

The forms known to me as referable to the genus *Cylindræcium* as above defined are :—

(1) *Cylindræcium giganteum*, Busk.

Farrella gigantea, Bk., Quart. Journ. Micr. Sci., vol. iv. p. 93, pl. v. figs. 1, 2; Gosse, Mar. Zool., pt. ii. p. 22, fig. 40.

Avenella gigantea, Hincks, Ann. and Mag. Nat. Hist., ser. 3, vol. ix. p. 473.

Avenella fusca (*forma producta*), Smitt, Kritisk Förteckn., p. 503.

Cylindræcium giganteum, Hincks, Brit. Mar. Polyz., p. 535, pl. lxxvii. figs. 3, 4.

(2) *Cylindræcium dilatatum*, Hincks.

Farrella dilatata, Hincks, Quart. Journ. Micr. Sci., vol. viii. p. 279, pl. xxx. fig. 7.

Avenella dilatata, Hincks, Ann. and Mag. Nat. Hist., ser. 3, vol. ix. p. 473.

Cylindræcium dilatatum (*pars*), Hincks, Brit. Mar. Polyz., p. 536, pl. lxxix. figs. 1–3.

(3) *Cylindræcium fuscum*, Busk.

Farrella fusca, Bk., Quart. Journ. Micr. Sci., vol. iv. p. 94, pl. vi. fig. 3.

Avenella fusca, Alder, North. Cat., p. 69; ? Norman, Shetland Polyz., Rep. Brit. Assoc., 1868, p. 311; Smitt (*forma simplex*), Kritisk Förteckn., p. 503.

Cylindræcium dilatatum (*pars*), Hincks, Brit. Mar. Polyz., p. 537, pl. lxxvii. figs. 1, 2.

(4) *Cylindræcium pusillum*, Hincks.

Cylindræcium pusillum, Hincks, *loc. cit.*, p. 537, pl. lxxx. fig. 8.

(5) *Cylindræcium pusillum*, var. “*dwarf*,” Hincks.

Cylindræcium pusillum, var. “*dwarf*,” Hincks, *loc. cit.*, p. 538, pl. lxxx. fig. 9.

(6) *Cylindræcium papuense*, n. sp.

The respective dimensions of the zoëcia in these species, so far as they can be made out (mostly from Mr. Hincks's careful figures), are as follows, given in millimetres:—

	Length.	Breadth.
1. <i>Cylindræcium giganteum</i> ,	3·5 ×	0·20–0·25
2. <i>Cylindræcium dilatatum</i> ,	0·9 ×	0·13
3. <i>Cylindræcium fuscum</i> ,	1·7 ×	0·2–0·3
4. <i>Cylindræcium pusillum</i> ,	1·3 ×	0·10–0·13
5. <i>Cylindræcium pusillum</i> , var.,	0·7 ×	0·1
6. <i>Cylindræcium papuense</i> ,	1·3 ×	0·10–11

From these dimensions it would seem that the form most nearly approaching that in the Challenger collection is the one named *Cylindræcium pusillum* by Mr. Hincks; from this, however, it differs in the uniform diameter of the zoëcia, which in the latter become wider or subventricose below.

I may take this opportunity of remarking that the form named *Farrella fusca* by me, from specimens collected at Newhaven, Firth of Forth, by Mr. W. Thompson in 1849, and which is considered by Mr. Hincks synonymous with his *Cylindræcium dilatatum*,