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A New Hexacoral Species from the Upper Jurassic to Lower Cretaceous Yura Group at Cailloma, Arequipa Department, Southern Peru

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A New Hexacoral Species from the Upper Jurassic to Lower Cretaceous Yura Group at Cailloma, Arequipa Department, Southern Peru*

by

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Abstract

Recently, an interesting hexacoral specimen was collected by Ing. David DÁVILA from limestone in the Upper Jurassic to Lower Cretaceous Yura Group** outcropping at 22 km west of Cailloma, Arequipa Department, Southern Peru. The present work is based on this specimen, and a new hexacoral species, *Actinastrea caillomensis* is described.

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* This study is a result of the cooperative works of Chiba University Palaeontological Party on the Andes and the Geological Survey of Peru (Instituto de Geologia, Mineria y Metalurgia, Ministerio de Energia y Minas, INGEMMET).

** The Yura Group has been studied by many investigators; JENKS (1946, 1956), BENAVIDES (1962), WILSON & GARCIA (1962), GARCIA (1968), GUEVARA (1968), PECHO & MORALES (1968), GUIZADO (1968), BELLIDO (1969), VARGAS (1970), PERALES (1970) and MORALES (1977).

Systematic Description

by YAMAGIWA

Order Scleractinia BOURNE, 1900
Suborder Astrocoeniina VAUGHAN & WELLS, 1943
Family Astrocoeniidae KOBY, 1890
Subfamily Astrocoeniinae KOBY, 1890
Genus *Actinastrea* ORB., 1849
Actinastrea caillomensis n. sp.

Pl. 1, Figures 1a-c

Corallum massive and cerioid. Corallites subprismatic in shape, usually five or six sided; mostly 2.3 to 2.5 mm in inside diameter in mature stage. Corallite wall relatively thick. Its thickness 0.3 to 0.7 mm. Central distance 2.5 to 3.5 mm. Septa straight and thick. Their lateral surface commonly smooth. They are 24 in number in mature stage, arranged in three cycles. Those of the first two cycles long and usually contact with a columella. Those of the third cycle very short and free to the first two cycles'. Columella styliform and usually thickened by secondary deposits.

In longitudinal section, tabular-like endothecal dissepiments 7 per 2 mm in average.

Inside diameter of corallites	Number of long septa
2.3 to 2.5 mm	12
2.0 to 2.1 mm	11
1.6 to 1.7 mm	10

Remarks: The present form much resembles *Actinastrea kellumi* (WELLS, 1946, p. 2, pl. 1, fig. 1) from the Upper Jurassic La Casita Formation, Northern Mexico in having subprismatic corallites of almost same size, 24 septa arranged in three cycles, thick and long septa of the first two cycles, very short septa of the third cycle, thick corallite wall. However, the former's septa are commonly

smooth on their lateral surface, and the latter's ones have strongly spines on their lateral surface. It is similar to a specimen described by WELLS (1953, p. 3, fig. 1) as *Astrocoenia* cf. *lissoni* from the Lower Jurassic Chocolate Formation in Southern Peru in many respects. However, the former's septa of the third cycle are free and not contact with those of the second, and the latter's partly contact with those of the second. Besides, the former has thinner corallite wall and somewhat longer inside diameter. It is also related to *Actinastrea* sp. aff. *A. globosa* described by FELIX (1891, p. 156) from the Neocomian in Mexico. According to him, the latter's septa of the second cycle are somewhat shorter than those of the first. *Actinastrea budaensis* (WELLS, 1933, p. 160, pl. 6, fig. 3) from the Cenomanian Buda Limestone in Texas is also allied to the present form. However, the former's septa of the third cycle poorly developed and sometimes absent. Moreover, the former's septa of the third ones oft fuse by their inner ends to the septa of the second. It can be distinguishable from *Actinastrea lissoni* (TILMAN, 1917, p. 701, pl. 26, figs. 4a-b) from the Lias in Peru and *A. hexamera* (FRITZE, 1924, p. 318, pl. 3, fig. 7) from the Neocomian in Chile in having larger corallites.

Occurrence: It occurs from limestone in the Upper Jurassic to Lower Cretaceous Yura Group at 22 km west of Cailloma, Arequipa Department, Southern Peru.

Collector: David DÁVILA.

Repository: Reg. no. OKES810101 (holotype) (Department of Earth Science, Osaka Kyoiku University).

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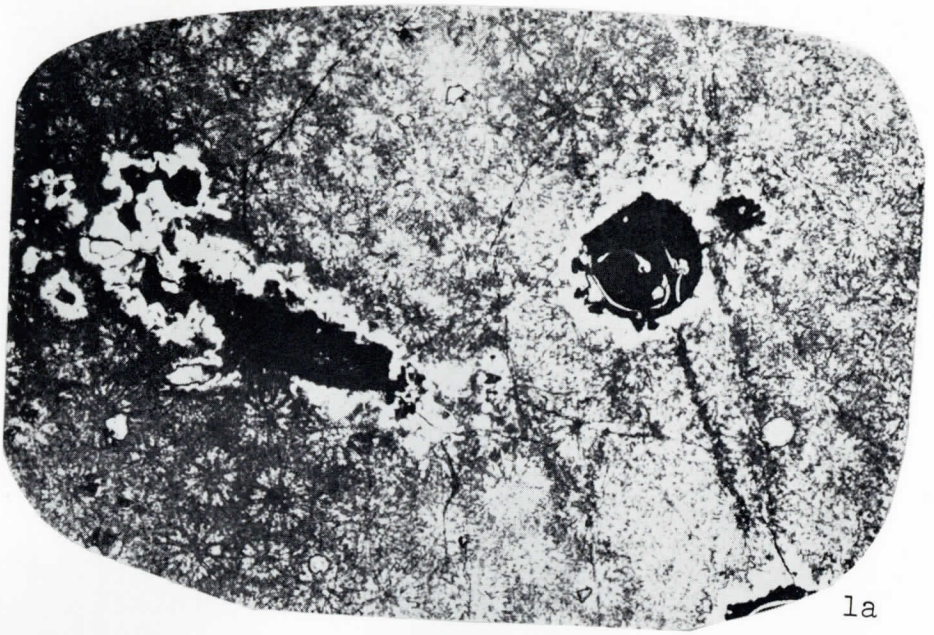
Explanation of Plate 1

Figs. 1a–c. *Actinastrea caillomensis* n. sp.

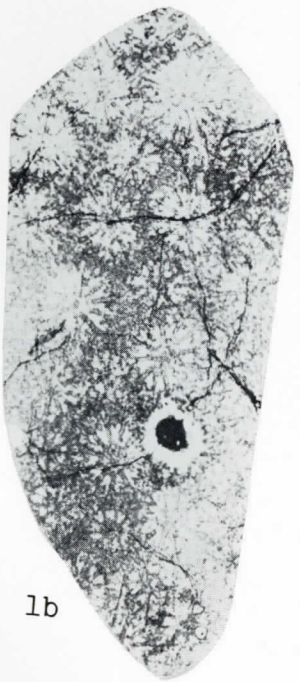
1a. Transverse section .....× 4.0 (OKES 810101a)

1b. Transverse section .....× 4.0 (OKES 810101b)

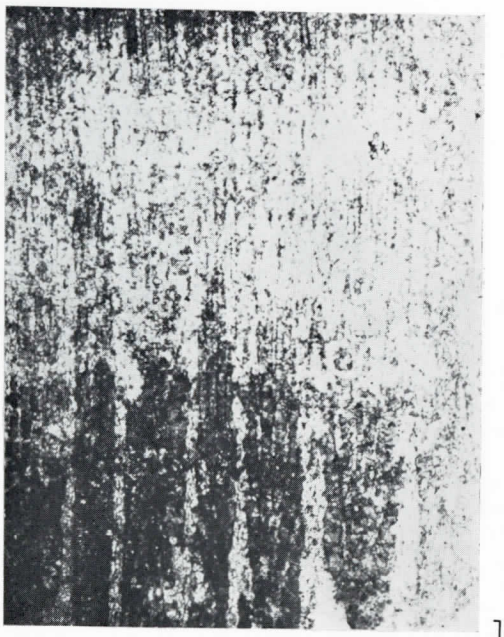
1c. Longitudinal section .....× 4.0 (OKES 810101c)



1a



1b



1c