Ng, P. K., and L. W. H. Tan, 1985. *Globopilumnus multiruberosus* Garth & Kim, 1983—a new record for Australia (Decapoda: Crustacea: Menippidae). *Records of the Australian Museum* 36(3): 127–129. [19 April 1985].

doi:10.3853/j.0067-1975.36.1985.341

ISSN 0067-1975

Published by the Australian Museum, Sydney

Records of the Australian Museum (1985) Vol. 36: 127-129. ISSN-1975-0067

Globopilumnus multituberosus Garth & Kim, 1983 – A New Record for Australia (Decapoda: Crustacea: Menippidae)

PETER K. L. NG AND LEO W. H. TAN

Department of Zoology, National University of Singapore
Kent Ridge, Singapore 0511

ABSTRACT. The menippid crab, *Globopilumnus multituberosus* Garth & Kim, 1983 is recorded from Australia for the first time, and considerably extends the known range of this deep water species. This is only the second species of the genus recorded from Australia, the first being *G. actumnoides* (A. Milne Edwards, 1873), recorded by Ward (1932).

NG K.L. PETER & LEO W.H. TAN, 1985. *Globopilumnus multituberosus* Garth & Kim, 1983 - a new record for Australia (Decapoda: Crustacea: Menippidae). Records of the Australian Museum 36: 127-129.
Keywords: Decapoda, Menippidae, taxonomy, Australia.

In a recent study on some Indo-Pacific pilumnid crabs (Superfamily Xanthoidea McLeay, 1838 *sensu* Guinot (1978) (Ng 1983), the authors had the opportunity to examine some material from the Australian Museum, through the kind courtesy of Drs D.J.G. Griffin and James Lowry. Of these, one was a specimen collected from Victoria, Australia and had been identified by Mary Rathbun (1923, pg. 111) as '*Pilumnus spongiosus* Nobili, 1905'. Balss (1933), in his review of the Indo-Pacific pilumnids, transferred this species to his new genus *Planopilumnus*, and remarked that Rathbun's specimen may have been a juvenile. A careful examination of the specimen, however, showed that Rathbun had misidentified the animal, which should instead be referred to *Globopilumnus multituberosus* Garth & Kim, 1983, a species recently described from the Philippines. The present specimen thus represents a new record for Australia. Until now, the only species recorded from Australia is *Globopilumnus actumnoides* (A. Milne Edwards, 1873), which is found in shallow waters in North West Australia (Ward 1932). The genus *Globopilumnus* Balss, 1933 is characterised by having a hairy carapace, whip-like male pleopod 2 and stout, straight male pleopod 1. It is tropical in distribution and contains eight species, of which five are found in the Indo-Pacific: *G. globosus* (Dana, 1852), *G. actumnoides* (A. Milne Edwards, 1873), *G. calmani* Balss, 1933, *G. multituberosus* Garth & Kim, 1983 and *G. kiiensis* Takeda & Nagai, 1983.

Genus Globopilumnus Balss, 1933
Globopilumnus multituberosus Garth & Kim, 1983
Fig. 1

Pilumnus spongiosus Rathbun, 1923: 111
Planopilumnus spongiosus Balss, 1933: 40
Globopilumnus multituberosus Garth & Kim, 1983: 689, fig. 6 (not *Pilumnus spongiosus* Nobili, 1905)

Material examined. 1♂ (Australian Museum: E6212) (7.1 by 5.6mm), coll. by F.I.S. 'Endeavour' south of Gabo Island, Victoria, Australia from 200 fathoms, det. as *Pilumnus spongiosus* Nobili, 1905 by M.J. Rathbun in 1923.

Remarks. This species was described from specimens collected from the Philippine Islands and off Honshu Island, Japan. It is characteristic in having the teeth on the anterolateral margin covered with small granules, especially at or near the tip, and can easily be separated from *G. actumnoides* by means of this character.

The present record thus greatly extends the known range of this species. The types were collected from depths ranging from 140 to 338 fathoms, the present specimen from 200 fathoms. *Globopilumnus multituberosus* also appears to be the deepest dwelling of all the known species in the genus; the others being shallow water species.

The present specimen agrees well with the original descriptions by Garth and Kim in 1983, but differs in having the supraorbital margin smoother, with two well developed teeth (not two tubercle covered lobes)

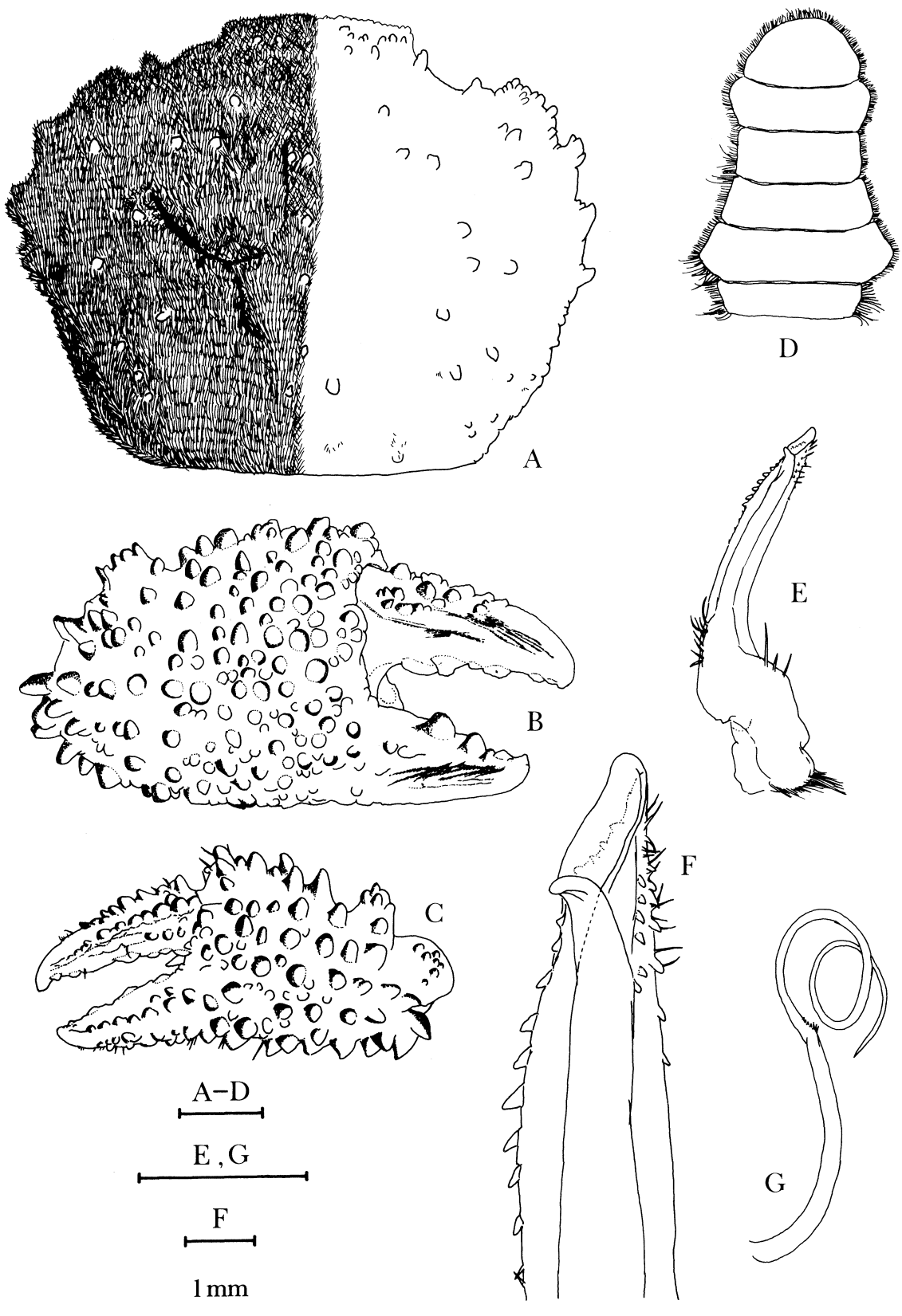

Fig. 1 *Globopilumnus multituberosus* Garth & Kim, 1983. **A**, dorsal view of carapace (right side denuded); **B**, right cheliped; **C**, left cheliped; **D**, abdomen; **E, F** male pleopod 1; **G**, male pleopod 2.

(Fig. 1A). The tubercles on the outer surfaces of the chelipeds are more worn and the cutting teeth of the fingers are sharper (Fig. 1B,C).

The chelipeds are asymmetrical, the right one being larger. The abdomen is broad with the last segment rounded (Fig. 1D). The male pleopod 1 is similar to those of the other four species of *Globopilumnus* so far recorded from the Indo-Pacific (see Guinot-Dumortier 1960 and Takeda & Nagai 1983), with the tip slightly 'flared' (Fig. 1E,F). The distal regions are covered with numerous short, strong spines. The straight, stout male pleopod 1 and the whip-like male pleopod 2, with its long flagellum (Fig. 1G), are typical for crabs of the family Menippidae Ortmann, 1893 *sensu* Guinot 1978, Superfamily Xanthoidea.

Like *G. globosus*, *G. actumnoides* and *G. kiiensis*, *G. multituberosus* does not have any stridulatory organs on the chelipeds and ambulatory legs. Such organs are however found in the Indo-Pacific *G. calmani*, the West African *G. africanus* (A. Milne-Edwards, 1867) and *G. stridulans* Monod, 1956 (Guinot-Dumortier & Dumortier 1960), and the North American *G. xantusii* (Stimpson, 1860) (Garth, 1968).

ACKNOWLEDGEMENTS. The authors wish to thank Drs D.J.G. Griffin, James Lowry and Roger Springthorpe for loan of the specimen, Mrs C.M. Yang of the Zoological Reference Collection, National University of Singapore for her help, and Ms Shirley Lim for doing the drawings.

References

Balss, H., 1933. Beitrage zur kenntnis Gattung *Pilumnus* und verwandter Gattungen. Capita Zoologica 4(3): 1–47.

Garth, J.S., 1968. *Globopilumnus xantusii* (Stimpson), n. comb., a new stridulating crab from the west coast of tropical America, with remarks on discontinuous distribution of some West American and West African genera of Brachyrhynchous crabs. Crustaceana 15: 312–318.

Garth, J.S. & H.S. Kim, 1983. Crabs of the family Xanthidae (Crustacea: Brachyura) from the Philippine Islands and adjacent waters based largely on collections of the U.S. Fish Commission steamer Albatross in 1908–1909. Journal of Natural History 17: 663–729.

Guinot, D., 1978. Principes d'une classification évolutive des Crustacés Décapodes Brachyoures. Bulletin Biologique de la France et de la Belgique, n.s., 122(3): 211–292.

Guinot-Dumortier, D., 1960. Les especes Indo-Pacifique de Genre *Globopilumnus* (Crustacea Brachyura Xanthidae). Mémoirs. Institut scientifique de Madagascar, ser. F., 3, 1959 (1960): 97–119.

Guinot-Dumortier, D. & B. Dumortier, 1960. La stridulation chez les crabes. Crustaceana 1: 117 - 155.

Ng, P.K.L., 1983. Aspects of the Systematics of the family Pilumnidae Samouelle, 1819 (Crustacea; Decapoda; Brachyura) and a study on evolutionary trends within the Superfamily Xanthoidea (sensu Guinot 1978). Unpublished B.Sc. Honours Thesis, Department of Zoology, National University of Singapore. 251 pp., pls. 1–12.

Rathbun, M.J., 1923. Report on the crabs collected by F.I.S. 'Endeavour' on the coasts of Queensland, New South Wales, and Victoria, South Australia and Tasmania. 3. Report on the Brachyrhynchen, Oxystomata and Dromiacea. Biological results of the fishing experiments carried out by the F.I.S. 'Endeavour', 1909–14. 5: 95–156, pls. 16–42.

Takeda, M. & S. Nagai, 1983. Description of a new crab from Kushimoto, the Kii Peninsula, Southwest Japan. Bulletin of the National Science Museum, Tokyo, ser. A, 9(2): 45–49.

Ward, M., 1932. The true crabs of the Capricorn Group, Queensland. Australian Zoologist, Sydney, 7(5): 237–255.