15 April 1997
PROCEEDINGS OF THE BIOLOGICAL SOCIETY OF WASHINGTON
110(1):69–73. 1997.

A new genus for the Central American crab *Pinnixa costaricana* Wicksten, 1982 (Crustacea: Brachyura: Pinnotheridae)

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Abstract.—A new monotypic genus, *Glassella*, is recognized from the tropical East Pacific for *Pinnixa costaricana* Wicksten, 1982. This genus shares with *Alarconia* Glassell, 1938, *Indopinnixa* Manning & Morton, 1987, *Scleroplax* Rathbun, 1893 and *Pinnixa* White, 1846, a carapace wider than long, and third pair of walking legs the longest. *Glassella* is distinguished from other genera by: MXP3 with ischium-merus pyriform, carpus larger than the conical propodus, and small digitiform dactylus inserted sub-distally on the inner face of propodus. The type species is redescribed and illustrated.

Pinnixa costaricana was originally described by Wicksten (1982) and placed in the genus *Pinnixa* White, 1846, because of its carapace shape and relative length and shape of the walking legs. During a recent revision of the *Pinnixa*-complex from the eastern Pacific, *P. costaricana* was compared to other *Pinnixa* species and to species of other genera in the Pinnotheridae with a *Pinnixa*-like morphology: *Alarconia* Glassell, 1938, *Indopinnixa* Manning & Morton, 1987, and *Scleroplax* Rathbun, 1893. We concluded that *P. costaricana* should be removed from the genus *Pinnixa* and placed in a new genus herein diagnosed. The morphological analysis of *P. costaricana* was based upon the study of the female holotype (AHF 806) deposited in Los Angeles County Museum of Natural History. Other species studied were: the type species of *Alarconia*, *A. seaholmi*, the type species of *Scleroplax*, *S. granulata*, and the species of *Pinnixa* reported by Bonfil et al. (1992), Zmarzly (1992), Martin & Zmarzly (1994), and Hendrickx (1995), all deposited in the San Diego Natural History Museum and at the Invertebrates Laboratory, Facultad de Ciencias, Universidad Autónoma de Baja California. The information used on the type species of *Indopinnixa*, *I. sipunculana*, was obtained from published description and figures, although critical features were confirmed by Dr. Raymond B. Manning from types deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (USNM). Comparison of these genera is provided in a dichotomous key based on adult characters.

The third maxilliped is abbreviated to MXP3 and the walking legs are indicated as WL1-WL4. AHF is an acronym for Allan Hancock Foundation.

Family Pinnotheridae
Glassella, new genus
(Figs. 1, 2)

Diagnosis.—Carapace suboblong, dorsal surface pockmarked, wider than long, integument firm, regions not defined; cardiac ridge lacking; front truncated, with shallow median sulcus. MXP3 with ischium-merus pyriform, fused, separated by faint line and distal margin truncated; palp as long as ischium-merus, 3-segmented, dactylus small,

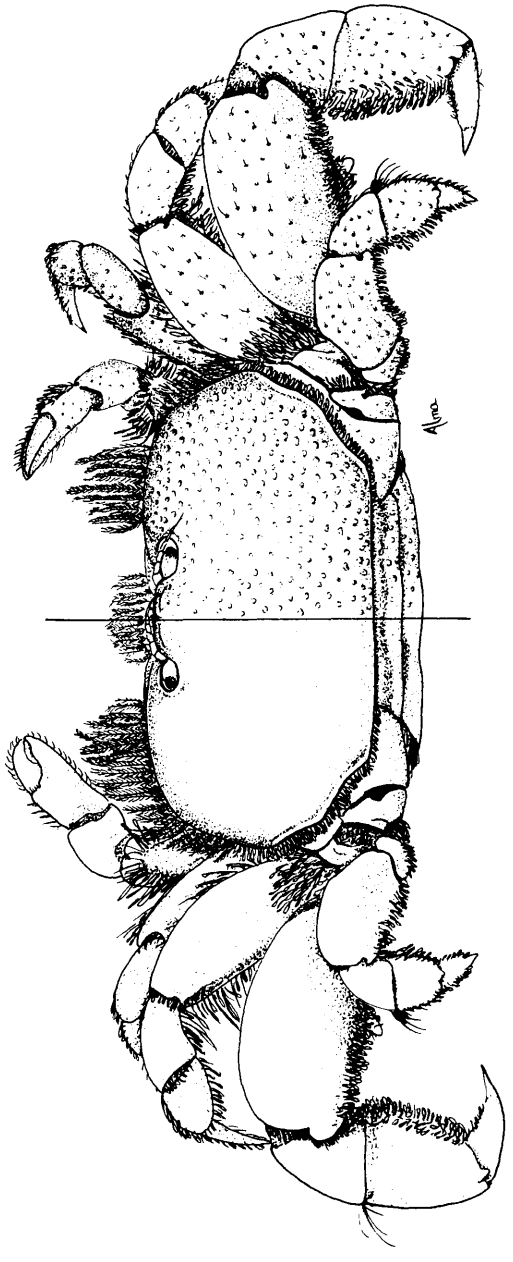

Fig. 1. *Glassella costaricana* (Wicksten, 1982), holotype AHF 806. Dorsal view. Carapace length 1.8 mm, width 4.2 mm.

digitiform, inserted sub-distally on inner face of conical propodus; carpus stout, longer than combined length of propodus and dactylus; exopod with median lobe on outer margin, flagellum 2-segmented. WL1-4 pockmarked, relative length 3 > 2 > 1 > 4, WL3 considerably the longest. Abdomen of female with 6 somites and telson free, widest at third somite; tapering from fourth somite to triangular telson.

Male unknown.

Etymology.—Named in honor of Steve A. Glassell, who studied the pinnotherid crabs of the eastern Pacific and made invaluable contributions on this group. Gender feminine.

Type species.—*Pinnixa costaricana* Wicksten, 1982, by present designation and monotypy.

Glassella costaricana (Wicksten, 1982), new combination
(Figs. 1, 2)

Pinnixa costaricana Wicksten, 1982:579–582. fig. 1, 2A–D; Hendrickx, 1995:148.

Material examined.—Female (holotype AHF 806).

Redescription.—(Modified from Wicksten 1982). Carapace suboblong, cylindrical, dorsal surface pockmarked, regions not defined; anterolateral margins diverging posteriorly, forming shoulders from which side walls drop vertically; lacking anterolateral crest or cardiac ridge. Posterior margin straight. Front not advanced, truncate; with shallow median sulcus. Carapace margin with setae, especially on ventral surface. Orbits small, slightly inclined downward, filled by eyes when retracted. Antennule plicate in small fossettes. Antenna large, multi-articulated.

Cheliped slender, setose. Margins of chela subparallel; ventral margin of propodus with small tubercles. Manus with group and lines of tiny tubercules. Fingers slender; tips pointed, curved, and leaving no gape when closed; dorsal margin of dactylus with blunt and acute tubercles.

WL1-2 slender; meri trigonal; dactyli sharp, nearly straight. WL1 twisted, somewhat smaller than second, nearly reaching end of propodus of WL2. WL2 reaching carpus of WL3. WL3 very wide; merus

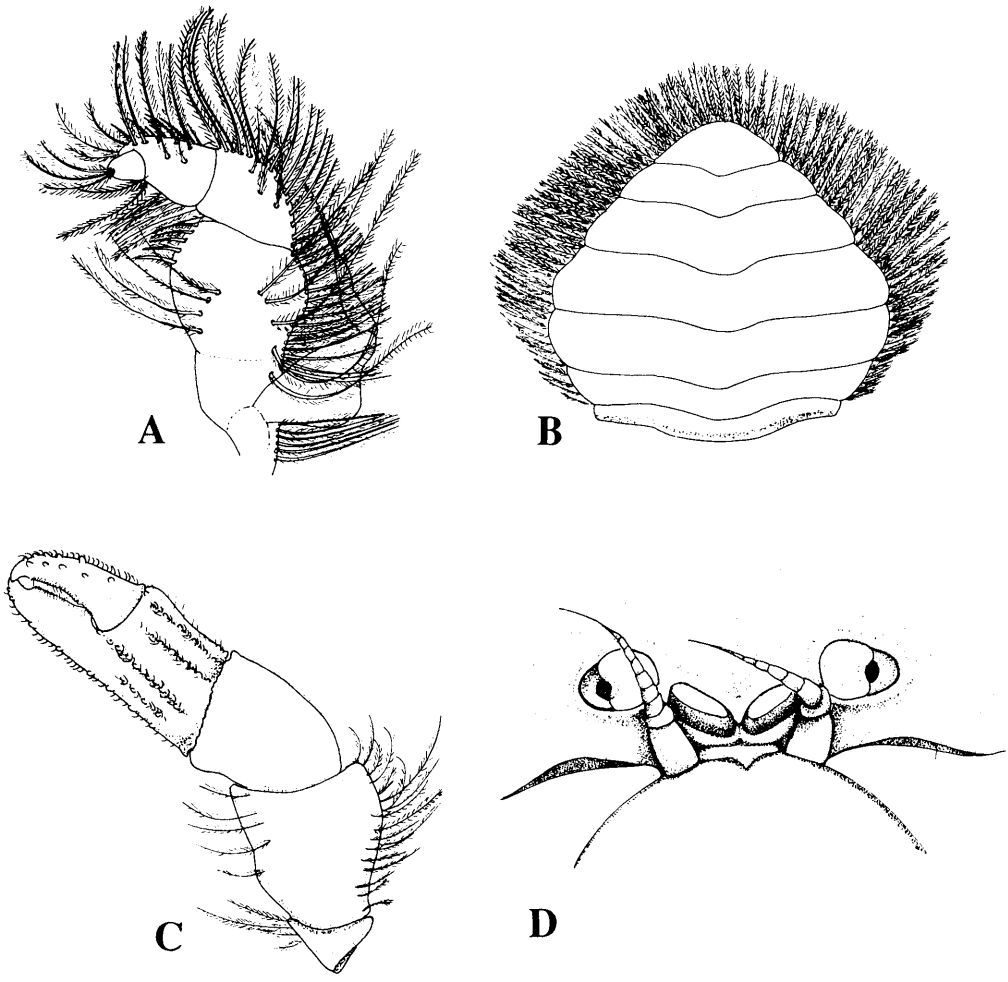

Fig. 2. *Glassella costaricana* (Wicksten, 1982), holotype AHF 806. A, third maxilliped (inner view); B, female abdomen; C, left chela (outer view); D, front, anterior view.

1.25× as long as wide, with stout tooth and small teeth and tubercles on ventral margin; carpus without teeth; propodus 1.5× as long as wide, with granules along flexor margin; dactyl sharp, slightly curved. WL4 short, reaching almost to end of WL3; dactyl stout, and triangular. All legs pilose and pockmarked.

Distribution and habitat.—Known only from the type locality, Playa de Coco, Provincia de Guanacaste, Costa Rica (about 10°5′N, 85°45′W); low intertidal zone, sand and rock.

Remarks.—As noted in the key given below, the genus *Glassella* most resembles *Pinnixa*, *Alarconia*, *Indopinnixa* and *Scleroplax*, all of which have a firm carapace that is wider than long and a third pair of WL considerably longer than the rest. Differences among these genera include: shape, degree of development of regions and hardness of the carapace; shape, degree of fusion, articulation point and relative length of the MXP3 articles; relative length of WL; and, width and degree of fusion of the abdominal somites.

Glassella costaricana can be distinguished from all other pinnotherids by the following presumed autapomorphies: MXP3 with pyriform ischium-merus;

shape, relative length and insertion point of the articles of the palp; and shape of the abdomen.

Key to *Pinnixa*-like genera of the world (Carapace wider than long, firm or hard; third pair of walking legs longest.)

1. Palp of MXP3 with dactylus shorter than and inserted sub-distally on inner face of propodus; carpus larger than propodus ..... *Glassella*, new genus (Pacific coast of Costa Rica; type species *Pinnixa costaricana* Wicksten, 1982; host unknown).
– Palp of MXP3 with dactylus as long as or longer than and inserted proximally on ventral margin of propodus; carpus shorter than propodus 2
2. Ischium and merus of MXP3 not fused, subequal in length; carapace regions well defined; gonopods protruding from sternal trench and reaching to buccal cavity ..... *Alarconia* Glassell, 1938 (Mexican Pacific; type species *Alarconia seaholmi* Glassell, 1938; host unknown).
– Ischium shorter than merus or both articles fused; carapace regions not well defined, gonopods not protruding from sternal trench and not reaching the buccal cavity 3
3. Carapace subpentagonal, hard, dorsally very convex; WL1-4 of similar shape, third pair slightly longer, fourth not noticeably reduced .... *Scleroplax* Rathbun, 1893 (Eastern Pacific, British Columbia, Canada to Baja California, Mexico; type species *Scleroplax granulata* Rathbun, 1893; hosts: in burrows of Crustacea-Decapoda (Callianassidae) and Echiurida.
– Carapace oblong, firm but not hard, flat or slightly convex; WL1-4 very dissimilar in shape, third pair stout and longer, and fourth noticeably shorter 4
4. Propodus of MXP3 elongated, distal end expanded far beyond mid-length of dactylus, both articles of similar shape; male abdomen of 6 free somites and telson ..... *Pinnixa* White, 1846 (Western Atlantic [Massachusetts, U.S.A. to Argentina]; Eastern Pacific [Alaska, U.S.A. to Chile]; Indo West Pacific [Japan, East Africa]; type species *Pinnotheres cylindricum* Say, 1818; host: Polychaeta, Enteropneusta, Echiurida, Sipunculida, Holothuroidea, Mollusca-Bivalvia, Crustacea-Decapoda [Callianassidae], Tunicata).
– Propodus of MXP3 short and stout, distal end not reaching far beyond middle length of dactylus, both articles very dissimilar in shape; male abdomen with fifth and sixth somites fused .... *Indopinnixa* Manning & Morton, 1987 (Indo West Pacific [Hong Kong]; type species *Indopinnixa sipunculana* Manning & Morton, 1987; in burrows of Sipunculida).

Acknowledgments

We are deeply grateful to Raymond B. Manning (USNM) for provide valuable information on *Indopinnixa sipunculana*; to R. B. Manning, Rafael Lemaitre and Marcos Tavares for reviewing our manuscript with great care; to Joel W. Martin and George E. Davis (LACMNH) for the loan of the holotype of *Glassella costaricana*; and to Alma Rosa de Campos for her very fine artistic work. This work was partially supported by program 0134 "Crustáceos Simbiontes del Pacífico Mexicano (formerly de Baja California)" of the Facultad de Ciencias, Universidad Autónoma de Baja California (UABC) and by agreement UABC-CONACyT 3587-N9311. EC is a fellow of the "Programa de Estímulo al Personal Académico 96/97" of the UABC.

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