

*Echinodictyum rugosum*, Ridley and Dendy (Pl. XXXII. figs. 1, 1a).

1886. *Echinodictyum rugosum*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 477.

Sponge (Pl. XXXII. fig. 1) stipitate, palmato-digitate, consisting of a short cylindrical stem about 19 mm. long, surmounted by a broad, flattened expansion which terminates in a series of flattened, digitate processes. Total height of specimen 187 mm., greatest breadth 131 mm.; thickness only about 4 mm. (the stalk is a little thicker). *Colour* in spirit greyish-yellow. *Texture* hard and rather brittle. *Surface* rugose, thickly beset with small, pointed eminences. *Oscula* and *pores* unknown.

*Skeleton*.—A well-developed, compact, but rather irregular reticulation of strong spiculo-fibre; the fibre consisting of a multispicular axis of smooth oxecote spicules, firmly united together, and very abundantly echinated by spined stylote spicules which project from it approximately at right angles.

*Spicules*.—*Megasclera*; of two kinds. (1) Smooth oxea, somewhat hastately pointed and usually bent at an angle in the centre, size about 0.3 by 0.015 mm., in the skeleton fibre. (2) Entirely spined styli (subtylostyli), tapering gradually to a fine but not very sharp point and with the spines most abundant on the base; size about 0.13 by 0.012 mm., abundantly echinating the skeleton fibre.

This species differs from all other described members of its genus in its palmate, slightly branched form; *Echinodictyum nervosum*, Ridley,<sup>1</sup> which also grows in one plane, being ramose from the stem upwards, and *Echinodictyum cancellatum*, Ridley,<sup>2</sup> forming a cancellate growth in a single plane.

*Locality*.—Station 190, September 12, 1874; lat. 8° 56' S., long. 136° 5' E.; southwest of New Guinea; depth, 49 fathoms; bottom, green mud. One specimen.

*Echinodictyum asperum*, Ridley and Dendy (Pl. XXXII. fig. 2).

1886. *Echinodictyum asperum*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 477.

Externally this species (Pl. XXXII. fig. 2) has very much the appearance of a so-called Keratose sponge. It is bushy and of suberect growth, cavernous and covered with large aculeations; most of the specimens are attached to fragments of coarse rock or Coral. Height commonly about 50 mm.; breadth about the same or a little more. *Colour* in spirit rich chocolate brown.<sup>3</sup> *Texture* coarsely fibrous. *Surface* uneven in the extreme, but glabrous where the dermal membrane is intact. *Dermal membrane* thin and transparent, containing an enormous quantity of reddish brown pigment granules disposed in small groups. This pigment is still more abundant in the deeper parts of the sponge.

<sup>1</sup> *Journ. Linn. Soc. Lond.* (Zool.), vol. xv. p. 496, pl. xxviii. figs. 7-10.

<sup>2</sup> *Zool. Coll. H.M.S. "Alert," Brit. Mus.*, 1884, p. 457, pl. xl. fig. D.

<sup>3</sup> Evidently natural, as other sponges attached are not coloured like this.