A new genus of ghost shrimp from Japan
(Crustacea: Decapoda: Callianassidae)

Raymond B. Manning and Akio Tamaki

(AT) Faculty of Fisheries, Nagasaki University, 1-14 Bunkyo-Machi, Nagasaki 852–8521, Japan

Abstract.—A new genus, Nihonotrypaea, is recognized for three species from Japan formerly assigned to Callianassa sensu lato: N. japonica (Ortmann, 1891), the type species; N. harmandi (Bouvier, 1901); and N. petalura (Stimpson, 1860).

One of us (A.T.) has carried out studies on the biology and development of the shallow water species, Callianassa japonica Ortmann, 1891, in an estuarine system on western Kyushu Island, Japan since 1989 (Tamaki et al. 1996, Tamaki et al. 1997). These studies revealed consistent differences in biology, development, habitat, and morphology in populations from different areas within the estuary, which extends from Ariake Sound through Tachibana Bay to the East China Sea (Tamaki et al. 1997: fig. 1). One of us (R.B.M.) examined samples from different localities within the study area and found that not only were there two species involved, but also that morphological characters warranted their separation into a new genus of Callianassidae. That two similar species occurred in Japan had been recognized by De Man (1928), who identified them as C. japonica and C. harmandi Bouvier, 1901, and clearly figured their diagnostic features; De Man’s material all came from Bingo, Japan. De Man’s findings generally have been ignored by subsequent students of the group. Sakai (1969) synonymized C. harmandi with C. japonica and recognized C. petalura Stimpson, 1860 as a distinct species.

As numerous studies on the biology of these species are in preparation by Tamaki and his colleagues and students, we decided to prepare this preliminary account to correct the specific names and make the generic name available. A more detailed account of the new genus and all three species assigned to it is in preparation by us.

Family Callianassidae Dana, 1854
Subfamily Callianassinae Dana, 1854
Nihonotrypaea, new genus

Diagnosis.—Carapace lacking rostral spine, minute median spinule present or absent. Cornea dorsal, subterminal, disc-shaped (Fig. 1a, b). Antennular and antennal peduncles similar. Third maxilliped (Fig. 1c, d) lacking exopod, ischiium-merus suboperculiform, merus projecting beyond articulation with carpus; latter, propodus and dactylius slender. Chelipeds unequal, both with meral hook. First pleopod slender, uniramous in both sexes (Fig. 1e, f). Second pleopod absent in male, slender, biramous in female (Fig. 1g). Third to fifth pleopods with stubby, projecting appendices internae (Fig. 1h) in both sexes.

Type species.—Callianassa japonica Ortmann, 1891, by present designation.

Included species.—Nihonotrypaea japonica (Ortmann, 1891), new combination; N. petalura (Stimpson, 1860), new combination; and N. harmandi (Bouvier, 1901), new combination.

Etymology.—The generic name is formed by combining the Japanese name
for Japan, Nihon, with the generic name Trypaea. The gender is feminine.

Remarks.—With the addition of Nihonotrypaea, nine genera are now recognized in the callianassid subfamily Callianassinae. Nihonotrypaea can be distinguished from those with projecting appendices internae on pleopods 3–5 as follows: from Biffarius Manning & Felder, 1991 in that the size of adults is larger, the antennal and antennular peduncles are similar in size and shape, and the third maxilliped is much narrower; from Calliapagurops de Saint Laurent, 1973 by its subterminal corneas; from Notiax Manning & Felder, 1991 in lacking a strong median spine on the carapace and in having the merus of the third maxilliped projecting beyond its articulation with the carpus; from Poti Rodrigues & Manning, 1992, by the presence of a complete linea thalassica on the carapace; from Trypaea Dana, 1852 in having a much smaller and shorter antennular peduncle.

In the three other genera in the subfamily (Callianassa Leach, 1814; Gilvossius Manning & Felder, 1992; and Neotrypaea Manning & Felder, 1991), the appendices internae of pleopods 3–5 are embedded in the margin of the endopod. That feature alone distinguishes members of these three genera from Nihonotrypaea, in which the appendices internae are projecting from the margin of the endopod.

One of the three species assigned to Nihonotrypaea, N. petalura, lives among boulders in the intertidal zone of ocean-
front beaches. The two other species, *N. japonica* and *N. harmandi*, live on protected flats in estuaries. The range of *N. petalura* is identical to that of *N. harmandi*.

Although De Man (1928) was correct in recognizing *C. japonica* and *C. harmandi* as distinct species, he assigned the wrong name to each of them, for he did not have access to their types and the original accounts were quite short. The two species can be distinguished by the size of their cornea alone, as shown by De Man (1928). In *N. harmandi* (Fig. 1a) the cornea is relatively large, at least half the width of the stalk, whereas in *N. japonica* (Fig. 1b) the cornea is much smaller, one-third to one-fifth the width of the stalk. In *N. harmandi*, the front often is ornamented with a minute spinule, which is lacking in *N. japonica*.

All members of the genus are relatively small, total lengths up to about 65 mm.

The two species also differ in aspects of biology, habitat, and their parasites (Manning & Tamaki, in preparation).

The original citations of the two species are:

*Callianassa subterranea* var. *japonica* Ortmann, 1891:56, pl. 1, fig. 10a [= *Callianassa (Trypaea) harmandi* sensu De Man, 1928:13, pl. 3, fig. 6].

*Callianassa Harmandi* Bouvier, 1901:333 [= *Callianassa (Trypaea) japonica* sensu De Man, 1928:13, pl. 5, fig. 10].

Acknowledgments

We thank Nguyen Ngoc-Ho, Muséum National d’Histoire Naturelle, Paris, for the loan of the syntypes of *Callianassa harmandi* Bouvier, 1901, and Elizabeth Lang, Musée Zoologique de l’Université et de la Ville de Strasbourg, France, for the loan of the holotype of *Callianassa japonica* Ortmann, 1891, for which we are most grateful. Without these specimens it would have been impossible to solve the identity of the two species found in Tamaki’s studies. Manning is indebted to Keiji Baba for sending the first samples of *N. japonica* and *N. harmandi*, which kindled his interest. The figure was prepared by Lilly King Manning. Manning’s studies on the systematics of callianassids are supported by the Smithsonian Marine Station at Fort Pierce. This is contribution 458 from that facility. We thank Brian Kensley, Rafael Lemaître, and Chris Tudge for their comments on the manuscript, which materially improved a late draft. The figure was prepared by Lilly King Manning.

**Literature Cited**


Lamoha hystrix, a new species of deep-water porter crab (Crustacea: Decapoda: Brachyura: Homolidae) from the central Pacific

Peter K. L. Ng
Department of Biological Sciences, National University of Singapore, Kent Ridge, Singapore 119260, Republic of Singapore

Abstract. — A new species of deep-water porter crab, Lamoha hystrix (Homolidae), is described from Canton Island (Phoenix Island group) in the central Pacific. Lamoha hystrix appears to be most closely allied to L. longipes (Alcock & Anderson, 1899), L. murotoensis (Sakai, 1979) and L. inflata (Guinot & Richer de Forges, 1981) from the Indian Ocean, Japanese and central Pacific waters respectively, but can easily be distinguished from them by its proportionately longer ambulatory legs and the presence of spines on the dorsal margin of the merus of the fifth ambulatory leg.

Recently, a series of homolid specimens collected from various parts of the Pacific and deposited in the Bernice P. Bishop Museum (BPBM), Honolulu, were examined. Among this material was an interesting specimen of the genus Lamoha Ng, 1998, from Canton Island, Phoenix Island group, which could not be referred to any known species. The genus is a replacement name proposed by Ng (1998) for Hypsophrys Wood-Mason & Alcock, 1891, who showed that the latter name was preoccupied by Hypsophrys Agassiz, 1859, a genus of freshwater fish. In the family revision by Guinot & Richer de Forges (1995), eight species of Lamoha (as Hypsophrys) were recognized from the Indo-Pacific and Atlantic Oceans.

Lamoha hystrix, new species, is here described. The terminology used follows Guinot & Richer de Forges (1995). The abbreviations PI-5 refer to the pereiopods (PI, cheliped, and P2-5, first to fourth ambulatory legs); M, Pr, and D are for merus, propodus, and dactylus respectively.

Taxonomic Account

Genus Lamoha Ng, 1998

Lamoha Ng, 1988: 121.

Type species. — Hypsophrys superciliosa Wood-Mason & Alcock, 1891, by original designation.

Lamoha hystrix, new species
Figs. 1-3

Material examined. — Holotype, ovigerous female, carapace width 38.7 mm, carapace length (tip of rostrum to posterior carapace margin) 48.9 mm, BPBM 511810, Canton (Kanton) Island, ca. 2°50’S 171°40’W, Phoenix Island Group, east of Kiribati, southwest of Hawaii, ca. 305-366, coll. T. Morin, Jun 1979.

Diagnosis. — Carapace longitudinally rect-

**View This Item Online:** [https://www.biodiversitylibrary.org/item/107585](https://www.biodiversitylibrary.org/item/107585)

**Permalink:** [https://www.biodiversitylibrary.org/partpdf/45532](https://www.biodiversitylibrary.org/partpdf/45532)

**Holding Institution**
Smithsonian Libraries

**Sponsored by**
Biodiversity Heritage Library

**Copyright & Reuse**
Copyright Status: In copyright. Digitized with the permission of the rights holder.
Rights Holder: Biological Society of Washington
License: [http://creativecommons.org/licenses/by-nc-sa/3.0/](http://creativecommons.org/licenses/by-nc-sa/3.0/)
Rights: [https://biodiversitylibrary.org/permissions](https://biodiversitylibrary.org/permissions)

This document was created from content at the Biodiversity Heritage Library, the world’s largest open access digital library for biodiversity literature and archives. Visit BHL at [https://www.biodiversitylibrary.org](https://www.biodiversitylibrary.org).