The abactinal surface is beset with small narrow plates which are arranged in longitudinal and transverse lines, forming an open network with regular square meshes. In some places there appear to be indications of cruciform plates at the intercrossing parts, but I am unable to say whether such plates really occur, or the resemblance is only superficial and due to partial anastomosis of the plates at the crossing. Small, isolated, microscopic spinelets with denticulate tips are borne on the abactinal plates, usually one at each decussation, and sometimes one midway on the transverse trabeculæ. The meshes are covered with membrane, which is crowded with rather large, uniform, forcipiform pedicellariæ. These are so numerous that they mask altogether the papulæ and give a general semicrystalline granular appearance to the surface, when examined with a magnifying-glass of low power.

The marginal plates do not appear to be in any way differentiated; and the uniform crowding of pedicellariæ extends up to the adambulacral plates.

The adambulacral plates are very small, and their armature consists of two rather elongate subequal spinelets, placed one behind the other and slightly obliquely. They are covered with membrane, which on the spines near the mouth forms a more or less saccular sheath.

On the inner half of the ray, at the base of the innermost spine, on the margin of the ambulacral furrow, there may be seen here and there a very small pedicellaria, which I believe to be forficiform in type. It is, however, much smaller than the forcipiform pedicellariæ, which are so numerous on the test generally, and appears to be more or less aborted in character.

The madreporiform body, which is very small and difficult to distinguish, is situated near the margin of the disk, and its surface is marked with only two or three simple furrows. The ambulacral tube-feet are arranged in simple biserial series.

Colour in alcohol, a dirty ashy grey.

Locality.—Station 145. Off Marion Island. December 27, 1873. Lat. 46° 43′ 0″ S., long. 38° 4′ 30″ E. Depth 140 fathoms. Volcanic sand. Surface temperature 41°·0 Fahr.

Remarks.—This is a true *Pedicellaster*, and differs in no way from the structural characters of *Pedicellaster typicus*. The presence of forficiform pedicellariæ is, however, an anomaly in the genus, which has been considered to possess only one kind—the forcipiform. The representatives of the forficiform pedicellariæ in *Pedicellaster hypernotius* are so small and have such an aborted character that I do not consider their presence sufficient to justify the removal of the form under description from the genus. In my opinion, they give additional interest to this species as representing either rudiments of organs more typically developed in an ancestral form, or incipient stages towards the higher development of this form of pedicellaria as found in other allied Asterids.

Pedicellaster hypernotius is more nearly related to *Pedicellaster typicus* and *Pedicel-*