

On these grounds there does not appear to be any sufficient reason to regard *Kinetoskias smittii* and *Kinetoskias cyathus* as specifically the same.

(2) *Kinetoskias pocillum*, Busk (Pl. VIII. fig. 2).

Kinetoskias pocillum, Bk., Quart. Journ. Micr. Soc., vol. xxi., N. S., p. 7, pl. i. figs. 2, 5, 1881.

Character.—Zoarium like that of *Kinetoskias cyathus*, but much smaller. Zoœcia rather contracted at the bottom, rounded above, and without any angular process. Avicularium (fig. 2*d*) affixed to the outer border about the middle. Posteriorly convex (fig. 2*b*), quite smooth, outline irregularly oblong, the outer border being sharp and the inner rounded and gibbous. Oœcia smaller than in *Kinetoskias cyathus*, cucullate, the opening looking obliquely outwards and downwards. Avicularia larger and proportionately wider than in *Kinetoskias cyathus*.

Habitat.—Station 122, lat. 9° 5' to 10' S., long. 34° 49' to 53' W., 32 to 400 fathoms. Station 299, lat. 33° 31' S., long. 74° 43' W., 2160 fathoms; blue mud.

As compared with the second species,—*Kinetoskias arborescens*,—described by Koren and Danielsen,¹ pretty nearly the same amount of difference exists between that form and *Kinetoskias pocillum*, as between *Kinetoskias smittii* and *Kinetoskias cyathus*. At the same time there are one or two points which induce some hesitation in positively asserting that the second Challenger form and *Kinetoskias arborescens* are not the same. The chief points of difference would appear to be:—1st, The position of the avicularium, which in *Kinetoskias arborescens* is placed at the upper and outer angle, whilst in *Kinetoskias pocillum* it is invariably seated at the middle (or a little below it) of the outer border. 2nd, In *Kinetoskias arborescens* the dorsal surface is strongly striated transversely, the ridges being elevated and oblique from below upwards and inwards, &c., whilst in *Kinetoskias pocillum* the dorsal surface is perfectly even and polished.

With respect to the *Bugula umbella* of Prof. Smitt, as from his admirable description and excellent figures there can, I think, be no doubt that it is the same as *Kinetoskias arborescens*, Koren and Danielsen, what has been said with regard to a comparison between that form and either of those in the Challenger collection, will equally apply to Prof. Smitt's. His specimen, however, seems to have been imperfect, as it has no peduncle, and appears to be turned inside out, and at all events is represented as it would seem the wrong way up in the figure.²

Prof. Smitt's description of the mode of commencement of the zoœcial portion³ corresponds exactly with what I have been able to make out in *Kinetoskias cyathus*, as does also his admirable account of the mode of formation, and true nature of the web-like expansion connecting the zoœcial branches at the bottom of the cup.

¹ *Loc. cit.*, pl. xii. figs. 9–14, and *Förhandl. Vidensk. Selsk.*, Christiania, 1867, p. 27.

² *Loc. cit.*, pl. xix. fig. 30.

³ *Ibid.*, fig. 31.