instead of being derived from them. This indeed seems borne out by the structure of the corallum of the very young forms which are still attached to the nurse-stock. In these the walls are well developed and almost imperforate, while the synapticulæ are comparatively undeveloped. Additional evidence for this view can also be drawn from the relation of the synapticulæ to the wall in many forms of the Cycloseridæ and Plesiofungidæ, in which, while it is convenient and is customary to speak of the walls of the smaller developing calicles as being formed by the upgrowth, the increase in size, and the fusion of the synapticulæ (as though these structures were distinct from the wall in their origin), it must be remarked that the synapticulæ appear to be direct interseptal outgrowths of the wall (as in *Agaricia*, *Tichoseris*, *Domoseris*, &c.); so that the statement that the walls are synapticulate, or that the walls are formed by the fusion of synapticulæ, would appear to mean nothing more than that the different parts of the wall which are deposited separately (and are then called synapticulæ) enlarge during growth and fuse to form a solid, more or less continuous mass, which is the more commonly known "wall."

It must be confessed, however, that conclusions as to the relations of these parts are practically but guesses at the truth of the matter; proofs of such relations in this, as in so very large a number of other cases among the Corals, can only be obtained when the development of these different structures from the soft parts in the young forms have been thoroughly investigated.

A remarkable degree of variation seems to characterise the different forms of *Fungia*, as is well evidenced by specimens in the collection; and our knowledge of constant specific characteristics and limitations, if such indeed exist, is very imperfect in these as well as in the other Reef-Corals.

From their great size and weight, and their unattached condition, the species of *Fungia* offer apparently the most suitable examples on which continuous and detailed observation and experiment may be made; while their remarkable abundance and peculiarly favourable position on the reefs at Banda and Tahiti would seem to point to such localities as being the best adapted to such investigation. It is certainly a promising field for any naturalist who, with time and means at his disposal, would devote himself to it.

Thirteen species of this genus are in the collection.

1. *Fungia patella* (Ellis and Solander).

Madrepora patella, Ellis and Solander, Zoophytes, p. 148, pl. xxviii. figs. 1, 2, 3, 4.
Fungia agariciformis, Leuckart, De Zooph. Corall., p. 42, pl. iv. figs. 1–4.
„ *agariciformis*, Dana, Zoophytes, p. 292, pl. xviii. figs. 5, 6.
„ *patella*, Milne-Edwards and Haime, Cor., iii. p. 8.
„ *patella*, Klunzinger, Cor. roth. Meer., p. 61, pl. vii. fig. 4, and pl. viii. fig. 2.

Some very large and two small specimens of a variety of this common species were obtained. The septa are very thin at the upper border, with very small teeth. The