of the former species). The three free abdominal segments are only separated from each other by a suture laterally; dorsally they are completely fused. Each bears a row of spines dorsally, which spread out laterally to occupy the whole of the segment. The first abdominal segment has a pair of short spines on either side of the ventral median line but in front of the anterior extremity of the uropoda; these are directed downwards and are approximately parallel to each other.

The caudal shield is covered with numerous longitudinal rows of spines and pointed tubercles which are directed backwards; on either side of the posterior extremity, and just above the lateral margin, is a long curved spine similar to those found in so many other species. The posterior extremity of the caudal shield is straight, and not bent upwards and pinched in as in *Arcturus spinosus* and *Arcturus furcatus;* the dorsal median line is devoid of spines and bears a longitudinal groove.

The thoracic appendages (figs. 3, 4) are furnished with numerous spines on the posterior of the joints, which decrease in number towards the distal extremity of the limb. The uropoda are also beset with a number of sharp pointed tubercles.

Station 153, Southern Ocean, February 14, 1874; lat. 65° 42′ S., long. 79° 49′ E.; depth, 1675 fathoms; blue mud.

Arcturus spinosus, F. E. Beddard (Pl. XX. figs. 1–11).

Arcturus spinosus, F. E. Beddard, Proc. Zool. Soc. Lond., 1886, pt. i. p. 110.

Eleven examples of this fine species were dredged in deep water (1375 fathoms), to the west of Kerguelen Island, eight females and three males.

It is very noticeable on account of the great development of spines over the surface of the body, a character which is met with in several other deep-sea species, as well as in certain of the Kerguelen shallow-water *Arcturi*, *e.g.*, *Arcturus furcatus* (*vide* p. 85).

Besides the possession of ovigerous lamellæ by the female and of a penial filament by the male, the two sexes are distinguishable by a number of other small but constant differences.

In the female the anterior portion of the thorax is considerably wider than it is in the male; a difference which is of course correlated with the presence of ovigerous lamellæ in the former sex. The two sexes also differ very considerably in the development of spines upon the body, the females being invariably much more spiny than the males. These distinctions, which are especially marked in the abdominal region of the body, will be considered in detail in the following description of the species.

Length of the largest specimen 48 mm., length of antennæ 60 mm.

The anterior margin of the head is excavated; on either side of the median dorsal line, between and a little in front of the eyes, are a pair of long spines inclined upwards and slightly outwards; behind them, and corresponding to them in position, are a pair