

placed very obliquely on the rachis, so that its dorsal portion, which reaches the middle line of the rachis, runs in a longitudinal direction. The ventral margin of the pinnule is concave, thickened, and beset with irregular wart-like protuberances; whilst the dorsal convex border bears the closely set polyp-cells, thirty to thirty-four in number, which alternate in such a manner as to give the appearance of two rows. Besides the more fully-developed cells, each pinnule has at the dorsal end of its polypiferous margin from three to five smaller or rudimentary cells, which are not to be confounded with the zooids. The polyp-cells are in part well separated, and together with the eight strong spines at their opening, 3 to 4 mm. long; in part shorter, more or less confluent; and some are as if imbedded in the pinnules, and only free at their openings.

The rachis is nowhere free on the dorsal side of the feather, but on the ventral aspect its middle line is not covered by the zooids. These are ventral and lateral. The ventral zooids form thick prominent yellow spiny bands, which begin at the ventral margin of the pinnule at a little distance from its attachment, run obliquely upon the sides of the rachis, and end with a longitudinal streak, the point of which reaches the next band of zooids, so that all the ventral zooids together form one continuous line on each side, giving offsets to each leaf. The zooids themselves are crowded on each band, larger and smaller, and largest in the neighbourhood of the pinnule. The lateral zooids fill the intervals between the leaves, are numerous toward the ventral side of the rachis, where they reach the ventral zooids, and run out with a single row at the outside of the dorsal attachment of the pinnule; they are all much smaller than the ventral zooids, but they are also armed with projecting spines.

The stalk is thickened at the upper end, and seems to terminate inferiorly in a rounded point. The colour of the whole polypidom is generally red, and darker on the stalk, with the exception of its lower end which is pale red, becoming colourless towards the tip. The feather is pale red, with the exception of the polyp-cells and ventral zooids, which are yellow. The axes of the polyps and their stomach-walls are also red. All coloured parts owe their colour to calcareous needles of characteristic form. Uncoloured calcareous bodies are found at the lower end of the stalk.

Maximum length of the yellow needles of the polyp cells,	.	.	1 mm.
Breadth,	.	.	0.058
Maximum length of the red spicules of the pinnules,	.	.	0.85 to 0.90
Width,	.	.	0.021 ,, 0.027
Uncoloured bodies of the end of the stalk, round or elliptical,	.	.	0.004 ,, 0.015
Length of the whole polypidom,	.	.	300
Length of the stalk,	.	.	84
Breadth of the feather,	.	.	43
Breadth of the stalk,	.	.	8
Breadth of the enlargement of the stalk,	.	.	10.5
Breadth of the base of the pinnules,	.	.	17-19