wards in Ceylon, in January 1882; it is figured in Pl. XVII. of this Report. A third species may be an Agalmid, from the Tropical Pacific, the siphosome of which was figured by Lesson under the name *Plethosoma crystalloides* (**22**, pl. iv. fig. 2); the nectosome was detached in the only specimen observed. A fourth species is the North Pacific form, which Mertens observed in 1827 (lat. 42° N., long. 210° E.), and of which Brandt has given a short description under the name *Agalma mertensii* (**25**, p. 34). I had recently the opportunity of comparing the excellent pictures (unfortunately not published) which Mertens had executed most carefully from the living animal. They have convinced me that this *Crystallodes mertensii* is a peculiar species, differing in the special form of the nectophores and the arrangement of the bracts.

Crystallodes vitrea, n. sp. (Pl. XVII.).

Habitat.—Indian Ocean, Ceylon (Belligemma), January 1882 (Haeckel).

Nectosome (upper half of figs. 2, 3; fig. 1, lateral view, from the left side; fig. 2, dorsal view; fig. 3, ventral view).—The swimming apparatus in the single specimen observed was 14 mm. long, 8 mm. broad, and composed of an apical pneumatophore and of five pairs of opposite nectophores, besides some undeveloped buds on the base of the former. The axial trunk of the nectosome is a slender colourless tube, slightly undulating; its uppermost part is the thin pedicle of the pneumatophore, and was often stretched by the swimming animal in the usual position, with horizontally lying trunk (fig. 1); the pedicle of the pneumatophore was often bent upwards, and formed a right angle with the trunk, so that the float stood vertically. The column composed of the nectophores is a six-sided amphithect prism, corresponding to the regular union of the opposite pairs (fig. 6).

Pneumatophore (figs. 1–3, *p*).—The float is small, ovate or pyriform, with a red pigment-spot at the apex. Outside are visible four equidistant longitudinal lines, the insertions of the four vertical septa, which divide the pericystic cavity of the pneumatophore into four radial chambers.

Nectophores (figs. 1, 12, lateral view; figs. 2, 10, dorsal view; figs. 3, 9, ventral view; fig. 8, basal, fig. 7, apical view).—The cartilaginous umbrella of the nectophores is strongly compressed from both faces, so that the proportion of the frontal diameter to the principal and the sagittal axis = 3 : 2 : 1. The principal axis is nearly horizontal. The two large faces, upper dorsal and lower ventral, are nearly parallel and hexagonal in outline, the former slightly convex, the latter concave, with a prominent crest in the ventral median line; from this arises the short pedicle which attaches the nectosac to the trunk. The proximal half of the umbrella is wedge-shaped, thickened towards its equator, with a deep apical incision by which the two paired auricles or apical horns embracing the trunk are separated. The narrow lateral faces of the nectophores (right