

heads of five-rayed spicules. One ray of each spicule dips directly into the body of the sponge, and the other four, which are at right angles to it, form a cross on the surface, giving it a beautiful stellate appearance. The silicious rays of one star curve towards and meet the rays of the neighbouring stars, and run parallel with them. All the rays of all the spicules are thickly invested with consistent semi-transparent gelatinous matter, which binds their concurrent branches together by an elastic union, and fills up the angles of the meshes with softly curved viscous masses. This arrangement of the spicules, free and yet adhering together by long elastic connections, produces a strong, flexible, and very extensible tissue. The cylindrical oscular cavity within the sponge is lined with nearly the same kind of network.

When the sponge is living, the interstices of the silicious network are filled up both outside and in with a delicate fenestrated membrane formed of a glairy substance like white of egg, which is constantly moving, extending or contracting the fenestræ, and gliding over the surface of the spicules. This 'sarcode,' which is the living flesh of the sponge, contains distributed through it an infinite number of very minute spicules, presenting the most singular and elegant forms very characteristic of each species of sponge. A constant current of water carried along by the action of cilia passes in by apertures in the outer wall, courses through the passages in the loose texture of the intermediate sponge-substance carrying organic matter in solution and particles of nourishment into all its interstices,