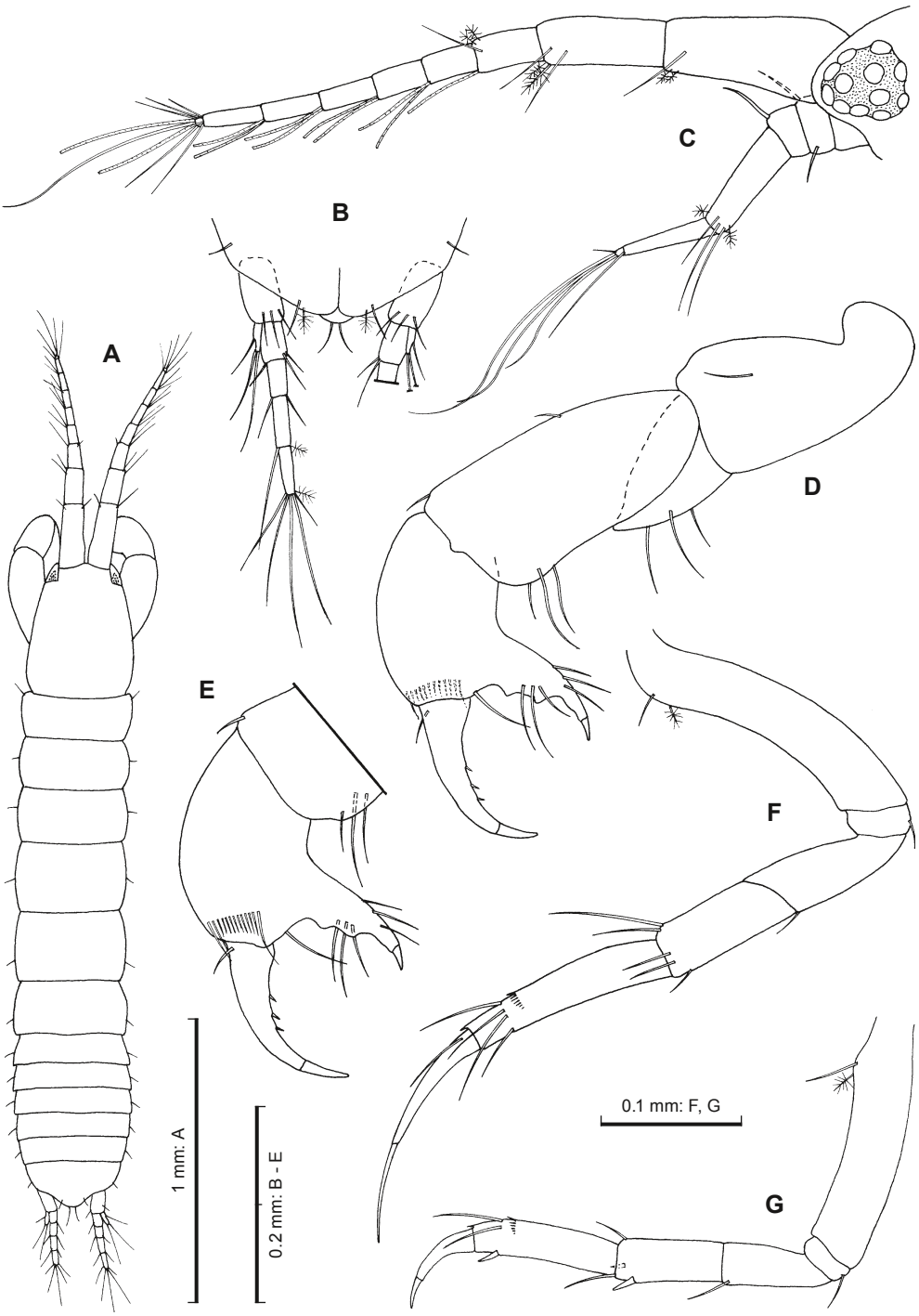

Fig. 3 - *Leptochelia vatulelensis* n. sp., male: A, body (dorsal); B, pleotelson (caudal part) and uropods (excepting the endopod of right uropod); C, antennule and antenna (lateral); D, cheliped (left, outer face); E, chela (right, inner face); F, pereopod II; G, pereopod III.

Pereopod II (Fig. 3 F) slender. Basis, 5.4 times as long as wide, with one broom and one proximotergal simple setae. Ischium with one sternal simple seta. Merus about half as long as basis, with one distosternal short seta. Carpus approximately as long as merus, with five distal setae. Propodus 1.6 times as long as carpus, with four distal simple setae. Dactylus together with unguis slightly longer than propodus; proximotergally with one fine seta; unguis shorter than dactylus.

Pereopod III (Fig. 3 G) slender but shorter than pereopod II. Basis four times as long as wide, with two setae as in pereopod II. Ischium with one sternal seta. Merus with one distosternal simple seta. Carpus slightly longer than merus, distally with two setae and two spines. Propodus about 1.5 times as long as carpus, with one distosternal spine and two distotergal simple setae. Dactylus strong, curved, with short unguis.

Pereopod IV (Fig. 4 A) similar to pereopod III, but slightly smaller.

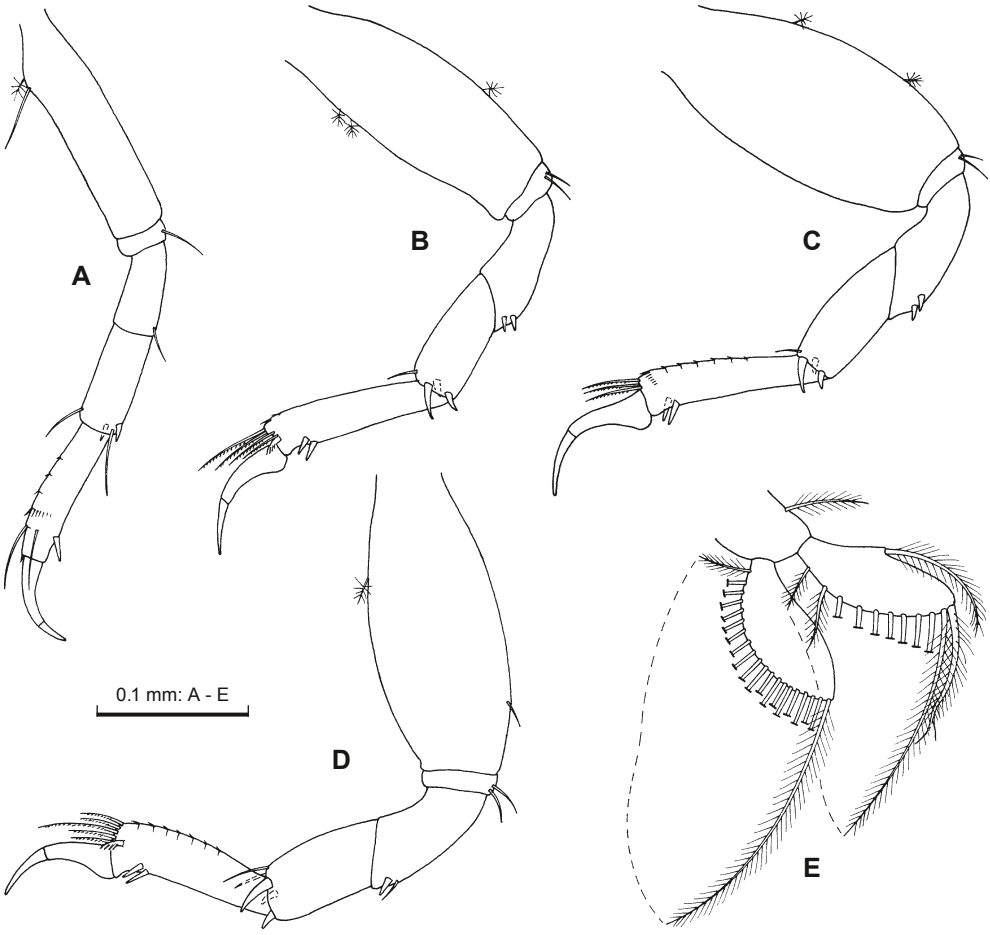

Fig. 4 - *Leptochelia vatulelensis* n. sp., male: A-D, pereopods IV-VII, respectively; E, pleopod.

Pereopod V (Fig. 4 B) stronger than pereopod IV. Basis thick, 2.6 times as long as wide, with one sternal and two tergal broom setae. Ischium with two sternal simple setae. Merus narrower than basis, with two distosternal spines. Carpus about as long as merus, with one seta and three spines distally. Propodus four times as long as wide and about 1.5 times as long as carpus, with two distosternal spines, and four ciliate setae and one ciliate spine distotergally. Dactylus with a proximosternal rounded prominence.

Pereopod VI (Fig. 4 C) similar to previous pereopod; propodus with three distotergal ciliate setae.

Pereopod VII (Fig. 4 D) differing from the previous two pereopods by having two carpal and five propodal distotergal setae.

Pleopods (Fig. 4 E). Endopod with one midexternal plumose seta and other eleven (unequal) on the inner margin. Exopod with 20 unequal plumose setae on inner side.

Uropod (Fig. 3 A, B) similar to that of female. Peduncle larger than first endopod article, with three distal short setae. Exopod shorter than the first endopod article, with one midlateral and two distal setae. Endopod four-articulated, each of first two articles shorter than either of following two articles. First three articles with one to three simple setae and last article with five simple setae.

Variability. In some females and manca stages, the endopod of the uropods is formed of only three articles. Also, the male allotype has the endopod of one of the uropods formed of three articles, and other males have a five-articulated antennular flagellum.

Remarks. The main morphological feature which distinguishes *L. vatulelensis* n. sp. from some species of the "group *Leptochelia-dubia*" is the number of the endopod articles of the uropods (4, rarely 3, in comparison with 5 or 6) a feature also found in *L. itoi* Ishimaru, 1985 (from the Japanese waters), *L. lusei* Bamber & Bird, 1997 (from the South China Sea waters), *L. karragarra* Bamber, 2008 and *L. nobbi* Bamber, 2005 (the last two from the Australian waters).

L. vatulelensis is distinguished from these four species (both in females and in males) by the absence of the distosternal spine from the merus of pereopods III and IV (the new species having only one seta). In addition, it is distinguished from *L. itoi* by the length of the uropod endopod (shorter in *L. vatulelensis*) and by the size and configuration of the male chelipeds (much larger and showing a very strong dimorphism in *L. itoi*). The antennular flagellum in males is of six articles in *L. vatulelensis* n. sp. (as in *L. karragarra* and *L. nobbi*), but only four in *L. itoi* and *L. lusei*. On the antennular flagellum of the male there are 2 (sometimes 3) aesthetascs (relatively short) on each article in the new species, 3-4 relatively long aesthetascs in *L. lusei*, 5-6 short aesthetascs in *L. itoi*, 6-7 long aesthetascs in *L. karragarra* and 7-9 very long aesthetascs in *L. nobbi*.

These differences, together with other differences in the numbers and lengths of some setae on the pereopods and pleopods, lead to the conclusion that the species from Fiji and New Caledonia is new. As we mentioned in "Abstract", although it inhabits inland, anchialine caves, the new species lacks morphological features that are characteristic of some cave species.

ACKNOWLEDGEMENTS

Collection of tanaidaceans from South Pacific caves was carried out as part of a year-long faunal survey of anchialine caves of the region funded by U.S. National Science Foundation grant BSR-8700079 and National Geographic Society grant 3412-86 to T. Iliffe. We thank Dr. Patrick Nunn of the University of the South Pacific in Suva, Fiji for providing us with invaluable logistical assistance. We also thank research assistant Dr. Şerban Sârbu, who helped with collecting and sorting, and expedition member Yolanda Iliffe.

Not the least, the authors are deeply grateful to the two anonymous reviewers for their strictness with which they verified the manuscript and their pertinent suggestions. In addition, the senior author expresses his sincere thanks to Dr. Graham Bird for the information given some times ago regarding some leptochellids genera.

LEPTOCHELIA VATULELENSIS (CRUSTACEA: TANAIDACEA), O NOUĂ SPECIE DIN GROTELE ANCHIALINE ALE PACIFICULUI DE SUD-VEST

REZUMAT

Este descrisă specia *Leptochelia vatulelensis* n. sp. provenind din micile insule Vatulele (grupul Insulelor Fiji) şi Ouvéa (Insulele Loyalty, Noua Caledonie), din sud-vestul Oceanului Pacific.

Noua specie se deosebeşte de celelalte ale "grupului *Leptochelia-dubia*" (cu care se aseamănă) prin următoarea combinaţie de trăsături morfologice: (1) prezenţa a 3-4 sete distale pe bazisul maxilipedului; (2) merusul pereopodelor III şi IV cu câte o singură setă disto-sternală; (3) endopodul uropodelor format din patru (rar trei) articule; (4) masculii cu câte două estetasce (scurte) pe primele cinci articule ale flagelului antenulei; (5) chelipedul masculilor cu dimorfism diminuat; (6) masculii cu un şir vertical de sete situat pe propodul chelipedului, lângă articulaţia cu dactilul.

Deşi provine din grote anchialine, noua specie nu prezintă trăsături morfologice caracteristice unor specii cavernicole.

LITERATURE CITED

BAMBER, R. N., 2005 - The Tanaidaceans (Arthropoda: Crustacea: Peracarida: Tanaidacea) of Esperance, Western Australia, Australia. Pp. 613-727. *In:* F. E. Wells, D. I. Walker and G. A. Kendrick (eds), The Marine Flora and Fauna of Esperance, Western Australia, Western Australian Museum, Perth.

BAMBER, R. N., 2006 - Shallow water tanaidaceans (Crustacea: Peracarida: Tanaidacea) from New Caledonia and the Loyalty Islands. Zootaxa, 1108: 1-21.

BAMBER, R. N., 2008 - Tanaidaceans (Crustacea: Peracarida: Tanaidacea) from Moreton Bay, Queensland. Memoirs of the Queensland Museum-Nature, 54 (1): 143-217.

BAMBER, R. N., 2010 - In the footsteps of Henrik Nikolaj Krøyer: the rediscovery and redescription of *Leptochelia savignyi* (Krøyer, 1842) sensu strictu. Proceedings of the Biological Society of Washington, 123 (4): 289-311.

BAMBER, R. N., G. J. BIRD, 1997 - Peracarid crustaceans from Cape d'Aguilar and Hong Kong, III. Tanaidacea: Tanaidomorpha. Pp. 103-142. *In*: B. Morton (ed.), The Marine Flora and Fauna of Hong Kong and Southern China Sea IV. Proccedings of the Eighth International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong, 2-20 April 1995, Hong Kong University Press.

BAMBER, R. N., A. C. COSTA, 2009 - The tanaidaceans (Arthropoda: Peracarida: Tanaidacea) of São Miguel, Azores, with description of two new species, and a new record from Tenerife. Açoreana, supl. 6: 183-200.

BAMBER, R. N., G. BIRD, M. BLAZEWICZ-PASZKOWYCZ, B. GALIL, 2009 - Tanaidaceans (Crustacea: Malacostraca: Peracarida) from soft-sediment habitats off Israel, Eastern Mediterranean. Zootaxa, 2109: 1-44.

BIRD, G. J., R. N. BAMBER, 2000 - Additions to the tanaidomorph Tanaidacea (Crustacea: Peracarida) of Hong Kong. Pp. 65-104. *In*: B. Morton (ed.), The Marine Flora and Fauna of Hong Kong and Southern China Sea V. Proccedings of the Tenth International Marine Biological Workshop: The Marine Flora and Fauna of Hong Kong and Southern China, Hong Kong, 6-26 April 1998, Hong Kong University Press.

CHOY, S. C., 1987 - Magico-religious taboos and their contribution to the conservation of the biota of anchihaline habitats. Stygologia, 3 (4): 305-312.

DOJIRI, M., J. SIEG, 1997 - The Tanaidacea. Pp. 181-278. *In:* J. A. Blake, P. H. Scott (eds), Taxonomic Atlas of the Bentic Fauna of the Santa Maria Basin and Western Santa Barbara Channel. Volume 11, The Crustacea Part 2, The Isopoda, Cumacea and Tanaidacea, Santa Barbara Museum of Natural History.

GUȚU, M., 2011 a - The redescription of the *Leptochelia bispinosa* Guțu and *L. corsica* Dollfus, and the first description of the female of *L. tenuicula* Makkaveeva (Crustacea: Tanaidacea). Travaux du Muséum National d'Histoire Naturelle „Grigore Antipa", 54 (1): 21-41.

GUȚU, M., 2011 b - A new genus and two new species of leptocheliids from the marine shallow waters of Indonesia (Crustacea: Tanaidacea: Tanaidomorpha). Travaux du Muséum National d'Histoire Naturelle „Grigore Antipa", 54 (1): 43-61.

HEARD, R. W., T. HANSKNECHT, K. LARSEN, 2004 - An Illustrated Identification Guide to Florida Tanaidacea (Crustacea: Peracarida) Occuring in Depths of Less Than 200 m. State of Florida, Department of Environmental Protection, Tallahassee. http://www.dep.state.fl.us/labs/cgi-bin/sbio/keys.asp#keys.

ISHIMARU, S., 1985 - A new species of *Leptochelia* (Crustacea, Tanaidacea) from Japan, with a redescription of *L. savignyi* (Krøyer, 1842). Publication of the Seto Marine Biological Laboratory, 30 (4/6): 241-267.

LANG, K., 1953 - The postmarsupial development of the Tanaidacea. Archiv för Zoologi, 4: 409-422.

LANG, K., 1973 - Taxonomische und phylogenetische Untersuchungen über die Tanaidaceen (Crustacea). 8. Die Gattungen *Leptochelia* Dana, *Paratanais* Dana, *Heterotanais* G. O. Sars und *Nototanais* Richardson, Dazu einige Bemerkungen über die Monokonophora und ein Nachtrag. Zoologica Scripta, 2: 197-229.

LARSEN, K., H. RAYMENT, 2002 - New species of *Leptochelia* (Crustacea: Tanaidacea) from the Andaman Sea, North-Eastern Indian Ocean. Phuket Marine Biological Center, Special Publication, 23 (1): 17-31.

STOCK, J. H., T. M. ILIFFE, 1991 - Two new species of *Liagoceradocus* (hypogean Amphipoda) from South-western Pacific islands, with key to the world species. Invertebrate Taxonomy, 5: 807-825.

Received: October 17, 2011
Accepted: November 30, 2011

Modest Guţu
Muzeul Naţional de Istorie Naturală "Grigore Antipa"
Şos. Kiseleff 1, 011321 Bucureşti 2, România
e-mail: mgutu@antipa.ro

Thomas M. Iliffe
Department of Marine Biology, Texas A & M University at Galveston
Galveston, TX 77553-1675, U.S.A.
e-mail: iliffet@tamug.edu