

Locality.—Station 235, June 4, 1875; lat. 34° 7' N., long. 138° 0' E.; 565 fathoms; green mud; bottom temperature, 38°·1 F. Three much mutilated specimens.

Remarks.—It is with some hesitation that I have separated this species from the preceding one. It is altogether larger and more massive than *Eudiocrinus semperi*, with a larger and more distinctly conical centro-dorsal and more numerous cirri. The first brachials have larger muscle-plates for articulation with the radials, and are more trapezoidal in outline; and as the second brachials are relatively longer than those of *Eudiocrinus semperi*, and at the same time more trapezoidal in form, the base of each arm is considerably constricted at the junction of its first two joints (Pl. VII. fig. 1).

The general proportions of the remaining arm-joints and of the pinnules appear to be much the same in the two types, excepting that in the smaller *Eudiocrinus semperi* the joints of the lower pinnules are rather longer relatively to their width than in *Eudiocrinus japonicus*. Of the twelve arms which are preserved in three individuals of the latter species, only one has the first pinnule on the left side; while in *Eudiocrinus semperi* this appears to be normally the case in the two antero-lateral rays.

There are some specimens of *Eudiocrinus* in the University Museum at Berlin, which were kindly shown to me by Dr. Hilgendorf, who had collected them in Japan. I think that they are probably identical with the type just described. They have rather fewer cirrus-joints, and the junctions of the first eight brachials are distinctly tubercular. The tubercle between the first two is in the middle line, and those between the following joints lie alternately on either side of the arm. The three Challenger examples, however, show no traces of these tubercles, with the exception of the median one, which is far less marked than in the Berlin specimens.

Genus 4. *Antedon*, de Fréminville, 1811.

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 1733. *Caput Medusæ*, Linck, *Ibid.*, p. 57.
 1758. *Asterias*, Linnæus (*pars*), Systema Naturæ, 10th ed., Holmiæ, 1758, t. ii. p. 663.
 1777. *Asterias*, Pennant (*pars*), British Zoology, 2nd ed., London, 1777, vol. iv. p. 55.
 1783. *Asterias*, Retzius (*pars*), K. Svensk. Vetensk. Akad. Handl., År 1783, t. iv. p. 241.
 1805. *Asterias*, Retzius (*pars*), Dissertatio, sistens Species Cognitas Asteriarum, Lundæ, 1805, pp. 33–35.
 1811. *Antedon*, de Fréminville, Bull. Soc. Philom. Paris, 1811, t. ii. p. 349.
 1813. *Asteriatites*, von Schlotheim (*pars*), Taschenbuch für die Gesammte Mineralogie, 1813, Jahrg. vii. Abth. 1. p. 68.
 1815. *Alecto*, Leach, Zool. Miscellany, London, 1815, vol. ii. p. 61.
 1816. *Comatula*, Lamarck (*pars*), Histoire Naturelle des Animaux sans Vertèbres, Paris, 1816, t. ii. p. 530.
 1820. *Ophiurites*, von Schlotheim (*pars*), Die Petrefactenkunde, Gotha, 1820, p. 326.
 1821. *Comatula*, Miller, A Natural History of the Crinoidea, Bristol, 1821, p. 128.
 1823. *Comatulithes*, von Schlotheim, Nachträge zur Petrefactenkunde, Gotha, 1823, Abth. ii. p. 47.
 1825. *Alecto*, Say, Journ. Acad. Nat. Sci. Philad., 1825, vol. v. p. 153.
 1827. *Pentacrinus*, Thompson, Memoir on the Pentacrinus Europæus, Cork, 1827, p. 10.