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A New Species of *Paralophaster* (Asteroidea) from New Zealand

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Abstract

A NEW species of asteroid, *Paralophaster hyalinus*, is described from 384 m off Portobello, Otago, New Zealand. Other members of the genus are confined to Antarctic waters and one species is known from Kerguelen. The affinities of this new species seem to lie with those from the Antarctic.

INTRODUCTION

FISHER (1940: 175) created a new genus, *Paralophaster*, which he distinguished from the closely allied *Lophaster* on the basis of its undifferentiated superomarginal paxillae. An asteroid dredged recently from the Taiaroa Canyon, Otago, proved to be the first record of the genus *Paralophaster* from New Zealand waters and a new species. Previously, the genus, with four species and one subspecies was known only from Antarctica, although *P. incertus* (Koehler), which Fisher (1940: 176) regarded as a doubtful species, occurred as far north as Kerguelen. This new species extends the range of the genus northwards from 50°S to 46°S. The genus is restricted to the Southern Hemisphere.

Order SPINULOSIDA Perrier, 1884
Family SOLASTERIDAE Perrier, 1884
Paralophaster Fisher, 1940

Paralophaster sp.n. Pl. 1, A, B, Fig. 1, a-e.

DESCRIPTION: Disc large, inflated; arms five, broad basally, tapering evenly to sharp tips, terminal ossicle oval, covered by short, thorny spines.

Abactinal surface of disc paved by four or five lobed plates which form an irregular mesh, lobes of one plate overlie those of next. Plates masked by thin skin. Each plate bears a distinct paxilla (Fig. 1a) consisting of a short sturdy trunk crowned with from 16-23 slender, hyaline spinelets often webbed basally; spinelets terminate in from one to three sharp prongs; near arm tips paxillae seldom bear more than 12 spinelets. Paxillae show no regular arrangement on disc centre, along edges of disc and arms (especially near arm tips) they form more or less regular longitudinal rows.

Papulae (Fig. 1a) 2-4, conspicuous, present in membranous interspaces between abactinal plates on disc and basally on arms, distally papulae single and near arm tip they may be absent altogether.

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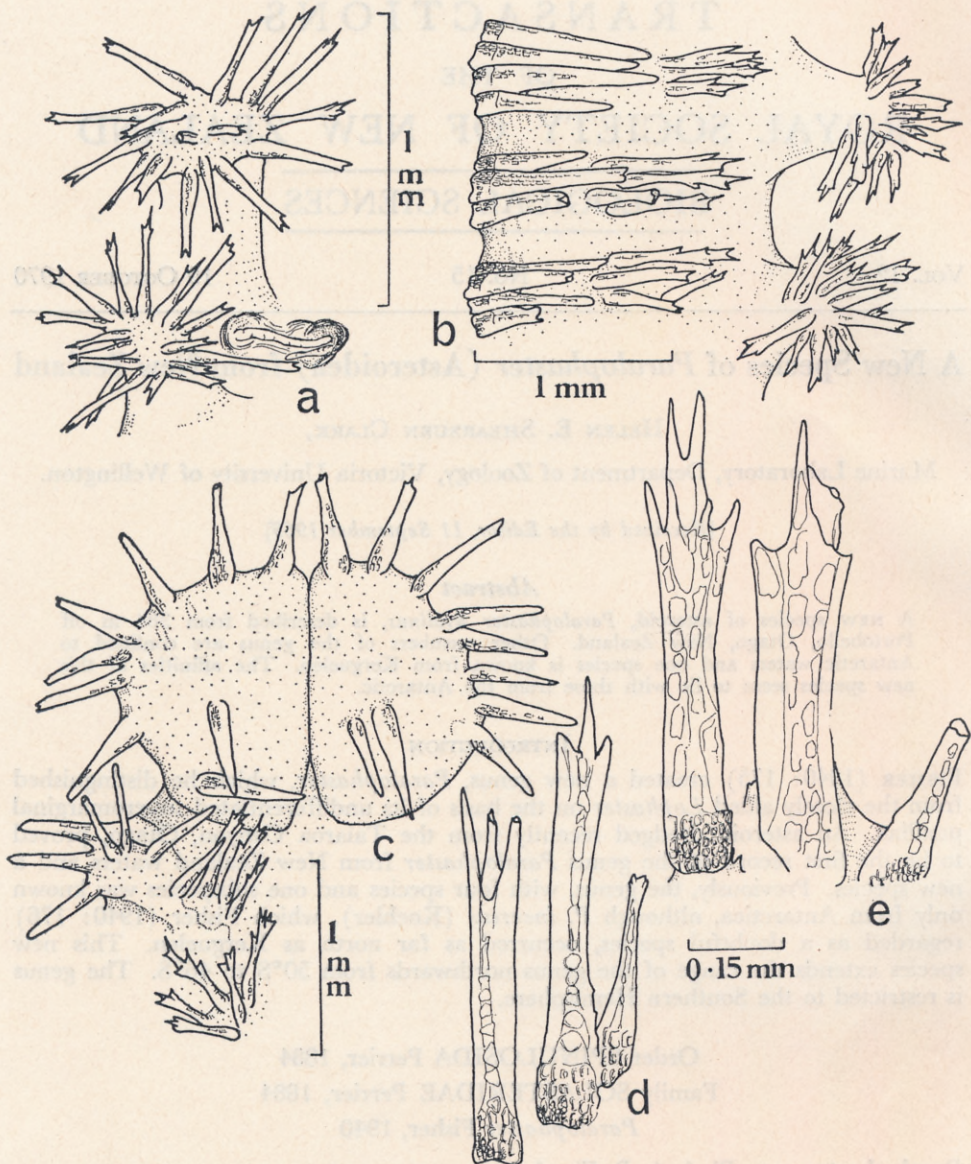
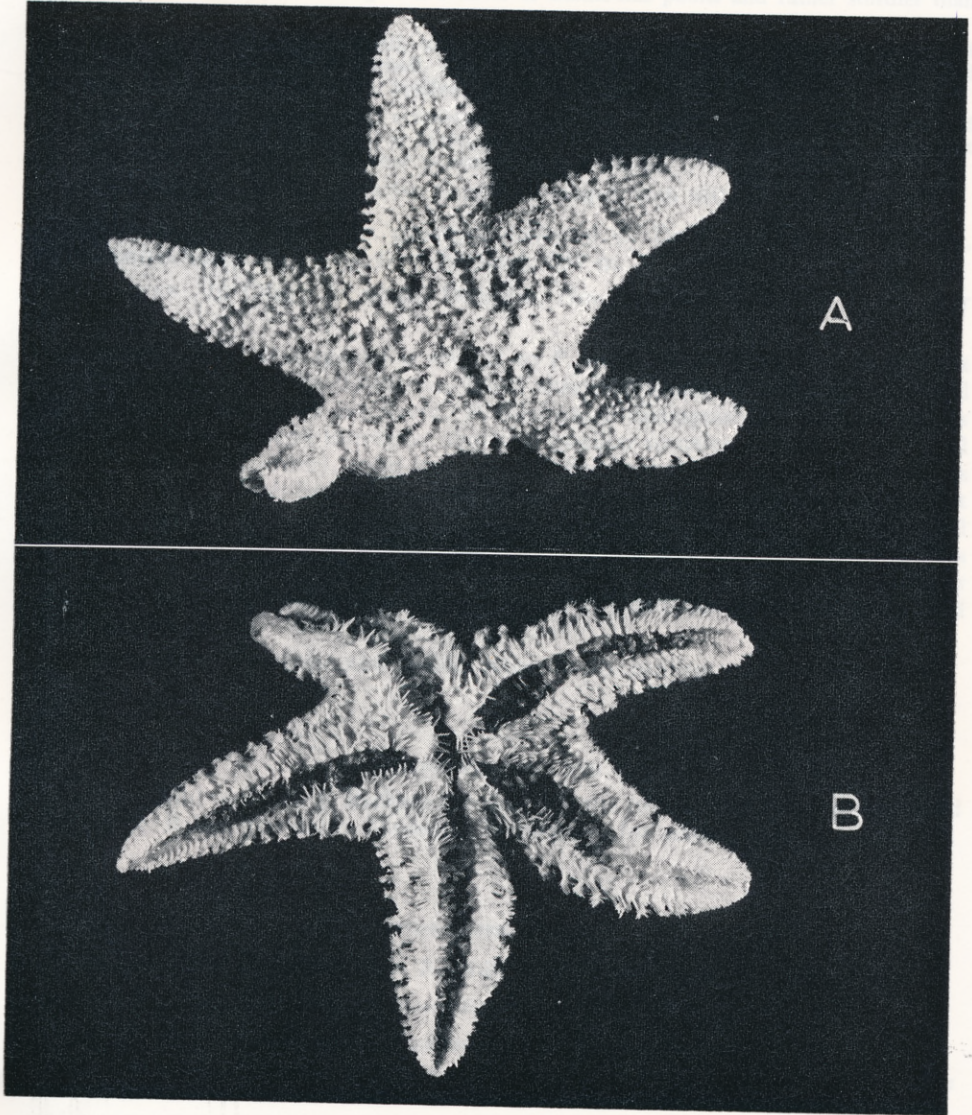


FIG. 1.—*Paralophaster hyalinus* sp.n. a: abactinal paxillae and 2 papulae; b: part of actinal surface showing adambulacral furrow spines, subambulacral spines, and inferomarginal paxillae; c: oral adambulacral and actinal plates; d: spines from abactinal paxilla near arm base; e: spines from inferomarginal paxilla.

Madreporite very small, tumid, circular, nearer centre than edge of disc, finely and deeply dissected; surrounding paxillae only slightly enlarged.

Anus almost central on disc, slightly raised, surrounded by a number of short, thorny spinelets.

Marginal plates form definite edge to disc and arms, from 16–18 present between interradial angle and arm tip. Inferomarginals (Fig. 1b) consist of a distinct trunk terminating in an oval head which bears from 13–24 short, thorny hyaline spinelets. Supermarginals smaller than inferomarginals but a little longer than neighbouring abactinal paxillae, especially



Paralophaster hyalinus sp.n. A, abactinal and B, actinal surfaces of holotype.

—Photo: J. T. Darby.

proximally, each paxilla consists of an expanded trunk or stem which bears from 15–20 slender hyaline spinelets similar to those of the inferomarginals.

Adambulacral plates (Fig. 1b) distinct with fringe of four (sometimes three, especially distally) slender, rather flattened, hyaline basally-webbed spinelets. Subambulacral spines four, forming compact group, either at right angles to furrow spines or forming an oblique series. Spines webbed basally, terminating in a number of needle-like points and rather sturdier than those of furrow margin.

Actinal intermediate areas small, actinal plates seldom extending beyond proximal half of arm. Actinal plates (Fig. 1c) small, oval, isolated, irregularly arranged, skin covered and bearing group of four or five short, hyaline, thorny-tipped spines.

Oral plates (Fig. 1c) broad, conspicuous, with 6–8 slender, tapering, basally-webbed marginal spines; suboral spines two or three, similar to furrow spines, one generally somewhat shorter, these form distinct group near posterior edge of plate.

Ambulacral grooves wide, tube feet biserially arranged, each with distinct sucking disc.

MATERIAL EXAMINED: One specimen collected by Dr E. J. Batham, 24/6/69, from Taiaroa Canyon, Otago, New Zealand, 384 m.

HOLOTYPE: In Otago Museum, Dunedin, New Zealand (A69.45). Size: R/r = 23/9mm.

REMARKS: This new species is similar to *P. antarcticus* (Koehler) from West Antarctica, but it lacks the distinctive, lobed abactinal spinelets, and both abactinal paxillar and suboral spines are fewer. *P. hyalinus* is distinguished from *P. incertus* (Koehler) in having more numerous abactinal paxillar spinelets and fewer marginal plates. *P. lorioli* (Koehler), from the Weddell Sea and South Shetland Islands, is distinct in having comb-like spines with points along one side only; in the present specimen they are present on both sides. In *P. godfroyi godfroyi*, abactinal and marginal spines terminate in a single point, and this is also true for most spinelets in *P. godfroyi asperatus*; other distinguishing features of *P. godfroyi asperatus* include the relatively few paxillar spines (about 12) and the more numerous oral furrow spines.

The specific name of the new species refers to the hyaline nature of the spines.

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