Cladorhiza inversa, Ridley and Dendy (Pl. XX. fig. 8; Pl. XXI. fig. 13).

1886. *Cladorrhiza inversa*, Ridley and Dendy, Ann. and Mag. Nat. Hist., ser. 5, vol. xviii. p. 343.

Sponge (Pl. XX. fig. 8) of the "*Crinorhiza*" form, consisting of a very small, conical head, produced upwards into a long, slender, tapering process. The base of the cone is nearly flat and faces downwards, and from its circumference there project outwards and downwards sixteen rather short, stiff, radiating processes. From near the centre of the lower (flat) surface of the sponge a single very short, stiff process projects, which is probably a downward prolongation of the main spicular axis, representing, in a much reduced condition, the usual "*Crinorhiza*" root or stem, while the main axis is developed to an unusual extent above. Diameter of base of cone 3 mm. *Colour* in spirit yellow. *Surface* even.

Skeleton.—The main skeleton consists, as usual, of a number of bands of spiculofibre, forming the axes of the various processes given off from the main mass.

Spicules.—(*a*) *Megasclera;* long slender styli, bluntly pointed and gradually swelling out towards the centre; size about 2·0 by 0·037 mm. (there is, however, a wide range of variation). In addition to these, which form the main skeleton, there are present a considerable number of loose tylostylote spicules. These are thickest in the middle, have a club-shaped head, and taper rather suddenly to a sharp point at the apex; size about 0·63 by 0·019 mm. (*b*) *Microsclera;* (1) anisochelæ (Pl. XXI. fig. 13), of the ordinary *Cladorhiza* type; with three teeth at each end and a curved shaft very much expanded, especially near the large end; length about 0·03 mm. (2) Sigmata (?). The anisochelæ are exceedingly abundant; on the radiating process they are arranged close together round the spicular axis with their larger ends pointing outwards. This appears to be a very common mode of arrangement in the genus.[1]

The most remarkable feature about this species concerns its external form; compared with other known "*Crinorhiza*" forms it appears to be upside down;[2] nor can we be certain that the surface which we have called "lower" in the description is not really the upper, and *vice versâ*. Having regard, however, to the function of the long radiating processes—which is, without doubt, to support the sponge in the soft mud on which it lies—we see that this would be best effected if the sponge lived in the position we have assigned to it. We must imagine, then, that this sponge agrees with its relatives in the shape of the conical head and the arrangement of the supporting processes, but that the main axis is developed in an upward instead of a downward direction; being barely represented below, while in most cases it is barely represented above.

[1] *Cf.* Sars, Remarkable Forms of Animal Life, pt. i. p. 67.

[2] *Cf.*, however, *Chondrocladia crinita* (p. 101), which makes an approach to this condition.