

Structure of Sarcodic Bodies of *Orbitolites duplex* (figs. 1–10), and *Orbitolites complanata* (figs. 11–18).

Orbitolites duplex.

Fig. 1.—Decalcified body, showing the concentric arrangement of its columnar sub-segments. Magnified 25 diameters.

Fig. 2.—One of its separate annuli, showing at a, a' and b', b' the upper and lower series of columnar sub-segments, with expanded summits, issuing from the annular sarcodic cords c, c' ; from which also issue the two rows of stolon-processes d, d' that go to form the succeeding annulus. Magnified 60 diameters.

Fig. 3.—Two of the columnar sub-segments more enlarged, to show the corpusculated character of the sarcodic substance. Magnified 150 diameters.

Fig. 4.—Thick-walled (parasitic?) cells, a, b, c , of a deep red colour, lying irregularly in the sarcodic substance of certain specimens. Magnified 200 diameters.

Fig. 5.—Small sub-segments of central portion, surrounded by chitinous (?) wall. Magnified 150 diameters.

Fig. 6.—Sarcodic body of “nucleus,” showing at a the primordial segment, which gives off the large circumambient segment b, b' , a partly-separated portion of which, c , gives off the first incomplete zone of sub-segments. Magnified 120 diameters.

Fig. 7.—Section of sarcodic body close to the median plane, showing the sarcodic annuli c, c' , giving off obliquely the narrow bases of the columnar sub-segments. Magnified 50 diameters.

Fig. 8.—Lateral view of two sarcodic annuli cc' , with their columnar sub-segments. Magnified 64 diameters.

Fig. 9.—Section of sarcodic body above the median plane, showing an increased diameter of the columnar sub-segments as compared with their narrow bases shown in fig. 7. Magnified 50 diameters.

Fig. 10.—Surface view of expanded summits of columnar sub-segments. Magnified 50 diameters.

Orbitolites complanata.

Fig. 11.—Decalcified body of sub-typical specimen, the inner part of which is formed on the “duplex” plan, as shown by the surface-aspect of its sub-segments, while the outer shows the aspect characteristic of the “complex” type. Magnified 25 diameters.

Fig. 12.—Surface-aspect of sarcodic sub-segments of inner part of sarcodic body, enlarged to 40 diameters, showing its exact correspondence to that of fig. 1.

Fig. 13.—Surface-aspect of sarcodic sub-segments of outer part of sarcodic body, occupying the chamberlets of the superficial planes. Magnified 50 diameters.

Fig. 14.—Portion of sarcodic body of “complex” type seen in vertical section:— a, b , annular cords of upper series; b' , an annular cord of lower series; c, c' , sub-segments of upper and lower planes, each connected with two annular canals; d, d' , columnar sub-segments of interposed stratum, communicating with those of next annulus, e , by oblique alternating stolon-processes. Magnified 150 diameters.

Figs. 15 and 17.—Parasitic (?) cells lying irregularly in sarcodic substance. Magnified 130 diameters.

Fig. 16.—Sarcodic substance of annulus and superficial sub-segments, containing spherical corpuscles, closely aggregated together in some parts, separate in others. Magnified 180 diameters.

Fig. 18.—“Nucleus” of typical form, showing at a the primordial segment, which gives off the large circumambient segment b, b' with its partly detached portion c , round the entire margin of which are given off stolon-processes that give immediate origin to a complete annulus of sub-segments. Magnified 84 diameters.