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**FIRST RECORD OF THE GENUS *RHACHOTROPIS* (CRUSTACEA:  
AMPHIPODA: GAMMARIDEA: EUSIRIDAE) FOR THE CUBAN  
MARINE WATERS, WITH THE DESCRIPTION OF A NEW  
SPECIES**

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Abstract. A new amphipod crustacean of the genus *Rhachotropis* (Gammaridea: Eusiridae), collected in association with a deep sea sponge, is herein described. The main differences between this new amphipod and all other known are also given. This is the first record of the genus in the Cuban waters.

Résumé. On décrit une nouvelle espèce d'amphipode du genre *Rhachotropis* (Gammaridea: Eusiridae), capturée en association avec une éponge des eaux profondes. Les principales différences entre ce nouvel amphipode et tous les autres déjà connus sont également données. C'est la première mention du ce genre dans les eaux cubaines.

Key words. Crustacea, Amphipoda, *Rhachotropis*, association with deep sea sponge, new species, Cuba.

During the revision of the alcohol into which a sponge of the genus *Lefroyella* (Hexactinellidae) was preserved, from 1997, at the collections of the Cuban National Sea Aquarium, some rare amphipods were detected. After their revision a new species to science resulted, belonging to the genus *Rhachotropis* (Family Eusiridae), which is herein described.

*Rhachotropis* is a genus with marine cosmopolitan species being mostly in cold or deep water, usually demersal or pelagic, from 0-9460 m depth (Barnard & Karaman, 1991). In the Tropical Western Atlantic only two species of this genus are recorded up today, *R. portoricana* Barnard, 1964 and *R. lobata* Shoemaker, 1934 (Ortiz et al., 2004).

Family Eusiridae Stebbing, 1888  
*Rhachotropis* S. I. Smith, 1883  
***Rhachotropis wimvaderi* n. sp.**  
(Figs 1-2)

*Material.* 9 specimens: *holotype* adult male, No. ANC 07.1.2.007, in the collection of the Cuban National Sea Aquarium; 8 *paratypes*: 1 ovigerous female (bearing 2 eggs), 4 males, 3 unsexed specimens, No. ANC 07.1.2.008, deposited with the holotype. *Type locality*: South Cuba, Cayo Matías, 21°31'416''N, 82°27'738''W, 23.12.1997, in *Lefroyella crispa*, 580 m, Pedro Alcolado and Don Liberatore collectors with a manner minisubmarine.

*Etymology.* This species is named honoring Dr. Wim Vader, Trømso Museum, Norway, due to his important contributions to the knowledge of the amphipod crustaceans.

*Diagnosis.* Body with the pereional segments smooth. Pleonal segment 1 with a posterodorsal tooth. Segments 2 and 3 of pleon with one dorsal and two

posterolateral teeth. Head with a prominent and acute rostrum. Eye well developed, rounded. Maxilla 1 bearing a subdistal short seta. Coxa of pereopod 1 not surpassing the end of lower border of head. Accessory flagellum of antenna 1 with one vestigial article. Gnathopod 1 article 6 wider and shorter than 2. Pereiopod 7 as long as the length of the entire body. Article 7 of pereiopods long, with trifid tips. Epimerum 3 smooth. Telson cleft almost 1/3 its length, with setae on both lateral margins.

*Description of the adult male (holotype)*

*Body* (Fig. 1 A) length: 4.1 mm.

*Head* (Fig. 1 A) with cephalic lobe poorly developed. Eyes rounded, with orange ommatidia. Rostrum prominent and acute, more than half length of head.

*Antenna 1* (Figs 1 A, 2 J) with article 2 shorter than 3; accessory flagellum with one vestigial article; main flagellum of 15, or more articles.

*Antenna 2* (Fig. 1 A) with article 4 shorter than 5; flagellum with more than 20 articles.

*Maxilliped* (Fig. 1 D) with the inner lobe surpassing base of palp, with four short distal spines; outer lobe a little longer than basal article of palp, inner border covered with setae, which are bigger distally, with three setae on outer border; article 2 of palp longer than 1; article 3 as long as dactylus.

*Mandibles* (Fig. 1 G, H) with triturative molars; palp article 2 as long as 3; article 2 covered with setae on border of its distal half; article 3 falcated. Left mandible with 15-17 small incisive teeth; lacinia mobilis with four small and one big teeth, with four accessory setae. Right mandible with two incisive teeth; without lacinia mobilis; with six accessory setae.

*Maxilla 1* (Fig. 1 E) with a subdistal seta on inner lobe, and nine distal setae on outer lobe; palp article 1 half length of 2, bearing distal and subdistal setae.

*Maxilla 2* (Fig. 1 F) with both lobes very similar, with long distal and subdistal setae; outer margin of outer lobe covered with very small setae.

*Upper lip* rounded and entire, without setae (Fig. 1 C).

*Lower lip* with small inner lobes; outer lobes rounded; mandible lobes poorly developed.

*Gnathopod 1* (Fig. 1 I): coxa longer than high, bearing a small seta on its anterior tip; article 2 curved; article 3 armed with two spines on a very small posterior lobe; article 4 as long as 3, with seven-eight setae on its posterior lobe; article 5 with a long posterior lobe, which is covered with two tufts of setae; article 6 ovoidal, with palmar border rounded; with three spines defining the palm. Palm covered with long and short setae. Dactylus curved, slender and fixing palm.

*Gnathopod 2* (Fig. 1 J): coxa subquadrate; article 2 almost right and with two sets of distal setae; article 3 very short, armed with four distoventral setae; article 4 forming a small posterior lobe bearing terminal setae; article 5 with a long posterior lobe, which bears distal setae; article 6 longer than wide, with palmar border very oblique, and with four-seven small setae between two large ones; dactylus slender, covering 2/3 of article 6.

*Pereiopod 3* (Fig. 2 A): coxa quadrate and small; article 2 longer than 4; articles 4-6 very similar, with some setae on its posterior border; dactylus long, moderately trifid distally. Gill small but little longer than coxa.

*Pereiopod 4* (Fig. 2 B): coxa rounded ventrally, but dorsally slightly notched; article 2 subrectangular, but shorter than article 6, which is the longest; article 4 shorter than 5; article 7 long and trifid distally. Gill as long as article 2.

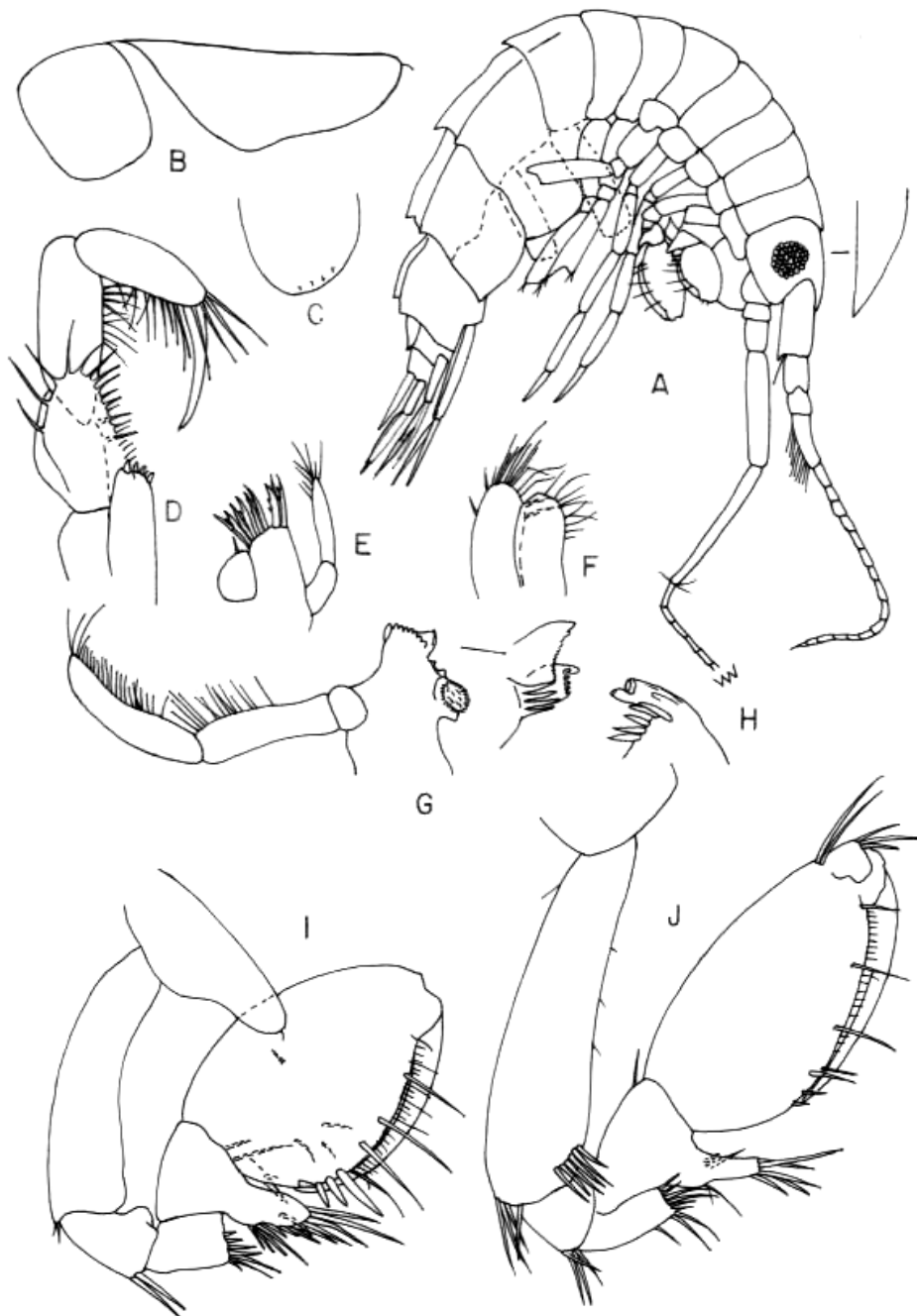


Fig. 1 – *Rhachotropis wimvaderi* n. sp., adult male holotype. A, lateral view of body; B, coxae 1 and 2; C, upper lip; D, maxilliped; E, maxilla 1; F, maxilla 2; G, left mandible; H, right mandible; I, Gnathopod 1; J, Gnathopod 2.

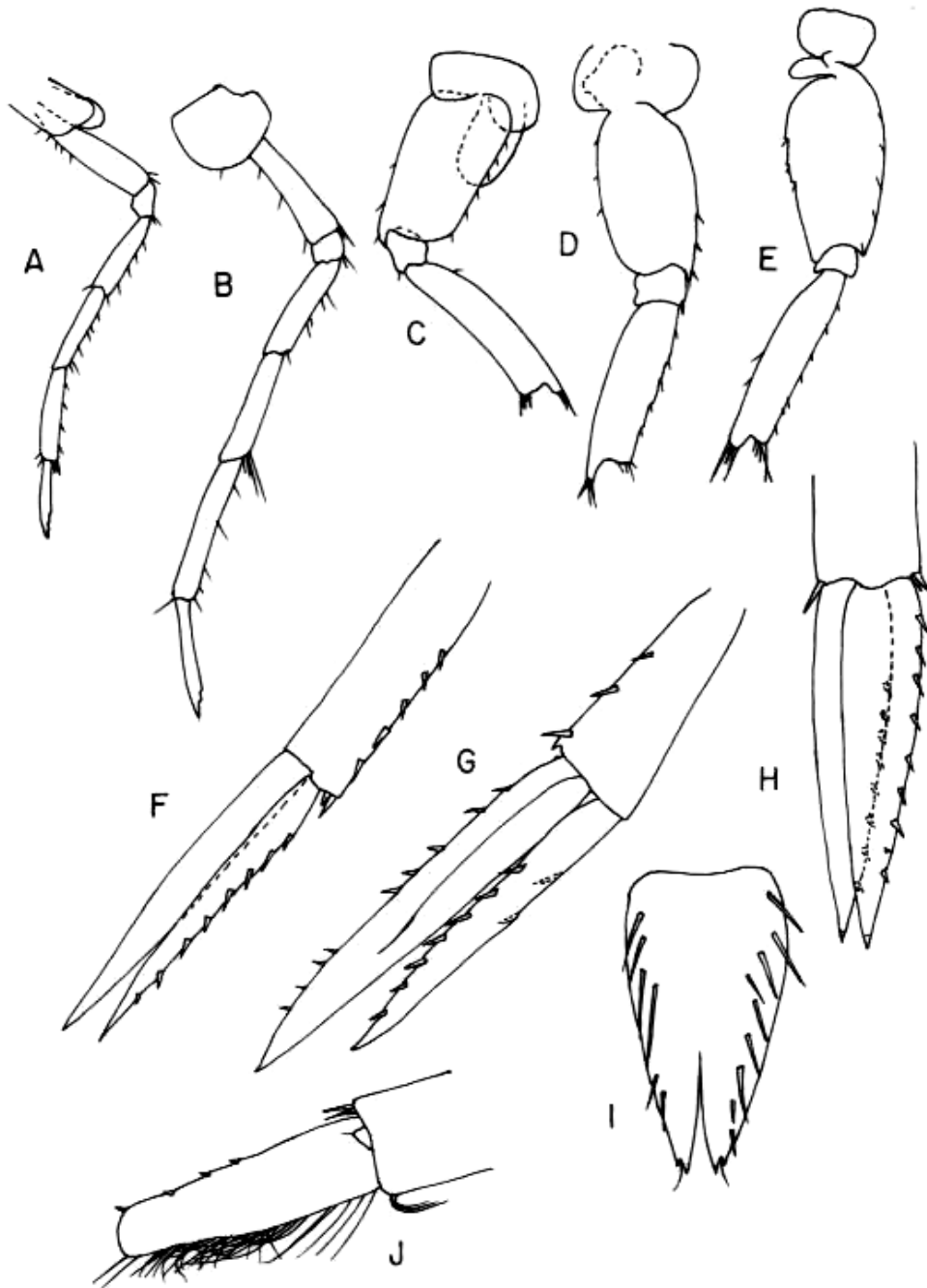


Fig. 2 – *Rhachotropis wimvaderi* n. sp., adult male holotype. A, pereopod 3; B, pereopod 4; C, pereopod 5 (aticles 5-7 omitted); D, pereopod 6 (aticles 5-7 omitted); E, pereopod 7 (aticles 5-7 omitted); F, uropod 1; G, uropod 2; H, uropod 3; I, telson; J, accessory flagellum of antenna 1.

*Pereiopod 5* (Fig. 2 C): coxa forming posterior lobe; article 2 wider than rest of the leg; article 4 longer than 2; article 7 long and trifold.

*Pereiopod 6* (Fig. 2 D): coxa subrectangular; article 2 subrounded; article 4 as long as 2; dactylus long and trifold distally.

*Pereiopod 7* (Fig. 2 E): coxa subquadrate; article 2 forming a small posterior lobe; article 4 as long as article 2; article 7 long and trifold distally.

*Uropod 1* peduncle, a little shorter than rami; with spines on distal 2/3 of outer border; both rami bearing spines on outer border.

*Uropod 2* peduncle shorter than rami; with some distal inner spines; outer ramus shorter than inner, both rami with inner spines.

*Uropod 3* peduncle shorter than rami; rami lanceolate and equal in length.

*Telson* cleft almost 1/3 its length; lobes bearing bifid tips; lateral margins covered with setae.

*Epimerum 3* with posteroventral corner forming a right angle; ventral and lower border entire.

*Length of other specimens (paratypes)*: males – one of 3.9 mm, two of 4 mm, one of 4.2 mm.

*Remarks.* As stated before, there are only two recorded species in genus *Rhachotropis* in the Tropical Western Atlantic, namely *R. lobata* Shoemaker, 1934 and *R. portoricana* Barnard, 1964. So, only the main differences of the new species and these two others will be discussed herein.

*Rhachotropis wimvaderi* n. sp. is distinguished from *R. lobata* by: acute rostrum; rounded eye; article 2 of pereiopod 7 forming a small posteroventral lobe; telson cleft 1/3 of its length, instead of, rounded rostrum; reniform eye; article 2 of pereiopod 7 with expanded point at middle of posterior angle; telson cleft less than 1/10, in *R. lobata*. From *R. portoricana*, the new species differs by bearing eyes; having a dorsally carinate pleonal segments, and article 2 of pereiopod 7 with the maximum width basally, instead of, no eyes; smooth pleonal segments, and article 2 on pereiopod 7 with its maximum width at the middle of its length, in *R. portoricana*.

On the other hand, *R. wimvaderi* n. sp. differs with the most similar European species, *R. inermis* Ledoyer, 1977, by having: telson cleft more than 20 %; eyes well developed; epimerum 3 smooth; rostrum short; one seta on inner lobe of maxilla 2, distal part of article 3 of maxilliped palp slender, instead of, telson poorly cleft; no well developed eyes; epimerum 3 denticulate; rostrum large; 3 setae on inner lobe of maxilla 2; distal part of article 3 of maxilliped palp wide; article 2 of antenna 1 as long as article 1; coxa of pereiopod 1 produced in a rounded lobe; dactylus of pereiopods 3-7 smooth, in *R. inermis*. For the new species *R. wimvaderi* the following morphological features are characteristic: well developed eyes; epimerum 3 smooth; one seta on inner lobe of maxilla 2; distal part of article 3 of maxilliped palp narrower basally; antenna 1 article 2 shorter than article 1; coxa of pereiopod 1, bearing a small seta on tip, with small ventral lobe; dactylus of pereiopods 3-7 trifold.

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PRIMA SEMNALARE A GENULUI *RHACHOTROPIS* (CRUSTACEA: AMPHIPODA:  
GAMMARIDEA: EUSIRIDAE) ÎN APELE MARINE CUBANEZE, CU DESCRIEREA  
UNEI NOI SPECII

## REZUMAT

Se descrie o specie nouă de amfipod a genului *Rhachotropis*, *R. wimvaderi* colectată dintr-un spongier din ape de adânc, din sudul Cubei. De asemenea, sunt menționate diferențele esențiale dintre noua specie și celelalte specii cunoscute ale genului. Aceasta este prima menționare a genului *Rhachotropis* pentru Cuba.

## LITERATURE CITED

- BARNARD, J. L., G. KARAMAN, 1991 - The families and genera of Marine Gammaridean Amphipoda (Except Marine Gammaroids). Records of the Australian Museum, Supplement 13:1-866.
- ORTIZ, M., A. MARTÍN, I. WINFIELD, Y. DÍAZ, D. ATIENZA, 2004 - Anfípodos (Crustacea: Gammaridea). Clave gráfica para la identificación de las familias, géneros y especies marinas y estuarinas del Atlántico Occidental Tropical. Univ. Nacional. Autónoma. De México, Fac. Estudios Superiores Iztacala, Carrera de Biología, Estado de México, 162 pp.

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