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RANGE EXTENSIONS

Range extension of *Nephasoma pellucidum*, and new records of *Apionsoma* (*Edmonsius*) *pectinatum* (Sipuncula) and *Thalassema steinbecki* (Echiura) from the Pacific of Costa Rica

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Key words: Sipuncula, Echiura, Gulf of Nicoya, Costa Rica.

Nephasoma pellucidum (Keferstein 1865).

Southern shore of Punta Morales (10° 03' N, 84° 58' W), Gulf of Nicoya, beneath rocks, intertidal, August 1, 1996. Collector: Harlan K. Dean, four specimens (UCR-44-01). Islas Cortezas (10° 04 ' N, 84° 58' W), Gulf of Nicoya, beneath rocks, intertidal, August 5, 1996. Collectors: Harlan K. Dean and José A. Vargas, two specimens (MCZ collection).

Remarks: These peanut worms have one pair of introvert retractor muscles and an undivided layer of longitudinal muscle. They bear uniformly distributed papillae on trunks that are cream or pale tan, and measure 10-19 mm long. The introverts are 50-75% of the trunk length, have a zone of pale scattered hooks, and a circle of short circumoral tentacles.

This species has a wide distribution. However, this is the first record from anywhere in the Eastern Pacific Ocean.

Apionsoma (*Edmonsius*) *pectinatum* (Kerfers-tein 1867).

Bahía Herradura (09° 38' N, 84° 40' W), Gulf of Nicoya, beneath rocks at low tide, intertidal, October 16, 1994. Collector: Carlos Gamboa, 1 specimen (UCR-45-01).

Remarks: This sipunculan has the longitudinal muscle layer divided into separate bands and tentacles forming a small cluster around the dorsal nuchal organ. The bilobed nephridia, the spindle muscle that is unattached to the posterior end of the trunk, and hooks with basal spinelets make it quite distinctive. The introvert is three times longer than 40 mm trunk. The trunk exhibits brown papillae, many in a square of folded skin.

An uncommon circum-tropical, shallow-water species. Since this species has been previously found in Panamá and México (Baja California), its presence in Costa Rica was only inferred until now.

These two new records, together with that of *Aspidosiphon elegans* being reported by Fonseca and Cortés (1998), and those reported by Cutler *et al.* (1991) bring to 13 the total number of peanut worm species found in Costa Rica.

Thalassema steinbecki Fisher 1946.

Southern shore of Punta Morales, Gulf of Nicoya, under rocks, intertidal, August 1, 1996. Collector: Harlan K. Dean, two specimens (UCR and MCZ collection, one each). Southern shore of Punta Morales, Gulf of Ni-

coya, under rocks, intertidal, August 3, 1996. Collectors: Harlan K. Dean and Sylvia Solano, two specimens (UCR-1-01, UCR-2-01 and MCZ collection).

Remarks. These spoon worms exhibit all the characters ascribed to this species by Fisher (1946), Stephen and Edmonds (1972), and Biseswar (1988). There are large papillae present just posterior to the proboscis and close to the posterior end, the proboscis is approximately the same length as the trunk, and there are two pairs of gonoducts. The stomach and gizzard are short, the gonostomal lips are smooth forming an incomplete circle, and the anal vesicles extend almost the entire length of the trunk.

All four specimens had a " blood red" body and off-white proboscis when collected, however, the body color changed to a gray to cream color upon fixation with formalin. This color change has also been noted in *Thalassema jenniferae* which was described as having a reddish-pink trunk in life but becoming off-white in formalin (Biseswar 1988). Previous records of *T. steinbecki* made no mention of this red coloration. Steinbeck and Ricketts (1941), who first collected specimens of this species from Baja California did not mention the color of living material, and in describing the species Fisher (1946) only had access to preserved material.

At least one of the specimens collected on August 1 was found beneath the same rock as one of the specimens of the sipunculan *N. pellucidum*, while both specimens of *T. steinbecki* collected on August 3 were found under the same rock as a specimen of *N. pellucidum*. One of the later two specimens was found embedded in the mud within a disarticulated bivalve shell while the other specimens were found exposed on the surface of the mud upon removal of the concealing rocks.

This species has been recorded only from the Eastern Pacific from California to Ecuador. However, this is the first record of this species from Central America.

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Harlan K. Dean [1,2] & Edward B. Cutler[1]
[1]Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts 02138. USA. E-mail: hdean@ici.net
[2]John Hazen White School of Arts and Sciences, Johnson and Wales University, Providence, Rhode Island 02903. USA.