

## A new genus and species of pinnotherid crab from Karachi, northern Arabian Sea (Crustacea, Decapoda, Brachyura)

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(Accepted 28 September 2001)

A new monotypic genus, *Sindheres*, is established to accommodate a new species, *S. karachiensis*, of pinnotherid crab from the northern Arabian Sea. The new genus resembles *Nepinnotheres* Manning, 1993 in having the dactylus of the third maxilliped inserted near the mid-length of the ventral margin of the propodus but it differs in having a sub-hexagonal carapace.

KEYWORDS: Decapoda, Pinnotheridae, commensal, *Gastrochaena*, *Sindheres*, Pakistan, new genus, new species.

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### Introduction

In August 1997, during routine collection trips by the Marine Reference Collection and Resource Centre (MRC), a live bivalve was found at Bulleji, a rocky beach near Karachi Examination in the laboratory by one of us (O.B.K.) revealed a moving crustacean leg near the foot of the mollusc. A small crab was removed from the host and it proved to be an undescribed species belonging to a new genus, and it is the fourth species to be recorded from Pakistan (see Hashmi, 1963; Moazzam and Rizvi, 1985; Tirmizi and Ghani, 1995, 1996).

The type of the new species is deposited in the collection of MRC. A photocopy of figures of the crab and its host, along with other pea crabs, was sent to J. Pearce, Scientific Editor, *Fishery Bulletin*, Woods Hole, on his request for information on Pakistani pea crabs.

The third maxilliped is abbreviated to MXP3, and the walking legs WL1–4. Measurements are in millimeters (mm). The measurement given in the species account is carapace length  $\times$  carapace width.

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*Sindheres* gen. nov.

*Diagnosis.* Size small, carapace 3.25 mm long, 5.0 mm wide in a unique holotype. Carapace sub-hexagonal, narrowing anteriorly, width greater than length, width greatest posterior to mid-length; regions poorly defined. Front very slightly projecting. MXP3 exopod with flagellum; ischium and merus indistinguishably fused, elongate; inner margin convex; palp three-segmented; propodus spatulate, longer than carpus, dactylus styliform, inserted below mid-length of ventral margin of propodus. Walking legs equal right and left; WL2 longest of walking legs, WL1–3 dactyli similar, subequal, falcate, strongly curved to sharp apex; WL4 dactylus slightly shorter than dactyli of WL1–3. Female abdomen of seven free somites, abdomen extended beyond bases of legs. Male unknown.

*Type species.* *Sindheres karachiensis* new species, by present designation and monotypy.

*Etymology.* An arbitrary combination of the name of the Pakistan province of Sindh and the ending *-eres*. The gender is masculine.

*Remarks.* Members of *Sindheres* can be distinguished at once from members of *Pinnotheres* Bosc, 1802, in having the dactylus of MXP3 inserted near the mid-length of the ventral margin of the propodus (Manning, 1993: figure 1(c)), rather than at its base (Manning, 1993: figure 1(b)). In this feature *Sindheres* resembles the eastern Atlantic *Nepinnotheres* Manning, 1993, but in members of *Nepinnotheres* the carapace is sub-circular, with the length and width subequal, rather than sub-hexagonal, with the length much shorter than the width. In *Sindheres*, the mesial margin of the MXP3 ischium-merus is convex, whereas in *N. pinnotheres* the mesial margin of MXP3 is slightly concave proximally with an obtuse projection subdistally.

*Sindheres karachiensis* sp. nov.

(figures 1, 2)

*Material.* Arabian Sea, Pakistan, Sindh, Bulleji 24° 50' 12" N, 66° 49' 12" E. shore on clay rock, 21 August 1997, one ovigerous female, 3.25 × 5 mm (holotype MRC Brac. 677).

*Description.* Ovigerous female: size small, cl 3.25 mm. Carapace fragile, greatest width posterior to mid-length. Front very slightly produced beyond outline of carapace. MXP3 propodus stout, length about twice height. Chela with movable fingers more than half length of palm, latter about 0.6 times height; movable finger with a tooth proximally and approximated cutting edge with a row of more than 22 anteriorly directed spines, fixed finger armed with a triangular tooth proximally, 2+12 anteriorly directed teeth on approximated cutting edge, and rows of setae. Walking legs slender, propodi of WL2 about five times and WL3 about four times longer than high; relative lengths WL2 > WL3 > WL1 > WL4. WL4 not extending to dactylus of WL3; carpus shorter than propodus on all legs; WL1–WL4 setose on posterior margin, right WL2 dactylus setose on anterior and posterior margins as figured. WL1–3 dactyli subequal, WL4 dactylus shorter.

*Colour.* White with bright red eyes.

*Host.* Bivalve mollusc, most probably the genus *Gastrochaema*, family Gastrochaeninae in mantle cavity between foot and mantle as indicated by an arrow (figure 2), shell length 17.5 mm.

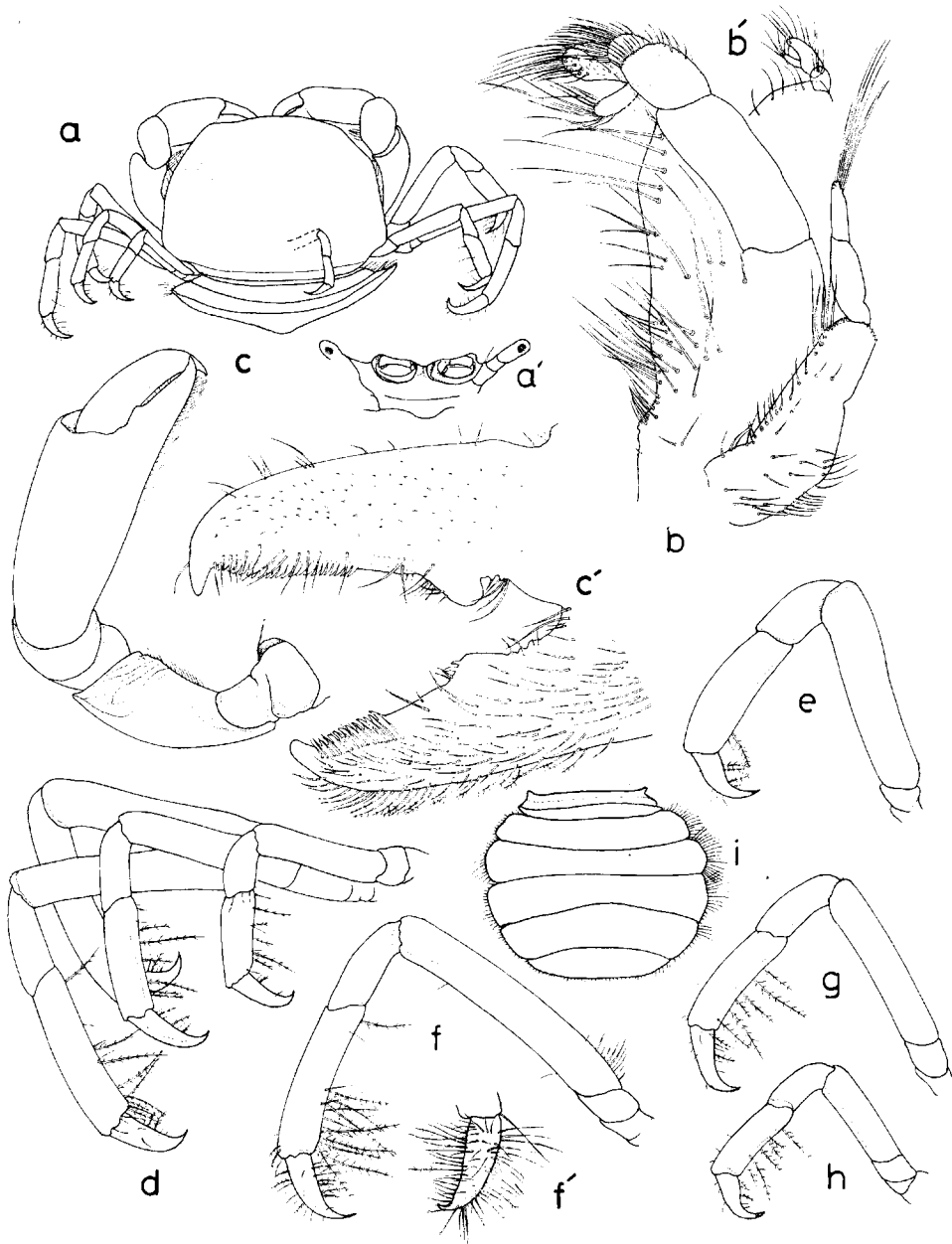


FIG. 1. *Sindheres karachiensis* gen. nov. and spec. nov. Female holotype 3.25 × 5 mm. (a) Dorsal view, right WL4 piercing through carapace; (a') front and eyes; (b) MXP3, right ventral; (b') same, palp, showing the dactylus insertion; (c) cheliped; (c') cutting edges; (d) left WL1-WL4 *in toto*; (e-h) WL1 WL4; (f') dactylus of right WL2; (i) abdomen.

*Habitat.* Littoral, clay.

*Remarks.* This new species can be distinguished easily from all of the Indo-Pacific species described by Gordon (1936), Silas and Alagarwami (1967) and

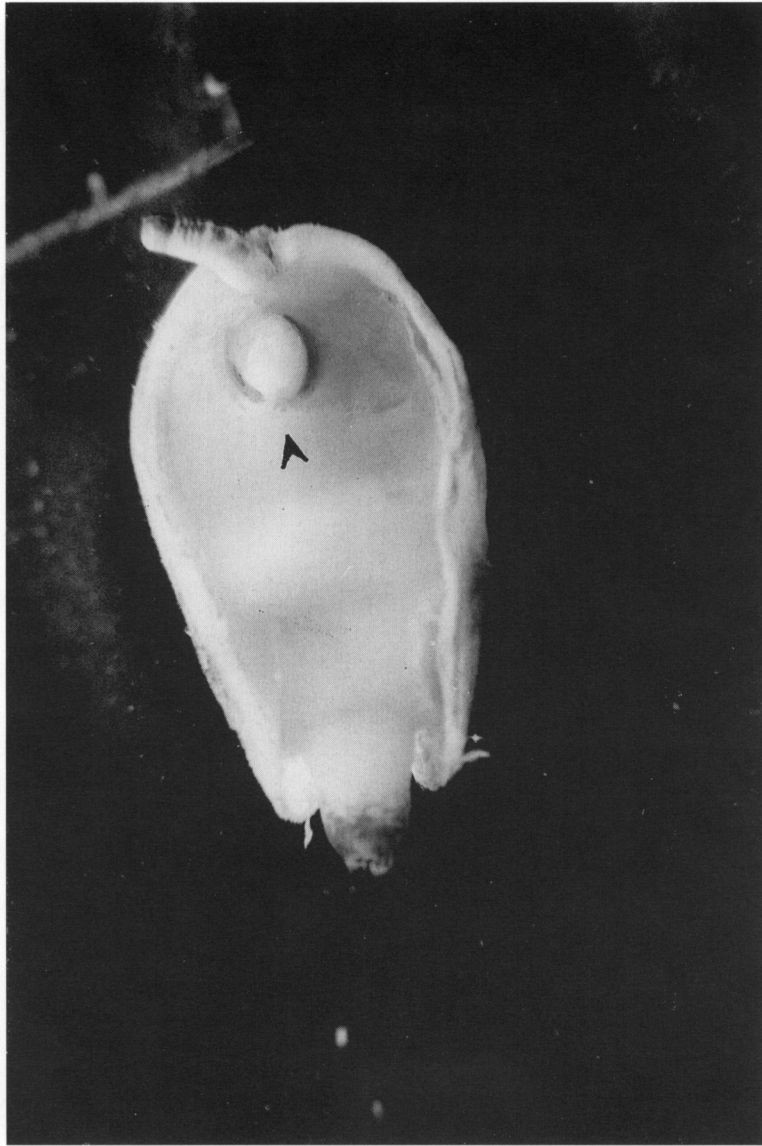


FIG. 2. Host bivalve, arrow indicating the hole in between foot and mantle.

Tirmizi and Ghani (1996). It is a unique species having a hexagonal carapace, well-pigmented eyes, MXP palp slender, slender walking legs with subequal dactyli, of which the WL-3 is the longest, with a dactyl comparatively more setose on the right side.

#### **Acknowledgements**

The senior author is thankful to her colleague, Miss Razia Naushaba for identifying the bivalve. The collection was done under an ONR project.

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