

A new amphipod crustacean of the genus *Haustorius* (Gammaridea, Haustoriidae), from the East Coast of Mexico

Un nuevo anfípodo del género Haustorius (Gammaridea, Haustoriidae), de la costa Este de México

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Abstract

A new species of amphipod crustacean, of the genus *Haustorius* (Gammaridea, Haustoriidae), which was collected at the entrance of a coastal lagoon, near Veracruz Port, at the East Coast of Mexico, is herein described. This is the first finding of the genus, in this country, and together with *H. jayneae* Foster & Lecroy, 1991, from the Gulf of Mexico, and *H. canadensis* Bousfield, 1962, from Western Canada, represents the only valid species of the genus, in the American waters.

Resumen

Se describe una especie nueva de anfípodo del género *Haustorius* (Gammaridea, Haustoriidae), que ha sido colectada a la entrada de una laguna costera, cerca del Puerto de Veracruz, en la costa oriental de México. Este es el primer registro del mencionado género para el país, siendo junto a *H. jayneae* Foster & Lecroy, 1991, del Golfo de México y *H. canadensis* Bousfield, 1962, de la costa occidental del Canadá, las únicas especies válidas del género para las aguas americanas.

Key words: Amphipoda, Haustoriidae, *Haustorius*, new species, Eastern Coast of México.

Palabras clave: Amphipoda, Haustoriidae, *Haustorius*, especie nueva, costa Este de México.

INTRODUCTION

The knowledge of the amphipod family Haustoriidae in the Gulf of Mexico was very scarce, until the papers published by BOUSFIELD (1965), and FOSTER & LECROY (1991). The last paper, offer the entire History of the studies carried out with the group, in this region, but also presented a very useful key, to the known species of the genus *Haustorius*.

Recently, when collecting biological material from the Alvarado Coastal Lagoons System, at the East coast of Mexico, some haustoriid amphipods were collected. After the study of this material, we concluded that this is a new species for Science, of the genus *Haustorius*, which is herein described.

METHOD AND MATERIALS

The material for this study came from the artificial entrance channel of the Camaronera Lagoon, at the Alvarado Coastal Lagoon System, at the East coast of Mexico (18° 52' 9" N, 97° 57' 26" W), and was collected by using a settled frame with planktonic network, 0.75 m high, 1 m wide, and 1.5 long. The presented figures were made with the aid of a camera lucida.

SYSTEMATIC

FAMILIA Haustoriidae Stebbing, 1906

SUBFAMILIA Haustoriinae Bousfield, 1965

Género *Haustorius* Muller, 1775

Haustorius mexicanus new species

(Figures 1- 3)

Holotype: Female with oostegites; 3.5 mm; entrance of Camaronera Lagoon; Alvarado Coastal Lagoon System, Veracruz, Mexico; 1 m depth; collected by the second author; July 1st.1996; water temperature 31°C; Salinity 5.6 + 1 ‰; deposited at the Colección Nacional de crustáceos, Instituto de Biología, UNAM, Mexico D.F.

Paratype: not sexed animal; 2 mm; caught and deposited together with the holotype;

Diagnosis. Antenna 1, accessory flagellum 3 segmented. Antenna 2 article 4 without marginal spines. Rostrum short, wide at base, not exceeding midpoint of peduncle segment 1 of antenna 1. Pereiopod 4 distal part of article 6, bearing no more than 5 setae and 1 spine. Pereiopods 5 and 6, article 4, and pereiopod 6, article 5, almost without spination on its facial surface. Coxae poorly setose. Coxa 7 only with 3 short setae at posterior angle. Pereiopod 7 articles 4 and 5 without spination on its facial face. Peduncle of uropods 1 and 3 with 1 subdistal seta. Pleopod 2 without spines on its peduncle. Telson deeply notched; telsonic lobes forming a right angle.

Description of the female holotype: Head broadest behind. Rostrum of head blunt, and short. Antennal sinuses not so marked.

Antenna 1 articles 1 and 2 subequal; article 3 half length of 2; article 1 of peduncle almost without setae; article 2 with a tuft of very long distal setae; flagellum with 6 articles.

Antenna 2 article 4 of peduncle, forming a deep lobe with a distal rounded projection with ventral margin covered by 24 long setae, devoid of spines; article five bearing only ventral long setae; flagellum of 6 articles.

Upper lip rounded and naked.

Lower lip inner lobe extending two-thirds length of the outer lobe; outer lobe broadly rounded.

Mandible with incisors minuscule trifid, with 5 accessory setae; palp article 2 with 3 inner and 2 outer slender setae; article 3 with 5 inner margin medial short setae (comb row), and 9 distal setae.

Maxilla 1 inner plate with 5 sparsely marginal setae; Outer plate with 4 stout, smooth, and blunt spines, and 8 slender, minutely serrate, subacute distal spines; palp article 2 with 3 lateral and 12 distal setae.

Maxilla 2 inner plate linguiform, covered with marginal setae; with 11 facial setae; outer plate with more than 30 inner marginal setae.

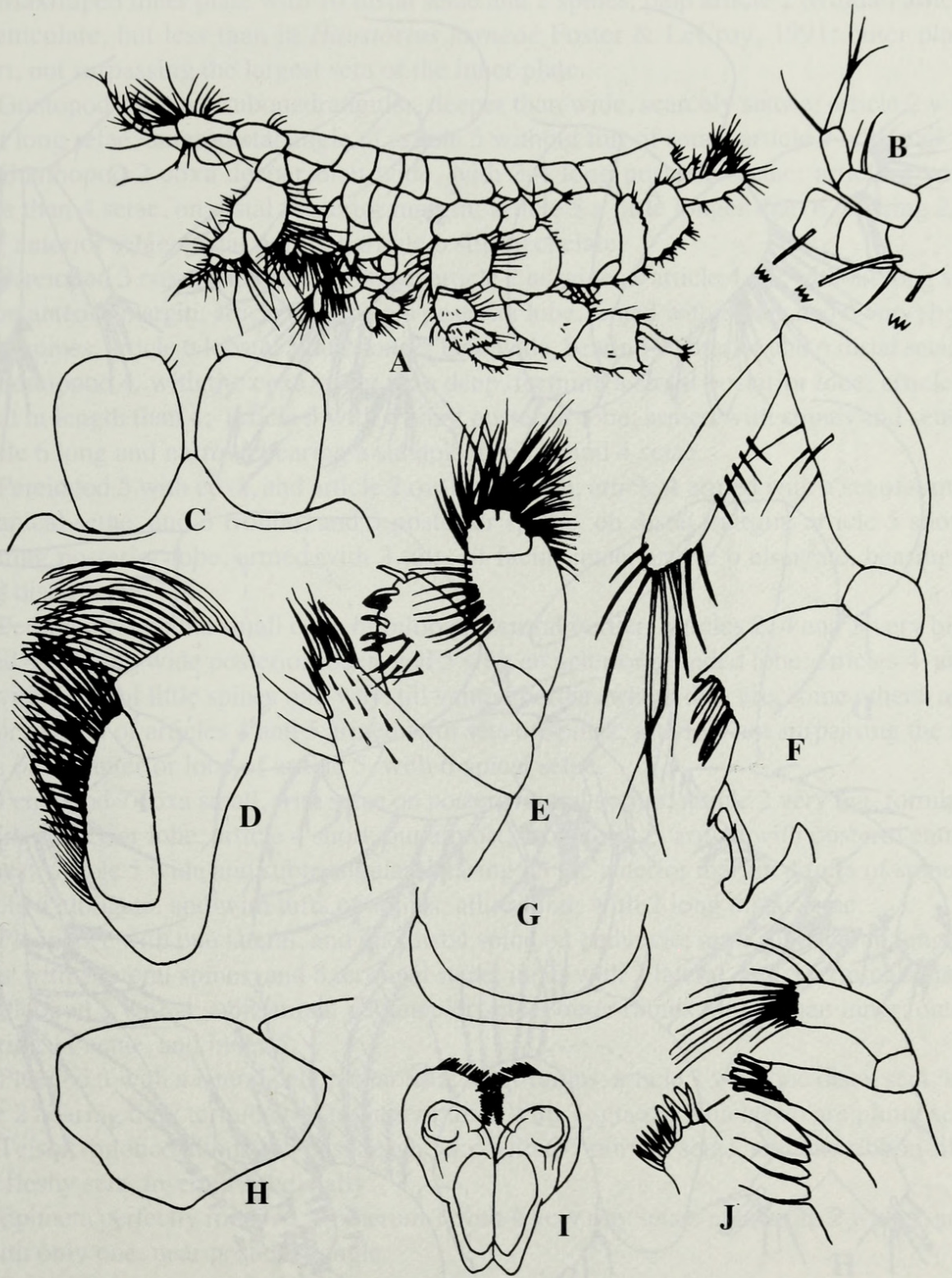


Figure 1. *Haustorius mexicanus* new species, A, lateral view of the body; B, accessory flagellum; C, dorsal view of rostrum; D, maxilla 2; E, maxilliped; F, left mandible; G, upper lip; H, lateral view of rostrum and segment 1 of antenna 1; I, lower lip; J, maxilla 1.

Figura 1. *Haustorius mexicanus* especie nueva, A, vista lateral del cuerpo; B, flagelo accesorio; C, vista dorsal del rostro; D, maxila 2; E, maxilípido; F, mandíbula izquierda; G, labio superior; H, vista lateral del rostro y el artejo 1 de la antena 1; I, labio inferior; J, maxila 1.

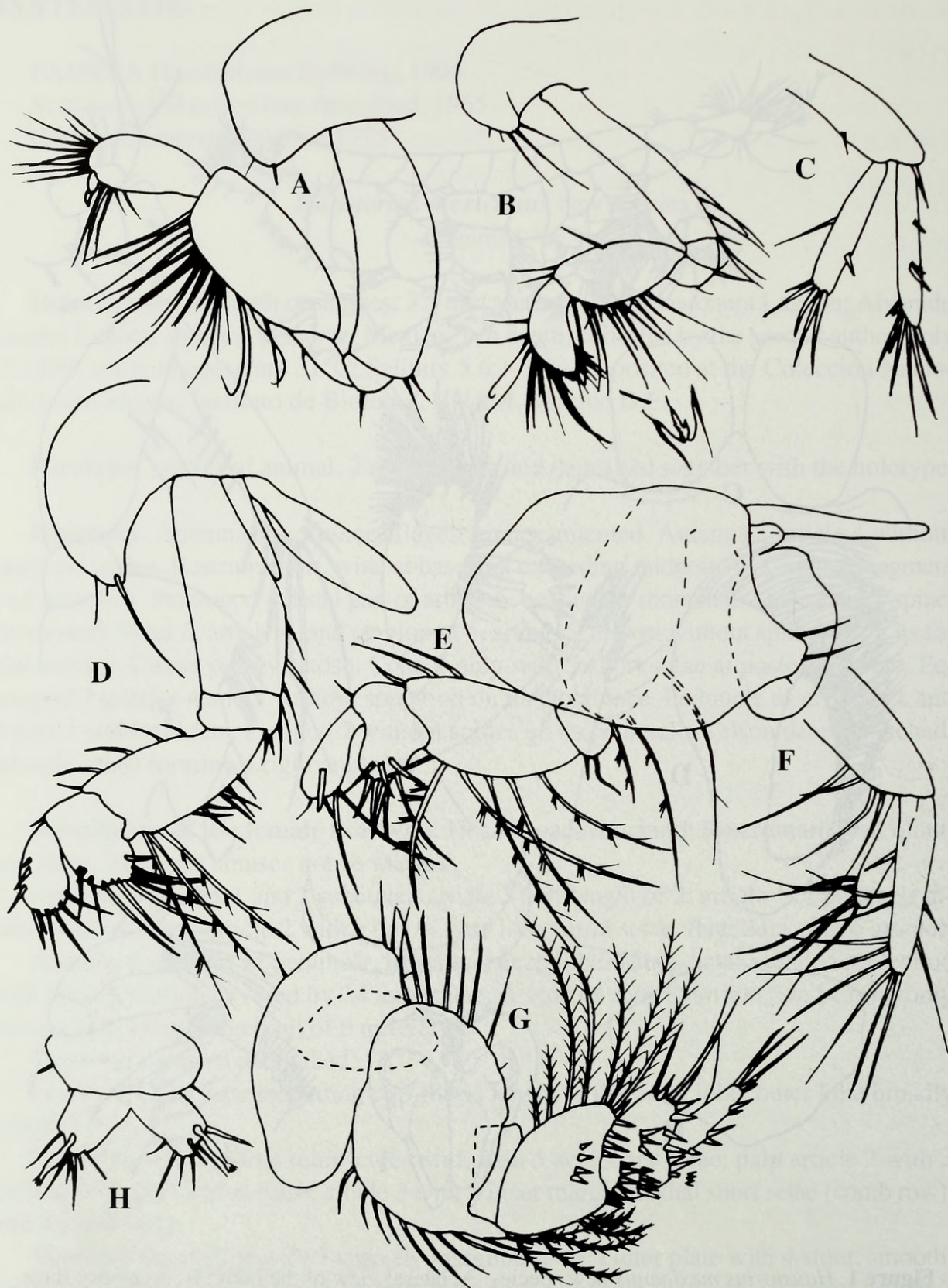


Figure 2. *Haustorius mexicanus* new species, A, gnathopod 1; B, gnathopod 2; C, uropod 1; D, pereopod 3; E, pereopod 4; F, uropod 2; G, pereopod 5; H, telson.

Figura 2. *Haustorius mexicanus* especie nueva, A, gnatópodo 1; B, gnatópodo 2; C, urópodo 1; D, pereiópodo 3; E, pereiópodo 4; F, urópodo 2; G, pereiópodo 5; H, telson.

Maxilliped inner plate with 10 distal setae and 2 spines; palp article 2 ovoidal; article 3 geniculate, but less than in *Haustorius jayneae* Foster & LeCroy, 1991; outer plate short, not surpassing the largest seta of the inner plate.

Gnatopod 1 coxa 1 subquadrangular, deeper than wide, scarcely setose; article 2 without long setae; anterodistal angle of article 5 without tuft of setae; article 7 with nail.

Gnathopod 2 coxa deeper than wide, with 3-4 long posterior setae; article 2 with more than 4 setae, on distal posterior margin; article 5 a little longer than 6, bearing 2-4 long anterior setae; distal point of article 6 slightly chelate.

Pereiopod 3 coxa, without long setae; article 2 as wide as article 4, all without long setae on anterior margin; article 5 forming a posterior lobe, armed with 8 long and 6 very short distal spines; article 6 lobate, a little longer than wide, bearing 3 anterior and 6 distal setae.

Pereiopod 4 with the coxa wider than deep, forming a small posterior lobe; article 2 equal in length than 4; article 5 with a blunt posterior lobe, armed with spines and setae; article 6 long and narrow, bearing a subapical spine, and 4 setae.

Pereiopod 5 with coxa, and article 2 oval, and wide; article 4 armed with a set of 4 mid subapical setae, and 3 frontal, and 5 posterior spines, on distal margin; article 5 short, forming posterior lobe, armed with 3 tufts of facial setae; article 6 elongate, bearing 2 long distal setae.

Pereiopod 6 with a small coxa of bilobate ventral border; articles 2, 4 and 5 very big; 2 and 4 forming wide posterior lobes, and 5 with an anterior rounded lobe; articles 4 and 5, with a pair of little spines mid way, till ventral border, where they are, some others; anterior margin of articles 4 and 5 armed with sets of spines; article 6 not surpassing the limits of the anterior lobe of article 5, with 6 apical setae.

Pereiopod 7 coxa small, with setae on posteroventral corner; article 2 very big, forming a wide posterior lobe; article 4 short, but almost, as wide as 2; armed with posteroventral spines; article 5 wide and subtriangular, bearing on the anterior margin 4 tufts of spines; article 6 elongate, and with tufts of spines, all-around; with 2 long distal setae.

Pleopod 1 with one lateral, and one distal spine on peduncle; rami subequal in length; outer with 3 lateral spines, and 8 terminal setae; inner with 2 lateral, and 5 terminal setae.

Pleopod 2 with 4 subterminal peduncular setae; outer ramus longer than inner; outer bearing 11 setae, and inner 5.

Pleopod 3 with a lateral peduncular seta; outer ramus, article 1 with one distal seta; article 2 bearing only terminal setae; inner ramus with 7 setae, of which two are plumose.

Telson bilobed almost till base; each lobe with 6-7 normal setae, and one ribbon-like and fleshy seta, inserted subdistally.

Epimera perfectly rounded; epimerum 1 with 4 very tiny setae; epimerum 2 with 5, and 3 with only one, near posterior angle.

Branchiae on segments 2 to 6.

Oostegites very short and slender, on pereiopods 3 and 4.

Remarks. The main differences between *Haustorius mexicanus*, new species, and *H. jayneae* are that the former has an accessory flagellum of 3 articles; the lobe on article 4 of antenna 2 has only long setae; and the coxae are poorly setose, instead of 4 articles on accessory flagellum; the lobe on article 4 of antenna 2 covered with short spines and se-

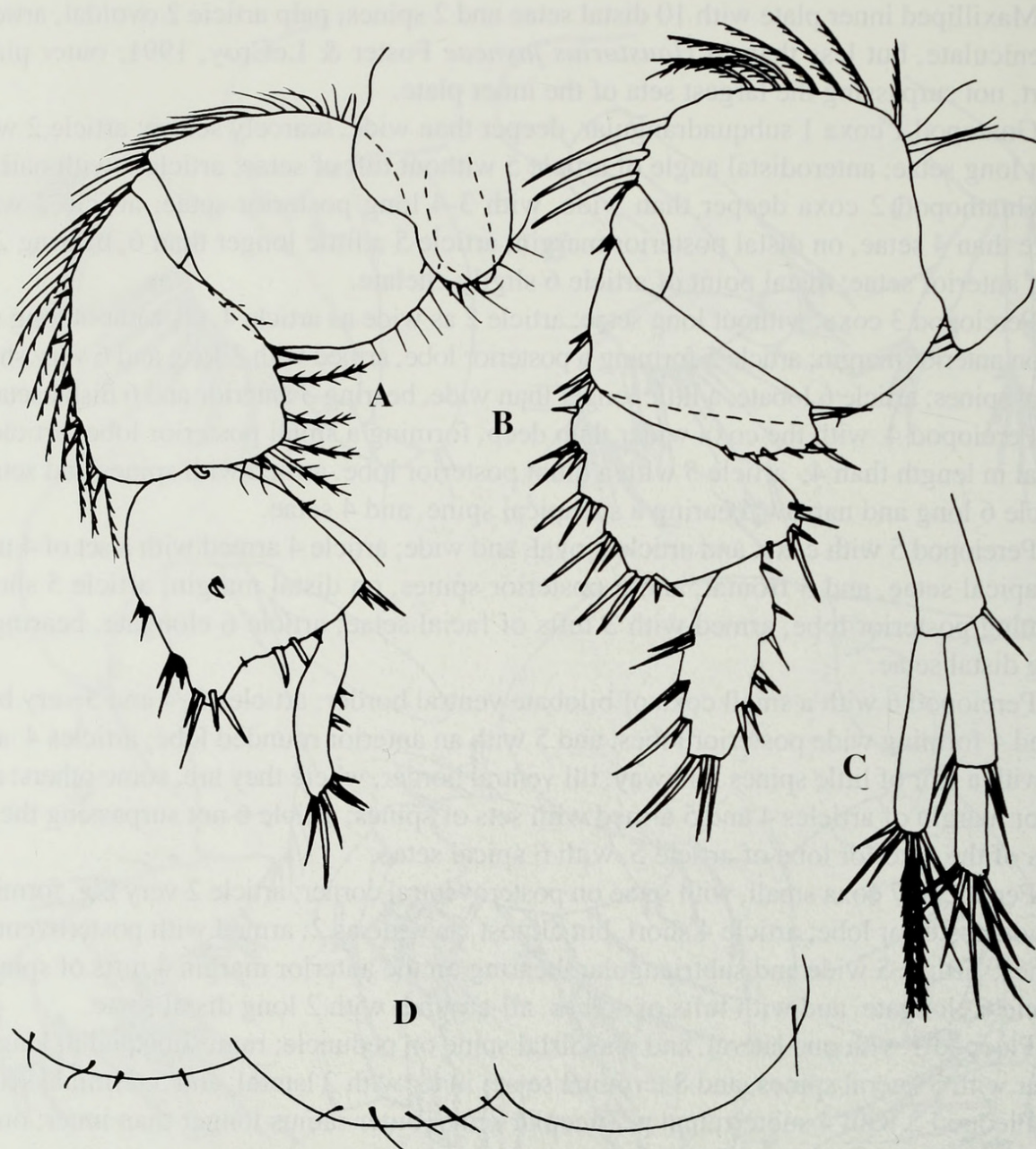


Figure 3. *Haustorius mexicanus* new species, A, pereopod 6; B, pereopod 7; C, uropod 3; D, epimera 1-3.

Figura 3. *Haustorius mexicanus* especie nueva, A, pereópodo 6; B, pereópodo 7; C, urópodo 3; D, epímeros 1-3.

tae; an the coxae very setose, on the second.

The coxa 4 has a small posterior lobe in *H. mexicanus*, new species, which is wider in *H. jayneae*. The ventral border of epimerum 3 is devoid of setae in the former, and covered with setae on the second, as well as, articles 4 and 5 of pereiopods 6 and 7, are almost devoid of facial spines or setae, on the new species, and armed with facial setae or spines, on *H. jayneae*. Also, they are some other differences between the twice species, because *H. mexicanus* new species, has no more than 3 spines on ventral border of article 5 of pereiopod 6, instead of more than 5 on *H. jayneae*. The comb row on article 3 of mandible palp, of the former has 5 setae, but 14-15 in the second. The number of accessory setae on

the mandibles are 5 in *H. mexicanus*, new species, instead of more than 8, in *H. jayneae*.

On the other hand, the inner plate on maxila 1 has 5 setae; the uropods are poorly setose or almost without spines, and the telson is very notched, and has longer and right angle lobes, armed with few spines, one of with, is ribbon like and fleshy, in the former, instead of 10 setae on the inner plate of maxilla 1; the telson has very short lobes, and is poorly notched, but very setose and devoid of special spines, in *H. jayneae*.

The other known species of the genus, *H. canadensis*, has a West American subtropical or temperate distribution, but can be easy separated from *H. mexicanus*, new species, by having, a comb row of more than 12 setae on article 3 of mandible; more than 8 accessory setae on mandible; accessory flagellum of 6 articles; very setose coxae; articles 4 and 5 of pereiopods 5-7 covered with a lot of setae or spines, on facial surface; a rounded antero-ventral angle on article 5 of pereiopod 6; epimera 2 and 3 very setose, and more complex armed pleopods.

Etymology: “*mexicanus*”, because the type material was collected at the mexican waters.

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