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SUMMARY

Thirty species of ophiuroids collected at the Swain Reefs, north-east of the Capricorn Channel near the southern limit of the Great Barrier Reef are discussed. The ophiocomid genus *Ophiopsila* Forbes is newly recorded for Australian waters with the description of a new species. In addition, there are six new species records for Australia and a further two species are newly reported for the Great Barrier Reef itself. Extensive colour notes for the living brittlestars are reported together with new extensions of species' ranges.

INTRODUCTION

The echinoderm fauna of the Great Barrier Reef has formed the focus of several expeditions (reviewed in Gibbs *et al.*, 1976). For the most part, the echinoderms of its northern region have been the most intensively documented (for example H. L. Clark, 1921, 1938, 1946; Gibbs *et al.*, 1976) but in comparison those of its southern region have been rather neglected. In 1962, the Swain Reefs, lying to the north-east of the Capricorn-Bunker group (21°43'S: 152°25'E), were surveyed and sampled by a party from The Australian Museum. The large and diverse collection of echinoderms obtained by the 1962 expedition was placed in The Australian Museum: the majority of the ophiuroid species presently reported are derived from that collection. The crinoids collected by the Swain Reefs Expedition have been described previously (A. M. Clark, 1975).

A total of thirty species, mostly representing ophiuroid genera commonly found in coral-reef environments, is recorded (A. M. Clark, 1976). The ophiocomid genus *Ophiopsila* Forbes is reported for the first time from Australian waters with the description of a new species, *Ophiopsila gilletti*. New records for Australian waters comprise: *Amphiura* (*Amphiura*) *luetkeni* Duncan; *Ophiomastix luetkeni* Pfeffer; *Ophionereis intermedia* A. M. Clark; *Ophiarachnella macracantha* H. L. Clark; and *Ophiodyscrita pacifica* Murakami. *Ophioconis cincta* (Brock) and *Amphioplus* (*Amphichilus*) *ochroleuca* (Brock) are newly recorded for the Great Barrier Reef. Of the remaining species reported, fourteen represent further southward extensions of their ranges from the northern part of the Great Barrier Reef.

An important feature of the Swain Reefs collection is the numerous colour notes and colour transparencies of the living brittlestars that accompany the preserved material. This has permitted a comparative study of the colouration of the living and preserved specimens to be made, a study that is particularly relevant to those ophiuroid taxa in which infrageneric diagnoses are made on the criterion of colour patterns (for example the family Ophiotrichidae). H. L. Clark frequently recorded the colour of live echinoderms and the colour changes associated with preservation, notably in his discussion of the Torres Strait fauna (H. L. Clark, 1921) with its accompanying lithographs. Where applicable, these data have been included in the systematic account for comparative purposes, as have the recent colour photographs of living, *in situ* ophiuroids presented by Coleman (1977).

For each species, the station and number of specimens are given; further details of the stations appear in Table 1. The prefix 'off Gillett Cay' refers to material collected prior