

circular, smooth-margined opening to the deep saccular gastral cavity. A group of diact and pentact pleuralia, whose tangential rays form a kind of veil, project radially from each of a number of small, regularly disposed, rounded elevations of the surface. In the neighbourhood of the simple unarmed oscular wall a number of strong isolated diacts project upwards. Between the dermal layer and the sieve-like gastral layer which stands above it the soft parts form a deeply folded plate with alternating inhalent and exhalent radial funnel-shaped canals.

The parenchyma contains oxyhexasters with very short main rays and various discohexasters. The spicules of the dermal membrane are almost exclusively pentacts.

1. *Rossella antarctica*, Carter (Pl. LV.).

Of the two species of *Rossella* hitherto known, viz., *Rossella antarctica*, Carter, and *Rossella velata*, Wyville Thomson, the former is represented in the Challenger collection by numerous specimens, which vary considerably in size, and were collected at four different stations.

Several specimens, from 2 to 4 cm. in height, growing on small fragments of bivalve shells and similar objects, were dredged to the south-east of Prince Edward Island (Station 145, lat. $46^{\circ} 43' 0''$ S., long. $38^{\circ} 4' 30''$ E.), from a depth of 140 fathoms, and volcanic sand ground. Numerous specimens of very various dimensions, up to 30 cm. in length and 15 cm. in breadth, were dredged to the south of the Kerguelen Islands (Station 150, lat. $52^{\circ} 4'$ S., long. $71^{\circ} 22'$ E.), from a depth of 150 fathoms, and a coarse gravel ground. Other forms of almost equal dimensions were obtained in Christmas Harbour, Kerguelen, at various depths, from volcanic mud ground. All these more or less well-preserved spirit specimens were attached at their base to stones, either directly or by means of small processes. Finally, several specimens, attaining a length of 20 cm., were trawled to the east of Buenos Ayres (Station 320, lat. $37^{\circ} 17'$ S., long. $53^{\circ} 52'$ W.), from a depth of 600 fathoms, and a green sand ground. These also were attached, either directly or by means of small processes and prolongations, to stones or other solid bodies.

The general form of this sponge may be described as barrel- or keg-like, or else as resembling an elongated pear. The lower, sometimes somewhat narrowed, solid end is either attached over its entire breadth to some large solid body, or is fastened by short lateral processes of irregular form to various smaller objects. I have never found the peculiar loose root-tuft which Carter represents in his diagrammatic figure;¹ but I have noticed such a structure on one of the two original specimens preserved in the British Museum, and it is quite possible that this modification, as

¹ *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xv. pl. x. fig. 4.