NEW RECORDS OF AND NOTES ON DECAPOD CRUSTACEANS IN THE EAST PACIFIC

BY

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INTRODUCTION AND MATERIAL

Although the decapod crustaceans of the east Pacific are well-known (see Morris et al., 1980; Austin, 1985; Hendrickx, 1993, 2005; and Retamal & Jara, 2002 for compilations and further references), new records and new species are reported upon quite frequently. Together with redescriptions of little known species, this helps improve our knowledge of this abundant group.

Examination of material recently collected or awaiting identification in institutional collections allows to report herein on eight species that represent new records for the region. For some of these, morphological comments are provided and some structures of interest have been illustrated.

Abbreviations are: CEDO, Centro Intercultural de Estudios de Desiertos y Océanos, Puerto Peñasco, Sonora, Mexico; EMU, Regional Invertebrates Collection, Instituto de Ciencias del Mar y Limnología, UNAM, Mazatlán, Mexico; SIO, Scripps Institution of Oceanography Invertebrates Collection, La Jolla, California, U.S.A.; CL, carapace length; CW, carapace width.

TAXONOMIC ACCOUNT

DENDROBRANCHIATA Bate, 1888

SOLENOCERIDAE Wood-Mason, 1891

Hymenopenaeus doris (Faxon, 1893)

(fig. 1)

Material examined. — One male (CL 22.8 mm) and one juvenile (CL 9.9 mm), 7 June 2001, off Ensenada del Pabellon (24°14.8′N 108°35.2′W), Sinaloa, Mexico, St. 20, benthic sledge, 1480-1520 m, R/V “El Puma” (TALUD VII cruise) (EMU-7518).

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Remarks. — The male of this species was unknown until Hanamura (1983) reported on a large series of males and females captured off the west coast of Baja California, Mexico, and illustrated the petasma of a 20.8 mm CL male. The petasma and the appendices masculina and interna of the large male examined herein are illustrated (fig. 1), the petasma with some more precision than in the figure provided by Hanamura (1983). The short rows of distal setae figured on the lateral process and the outer margin of the mesial process of the ventromedian lobule, as well as on the flap of the ventrolateral lobule by Hanamura (1983, fig. 2), are actually conspicuous and minute spines (fig. 1A). Differences between *H. doris* and *H. nereus* Faxon, 1893, the other species of this genus known from the east Pacific, include the lack of terminal spines, and the mesial process of the ventromedian lobule almost at a right angle (with only five spines) in the latter species (>10 spines in *H. doris*). The appendix masculina (fig. 1D) of *H. doris* resembles that of *H. nereus*, but the rounded, proximal part is somewhat shorter and the row of spines does not reach the tip; the appendix interna of *H. doris* (fig. 1C) is much shorter than that in *H. nereus*, and oval vs. abruptly narrowing in *H. nereus*; the ventrolateral spur (fig. 1B) is similar in both species, but relatively shorter in *H. doris* (see Pérez-Farfante, 1976 for a description of the genital structures of *H. nereus*). This record of *H. doris* is the third for the Gulf of California (see Pérez-Farfante, 1976).

**Pleocyemata** Burkenroad, 1963  
**Caridea** Dana, 1852  
**Palaemonidae** Rafinesque, 1815

**Palaemonetes hiltoni** Schmitt, 1921

Material examined. — Six specimens (CL 4.2-6.0 mm), 19 March 1998, Estero Conic (29° 10′ 41″ N 112° 15′ 50″ W), Infiernillo Channel, Sonora, Mexico, beach seine (coll. J. Torre, J. García, and L. Bourillón) (EMU-7516).

Remarks. — According to Wicksten & Hendrickx (2003), this species is known from only two localities in the Gulf of California (Guaymas and Caimanero Lagoon). This third record along the Gulf of California’s east coast increases its northernmost known distribution range in the Gulf by ca. 170 km.

**Alpheidae** Rafinesque, 1815

**Alpheus hyeyoungae** Kim & Abele, 1988

Material examined. — One male (CL 9.6 mm), 31 May 1980, Puerto Peñasco, Sonora, Mexico (coll. E. H. Bayer) (CEDO). Two males (CW 16.5 and 17.5 mm), 2 February 1964, 300 yards (ca.
Fig. 1. Genital structure of a male of *Hymenopenaeus doris* (Faxon, 1893) (EMU-7518). A, petasma, left half, dorsal view; B, left appendices masculina and interna, inner lateral view; C, same, with appendix interna (right) in flat perspective; D, details of appendix masculina in flat perspective.

270 m) north of Punta Belcher, Bahia Magdalena, Baja California Sur, Mexico, depth 10 m (30 feet) (SIO C 3694).

Remarks. — Described from Nayarit, Mexico, *A. hyeyoungae* was later recorded at several localities in the eastern tropical Pacific, and north of Los Angeles Bay.
and Tiburon Island in the Gulf of California (Kim & Abele, 1988; Villalobos et al., 1989). The present records extend its known distribution to the currently recognized northern limits of the Cortés Province (see Hendrickx et al., 2005), i.e., the northern extremity of the Gulf of California, and Magdalena Bay, on the west coast of the Baja California Peninsula.

**THALASSINIDEA Latreille, 1831**

**AXIIDAE Huxley, 1879**

**Axiopsis serratifrons** (A. Milne-Edwards, 1873)

Material examined. — Four specimens (CL 8.1-10.7 mm), 9 June 1958, Zihuatanejo (ca. 17°35′N 101°30′W), Guerrero, Mexico, dipnet (Cruise T0 5801) (SIO C 2893).

Remarks. — *Axiopsis serratifrons* was recently reported from near La Paz, Baja California, Mexico by Hendrickx (2002). Including the record from Gorgona Island, Colombia by Lemaitre & Ramos (1992), the present record from Zihuatanejo, on the S.W. coast of Mexico, is only the third for this species in the east Pacific.

**Eiconaxius cristagalli** Faxon, 1893

(fig. 2)

Material examined. — One ovigerous female (CL 8.3 mm), 25 January 1990, off Galápagos Islands (00°14.4′S 88°38.2′W), Ecuador, rock dredge D-12, 1123-1378 m (SIO C 9633).

Remarks. — *Axius cristagalli* was described by Faxon (1893) and illustrated by the same author two years later (Faxon, 1895). His material included 3 males and 1 female collected at 850 m (465 fathoms), off Mariato Point (6°22′20″N 81°52′W), Panama, and this species has apparently not been reported since (see Sakai & De Saint Laurent, 1989: 18; Lemaitre & Ramos, 1992: 356). The four syntypes deposited at the Museum of Comparative Zoology, Harvard (MCZ-4569), are still available and in very good shape. Photographs of specimens (courtesy of the Museum staff) and the original description and figures provided by Faxon (1893, 1895) were used for comparison with the Galápagos specimen. The syntypes and the specimen from Ecuador feature the typical, triangular, dorsally furrowed rostrum, with margins and median carina armed with prominent teeth (fig. 2), and the strong (slightly bifid in the Galápagos material and in one large syntype) tubercle on the anterior margin of the palm, just between the bases of the fingers. They all lack serration on the superior margin of the propodus, which is typical of *E. acutifrons* Bate, 1888, the other species reported for the east Pacific (Sakai & De Saint Laurent, 1989). The material examined increases the known lower bathymetric limit for this species by ca. 400 m and the southernmost distribution limit by over six degrees latitude. The specimen was bearing four, ready to hatch, large, oval eggs (ca. 2.6 mm × 2.0 mm). The female syntype described by Faxon (1893) carried 18 large eggs (2.0 mm × 1.5 mm).
Fig. 2. Rostrum of *Eiconaxius cristagalli* Faxon, 1893, lateral or laterodorsal views. A-D, of syntypes (MCZ-4569), drawn from photographs; E, of female specimen examined herein (SIO C 9633).

**Calocarides quinqueseriatus** (Rathbun, 1902)

Material examined. — One male (CL 20.4 mm), 18 April 2005, off Baja California Sur (25°24.8’N 110°40.4’W), Mexico, benthic sledge, St. 16, 1030 m, R/V “El Puma” (TALUD VIII cruise) (EMU-8141). One female (CL 17.4 mm), 14 November 2005, off Baja California Sur (26°02.3’N 110°37.27’W), Mexico, benthic sledge, St. 21B, 1349-1369 m, R/V “El Puma” (TALUD IX cruise) (EMU-7281). One male (CL 19.8 mm), 7 June 2007, off Guerrero (16°48’N 100°28’W), Mexico, box corer, St. 2, 964 m, R/V “El Puma” (TALUD XI cruise) (EMU-7284).

Remarks. — The male and female specimens collected in 2005 are the first records from the S.W. side of the Gulf of California. They increase the maximum known depth of occurrence for this species from 956-980 to 1349-1369 m (see Hendrickx, 1996). The specimens from off Baja California and the male from off Guerrero were collected in moderately hypoxic epibenthic conditions (0.57, 0.24, and 0.20 ml/l O₂, respectively).

**Brachyura** Latreille, 1802

**Pseudorhombilidae** Alcock, 1900

**Pseudorhombila xanthiformis** Garth, 1940


Remarks. — This is the first record for this species on the western side of the Gulf of California, Mexico (see Hendrickx, 1995). The sampling depth is similar to the depth of capture of the type from the waters north of Gorgona Island (ca. 108 m).
PINOTHERIDAE De Haan, 1833

**Dissodactylus glasselli** Rioja, 1944

Material examined. — One male (CW 2.1 mm), 1 female (CW 2.9 mm), and 1 juvenile (CW 0.9 mm), 20 October 2006, Playa Norte, Bay of Mazatlán, Mexico, bottom dredge, 3-4 m (coll. J. Salgado & M. Ayon) (EMU-7269).

Remarks. — The specimens examined were collected on the sea urchin, *Mellita grantii* Mortensen, 1948, one of the three species of *Mellita* reported for the Gulf of California (Solis-Marín et al., 2003). According to Rioja (1944) the type material was found on *M. longifissa* Michelin, 1858, Playa San Benito (Tapachula), Chiapas, Mexico. The only additional record for this species is from Puerto el Triunfo, El Salvador (Griffith, 1987), but no host was reported. At the time *D. glasselli* was collected and described, *M. grantii* had not yet been described. In literature, all records of east Pacific species of *Dissodactylus* found on *Mellita* correspond to *M. longifissa* (cf. Griffith, 1987), except for *D. lockingtoni* Glassell, 1935, reported on *Mellita grantii* by Campos et al. (1992). The echinoderm collection in the Instituto de Ciencias del Mar y Limnología, UNAM, contains one lot of *Mellita longifissa* (identification confirmed by F. Solis-Marín, October 2006) collected at the type locality of *D. glasselli*; in all respects it corresponds to the data provided by Rioja. This confirms the presence of *D. glasselli* on two species of *Mellita*. The present record increases the known distribution of *D. glasselli* to the north by ca. eight degrees of latitude.

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REFERENCES


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