

## Deep-water Decapod Crustacea from Eastern Australia: Lobsters of the Families Nephropidae, Palinuridae, Polychelidae and Scyllaridae

D.J.G. GRIFFIN & H.E. STODDART

Australian Museum, 6 College Street, Sydney NSW 2000, Australia

**ABSTRACT.** Twenty-three species of deep-water lobsters in the families Nephropidae, Palinuridae, Polychelidae and Scyllaridae are recorded from the continental shelf and slope off eastern Australia. Ten species and two genera have not been previously recorded from Australia. These are *Acanthacaris tenuimana*, *Projasus parkeri*, *Polycheles baccatus*, *P. euthrix*, *P. granulatus*, *Stereomastis andamanensis*, *S. helleri*, *S. sculpta*, *S. suhmi* and *Willemoesia bonaspei*. The deep-water lobster fauna of eastern Australia is compared with those of other Indo-Pacific areas. A key is given to all deep-water lobster species recorded from Australian waters.

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The deep-water lobster fauna of the Australian region first became known from collections made by the British *Challenger* Expedition (Bate, 1888), the 1911–14 Australasian Antarctic Expedition (Bage, 1938), the Commonwealth of Australia fishing experiments on the *Endeavour* (1909–1914); various local trawling excursions (e.g., Grant, 1905) and serendipitous catches by professional fishermen (e.g., McNeill, 1949, 1956). Knowledge of the fauna has increased greatly since then, especially as commercial fisheries interest and abilities have extended to greater depths. Surveys by Australia's CSIRO on the North West Shelf of Australia, prompted by interest in natural gas resources and potential commercial fisheries, have added many species to the known fauna. Similar surveys in north-east Queensland and New South Wales waters have produced an extensive by-catch of deep-water crustaceans. The deep-water

fauna of southern Australia is as yet poorly known but extensive collections have been made by the Museum of Victoria on the continental shelf and slope of south-eastern Australia and Bass Strait.

This paper is the third of a series dealing with deep-water decapods taken by the New South Wales Fisheries Research Vessel *Kapala*, which has carried out trawling experiments along the coast of New South Wales since 1971. Previous papers dealt with brachyuran crabs (Griffin & Brown, 1976) and shrimps and prawns (Kensley, Tranter & Griffin, 1987). This paper also deals with material from the collections of the Queensland Museum and other Australian Museum material.

The present report gives an account of twenty-three species in four families: Nephropidae, Palinuridae, Polychelidae and Scyllaridae. Species of two other deep-water lobster families have been reported from Australia: