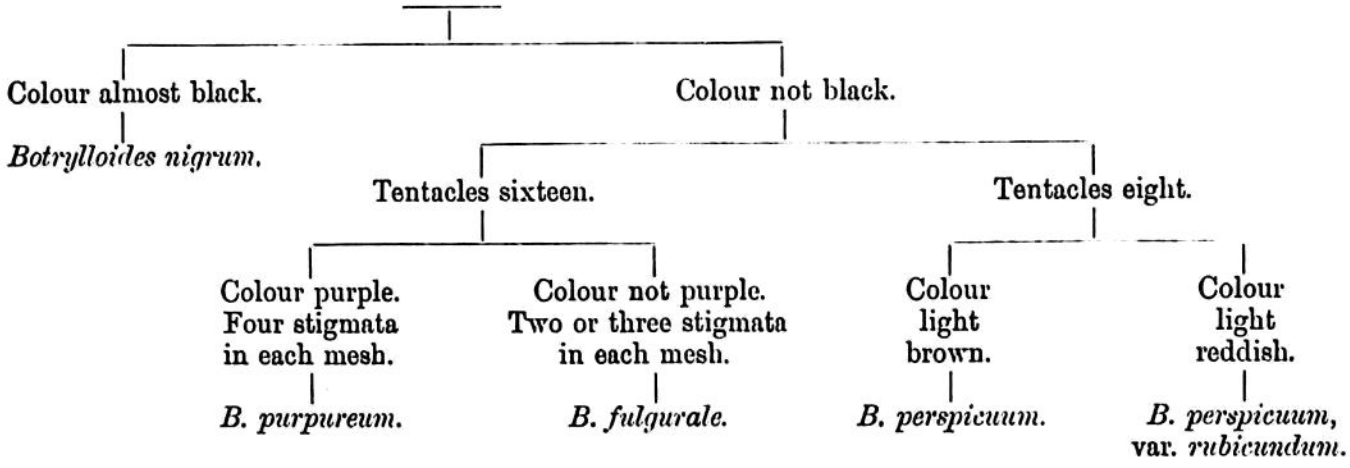
they are all new to science. One of the species was obtained during the "Lightning" expedition of 1868, the others are all Challenger specimens. The following scheme gives, in brief, the distinguishing characters of these new forms.



The specimen which is described under the name of *Botrylloides fulgurale* was obtained during the "Lightning" expedition of 1868, from a depth of 530 fathoms. This is probably the greatest depth at which a *Botrylloides* has been found.

Botrylloides purpureum, n. sp. (Pl. I. figs. 1, 2, and 3; and Pl. II. figs. 1–11).

The Colony is irregular in shape, large and spreading, and of moderate thickness. The surface is rather uneven, but smooth. The colour is a dark purple. A lighter area is found around the anterior ends of the Ascidiozooids and at the edges of the colony, which in some places become colourless and transparent. The common cloacal apertures are fairly numerous and conspicuous.

The length of the colony is about 7·5 cm., the breadth about 6 cm., and the average thickness about 2 mm.

The Ascidiozooids are elongated antero-posteriorly, being about 2 mm. in length and rather less than 1 mm. in greatest breadth. The anterior end, which is visible on the surface of the colony as a circular rather light coloured area, is about 1 mm. in diameter.

The Test is soft but firm. In no part does it become thick. On its thin expanded edges, at the margins of the colony, it is transparent and colourless or of a pale grey hue, elsewhere it is light purple. The terminal knobs of the vessels are not very conspicuous. They are of moderate size and of a dark purple colour. In sections the test is seen to be formed of a homogeneous matrix in which numerous minute rounded and fusiform cells are scattered. It is penetrated in all directions by numerous ramifying and anastomosing vessels with swollen terminations.