

A NEW SPECIES OF ASELOTTE MARINE ISOPOD, *MUNNA (UROMUNNA) HAYESI* (CRUSTACEA: ISOPODA) FROM TEXAS

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A new species of asellote isopod, *Munna (Uromunna) hayesi*, is described and illustrated. The species was found on algae-covered rocks on the south jetty at Port Aransas, Texas. It is the first of the genus *Munna* to be reported from the Gulf of Mexico, and the second species of the subgenus *Munna (Uromunna)* known from the western Atlantic.

INTRODUCTION

The genus *Munna* (sensu lato), Order Asellota, Family Munnidae, includes a large complex of more than 60 species of small marine and brackish water isopods. Attempts have been made to group the adequately described species into subgenera (Menzies 1962, Kussakin 1962, Frankenberg and Menzies 1966, Fresi and Mazzella 1974). The new species described herein is a member of the subgenus *Munna (Uromunna)* Menzies (1962). Only one species of this subgenus, *Munna (Uromunna) reynoldsi* Frankenberg and Menzies (1966), from salt marshes of Georgia, has previously been reported from the western Atlantic. The present species is the first record of the genus *Munna* (sensu lato) in the Gulf of Mexico.

Specimens were collected at the south jetty at Port Aransas, Texas during a field trip by a marine invertebrate zoology class from Lamar University. They were found in a sample obtained from the ship channel by several hauls of a small plankton net tossed out from the jetty. The isopods were probably dislodged as the net was pulled in over algae-covered rocks near the waterline.

The new species is named in honor of the late Dr. Edwin S. Hayes, former Head of the Biology Department and Dean of the College of Sciences at Lamar University.

MATERIAL EXAMINED

Port Aransas, Texas, channel side of south jetty; 5 Aug. 1975; in plankton sample taken from jetty rocks; 4 males, 2 females (one ovigerous), body length 0.95–1.05 mm.

Holotype: Male, length 1.05 mm, width 0.52 mm, deposited in the U. S. National Museum (Cat. No. USNM 1555297).

Allotype: Ovigerous female, length 1.0 mm, width 0.56 mm, deposited in the U.S. National Museum (Cat. No. USMM 155298).

Paratypes: One damaged male paratype and slides of dissected paratype material have been deposited in the U.S. National Museum (Cat. No. USNM 155299).

The other partially dissected paratypes are deposited in the working collection, Department of Biology, Lamar University.

GENERIC CHARACTERIZATION

Genus **Munna** Krøyer, 1839

Diagnosis. Munnidae having coxal plates visible in dorsal view on pereon somites two to seven inclusive. Body lacking spines. Eyes on a short immovable peduncle, preocular lobes generally present. Uropoda lacking peduncle. Antennae usually one-half or more the body length. (After Menzies, 1962).

Remarks. The present species differs from most of the other species of *Munna* in lacking distinct preocular lobes.

SUBGENERIC CHARACTERIZATION

Subgenus **Uromunna** Menzies, 1962

Diagnosis. *Munna* (sensu lato) with terminal joint of antennular flagellum never minute. Only one sensory filament on antennular flagellum. Mandibular palp comparatively short or absent. Exopod of pleopod 3 unjointed, narrower than the endopod. (After Fresi and Mazzella 1974).

Remarks. The subgeneric characters were recently reevaluated by Fresi and Mazzella (1974), who gave the revised diagnosis reproduced above. The present species agrees with their diagnosis, and resembles the only other western Atlantic species, *Munna* (*Uromunna*) *reynoldsi*, in lacking a mandibular palp. The present species has the apex of the first male pleopod more strongly expanded both laterally and distally than any of the other known species of *Munna* (*Uromunna*).

MUNNA (UROMUNNA) HAYESI N. SP.

Diagnosis

Munna (*Uromunna*) with front of cephalon straight and without distinct preocular lobes. First antenna with 6 segments, last article about 2/3 length of penultimate segment, and bearing one large sensory filament. Second antenna about 2/3 length of body, flagellum with 9–11 articles. First pereonite of male with elongated, rounded lateral margins. Pereonite 3 of female not markedly longer than adjacent segments. Mandibles lacking a palp. Ischium of pereopods with one prominent bifid seta on the superior margin. Pleotelson with continuous lateral margins lacking indentations for uropods, each ventrolateral border with about 11–14 ventrally directed, simple setae. Minute uropods inserted dorsally above and not projecting beyond lateral borders of pleotelson; exopod more or

less sub-cylindrical in cross-section, twice as long as broad, with 3–4 small setae near apex. Apex of first male pleopod expanded laterally as a short triangular process bearing 4 small setae; distal margin expanded posteriorly as a thin, leaf-like lobe devoid of setae. Endopod of second male pleopod an elongated cylindrical process tapering gradually to a narrow point.

Description

Cephalon. Front straight, without conspicuous setae. Eyes prominent on lateral protuberances; preocular lobes not evident.

Pereon. Pereonites 1–4 curved more or less anteriorly at the lateral margins, 5–7 curved posteriorly. A few short setae on lateral surfaces. Pereonite 1 of male (Fig. 1) with prominent elongated, rounded lateral margins. Pereonites 2–4 subequal in length. Female (Fig. 2) with pereonite 3 the broadest and somewhat the longest, but not markedly longer than adjacent segments.

Antenna 1 (Figs. 3, 4). Composed of 6 segments; terminal article about 2/3 length of penultimate segment, bearing one large sensory filament and 3 small setae at apex.

Antenna 2 (Fig. 5). Peduncle composed of 5 segments, last two subequal in length. No antennal scale is evident, although a seta is present where a scale has been detected in some other species. Flagellum consists of 9–11 articles.

Mandibles (Figs. 8–9). Left mandibular incisor with 3–4 teeth, lacinia with 4 teeth, setal row with 3 setae. Right mandibular incisor with 5 teeth, lacinia not present, setal row with 4 setae; neither mandible with palp.

Maxilla 1 (Fig. 10). Exopod with about 8–10 stout setae; endopod with 5 slender setae.

Maxilla 2 (Fig. 11). Trilobed; endopod with 2 longer and 1 shorter terminal setae, inner lobe of exopod with 3 terminal setae; outer lobe with 9–10 narrow setae along distal margin.

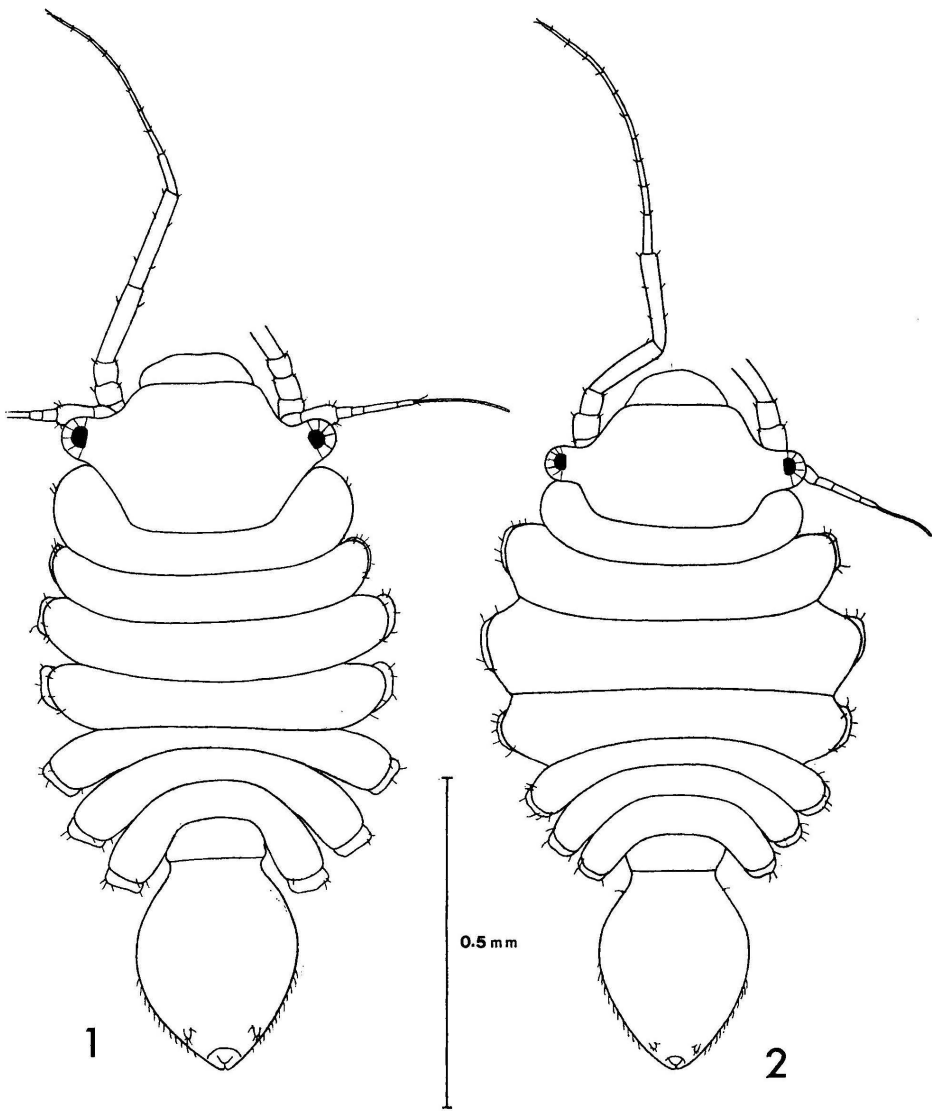
Maxilliped (Fig. 6). Palp with 5 articles, 2–3 expanded, each with 4 slender setae at inner distal corner; endognath with 3 coupling hooks.

Pereopod 1 (Fig. 12). More or less similar in male and female. Propodus broad, about as long as carpus and merus combined. Outer distal corner of merus with 3 stout bifid setae, inner distal corner with 1. Inner margin of carpus with 2 bifid setae, and 2 more at inner distal corner. Inner margin of propodus with about 3 bifid setae and a few simple setae.

Pereopod 7 of male (Fig. 7). Propodus about $1\frac{1}{3}$ times as long as carpus. Propodus with about 7 stout bifid setae on inferior margin and about 8 mostly simple setae on superior margin. Merus about $\frac{1}{2}$ as long as carpus, with 2 long bifid setae at superior distal corner and 1 bifid seta on inferior margin. Ischium with 1 prominent bifid seta on the superior margin at about the proximal third of its length, and a few small simple setae.

Other pereopods. The number of setae shows some variation.

Pleotelson (Figs. 18, 19). Vaulted, with continuous lateral margins lacking indentations for uropods; each ventrolateral margin bears about 11–14 ventrally

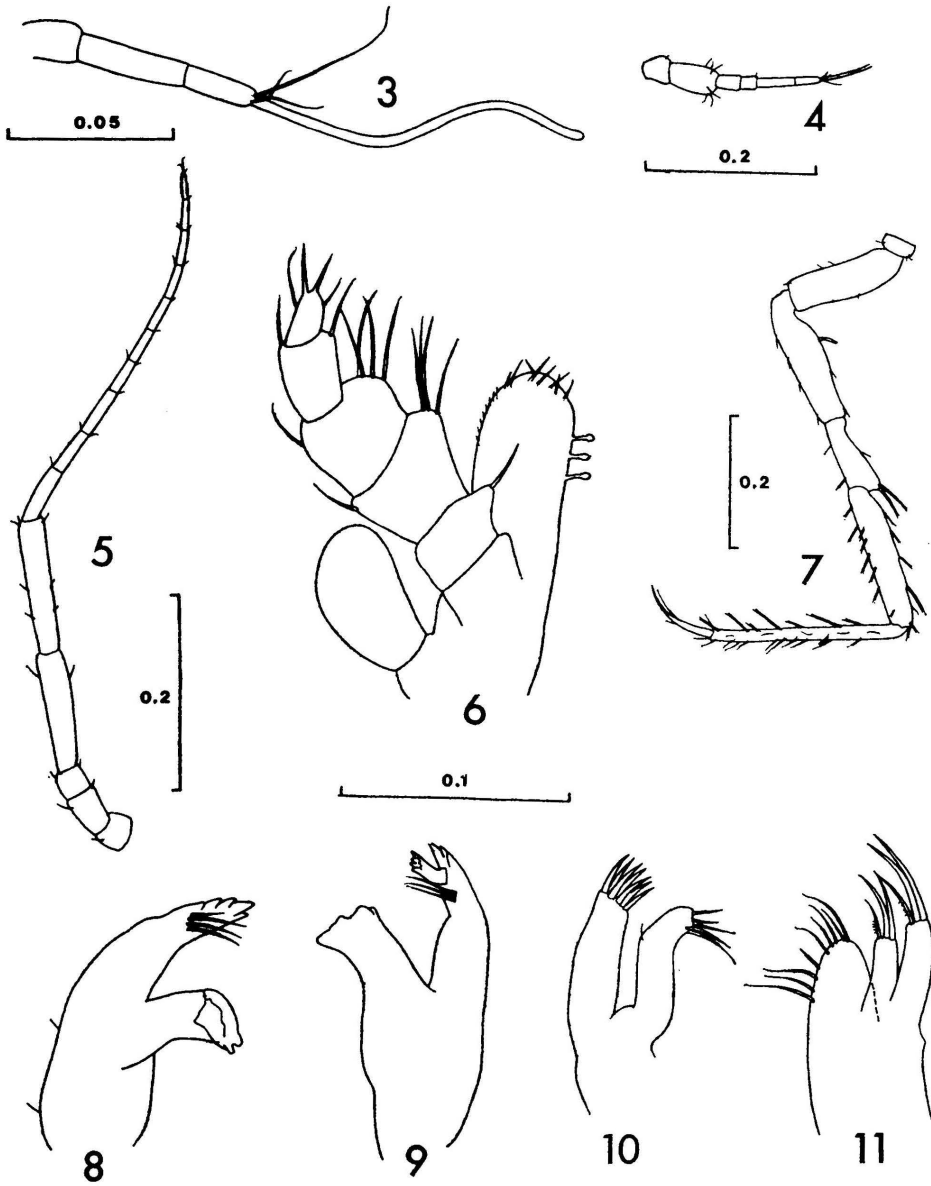


FIGS. 1-2. *Munna (Uromunna) hayesi* n. sp. 1, Male paratype, length 1.05 mm; 2, Female allotype, length 1.0 mm.

directed, simple setae. Apex with a small median projection dorsally; ventral apex shallowly cleft.

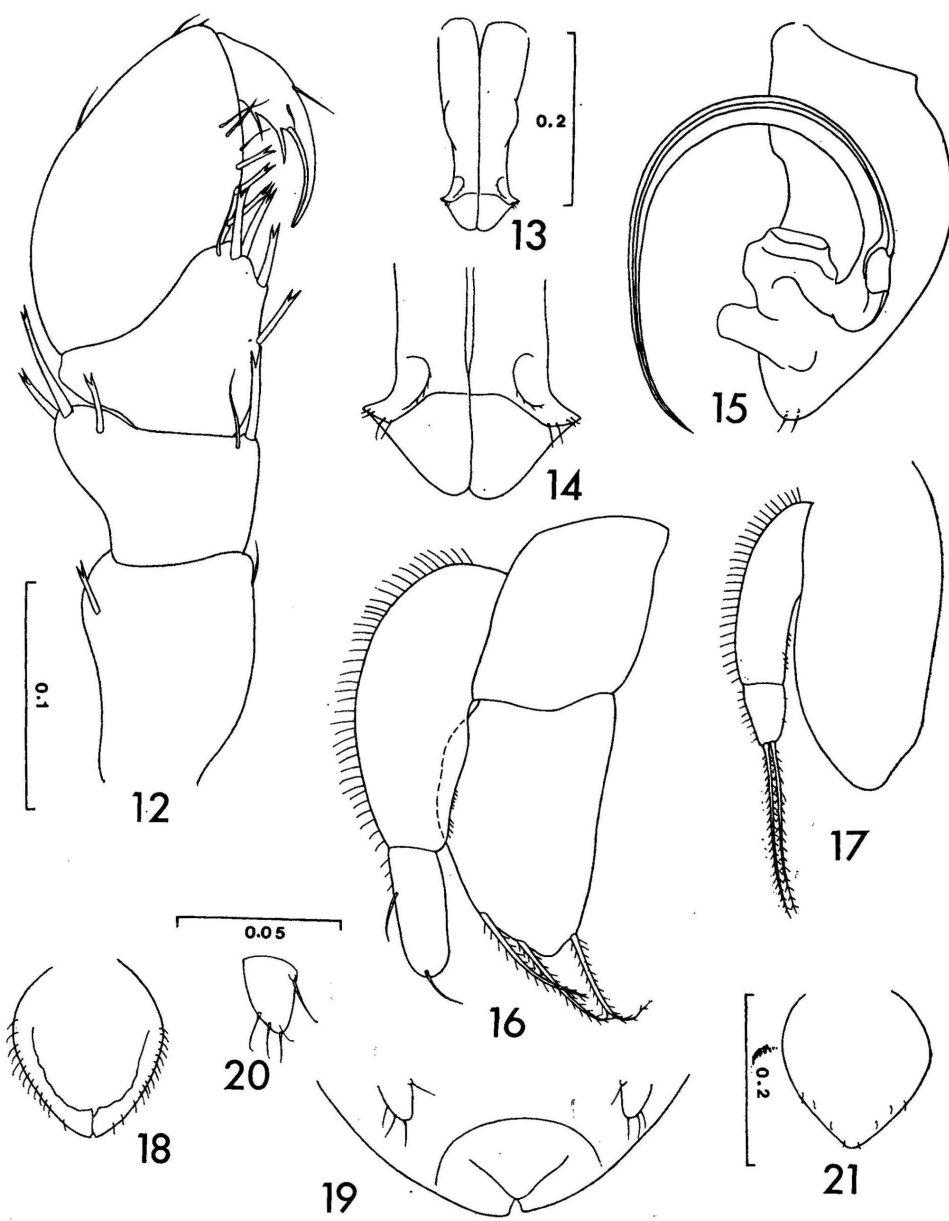
Uropods (Fig. 20). Very short, not projecting beyond lateral borders of pleotelson. Endopod minute, with a single apical seta. Exopod more or less subcylindrical, twice as long as broad, with 3-4 small setae near distal end.

Male pleopod 1 (Figs. 13, 14). Apex with the lateral corner flared outward as a



FIGS. 3-11. *Munna (Uromunna) haysei* n. sp. 3, Apex of first antenna, male paratype; 4, First antenna, male paratype; 5, Second antenna, female allotype; 6, maxilliped, male paratype; 7, Seventh pereopod, male paratype; 8, Right mandible, male paratype; 9, Left mandible, male paratype; 10, First maxilla, male paratype; 11. Second maxilla, female paratype. (Scales in mm; 8-11 same as 6; others as indicated.)

short triangular process bearing 4 small setae; distal end expanded posteriorly as a thin, leaflike lobe devoid of setae.



FIGS. 12-21. *Munna (Uromunna) hayesi* n. sp. 12, First pereopod, male paratype; 13, First pleopods, male paratype; 14, Same, detail of apex; 15, Second pleopod, male paratype; 16, Third pleopod, male paratype; 17, Fourth pleopod, male paratype; 18, Pleotelson, male paratype, ventral; 19, Pleotelson, male paratype, detail of apex, dorsal; 20, Uropod, male paratype; 21, Second pleopod, female paratype. (Scales in mm; 14-17 and 19 same as 12; 18 same as 21; 13 and 20 as indicated.)

Male pleopod 2 (Fig. 15). Exopod lacks plumose distal setae; endopod long, cylindrical, tapering to a narrow point.

Male pleopod 3 (Fig. 16). Endopod broader than exopod and bears 3 plumose setae at apex.

Male pleopod 4 (Fig. 17). Endopod broader than exopod and lacks distal setae; exopod bears 2 terminal plumose setae.

Female pleopod 2 (Fig. 21). About as long as wide, tapering to an obtuse apex, with about 4 minute setae near each lateral border.

AFFINITIES

The present species differs from all other known species referred to this subgenus in the degree of lateral and distal expansion of the first male pleopod. It seems closest to *Munna (Uromunna) reynoldsi* in having the frontal margin of cephalon straight, mandibles lacking a palp, uropodal exopod more or less subcylindrical, and lateral margins of pleotelson with several setae but without serrations. The two differ, however, in several readily observable features, as well as in certain details of the appendages. The following key allows easy separation of the two western Atlantic species of *Munna (Uromunna)* with a minimum of dissection.

KEY TO THE WESTERN ATLANTIC SPECIES OF MUNNA (UROMUNNA)

—Lateral borders of pleotelson with indentations for uropods, which project beyond margin of pleotelson; body length greater than twice the width; lateral margin of first pereonite of male not distinctly longer than those of other pereonites; third pereonite of female about twice the length of any other; apex of first male pleopod simple.

Munna (Uromunna) reynoldsi Frankenberg and Menzies, 1966.

Salt marshes along the coast of Georgia

—Lateral borders of pleotelson without indentations for uropods, which do not project beyond margin of pleotelson; body length not more than twice the width; lateral margin of first pereonite of male distinctly longer than those of other pereonites; third pereonite of female not much longer than any other; apex of first male pleopod expanded.

Munna (Uromunna) hayesi n. sp. Algae-covered rocks
on jetty at Port Aransas, Texas

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