consist almost wholly of carbonate of lime, the same ingredient which constitutes ordinary limestone. In 100 parts, 95 to 98 parts are of this constituent; of the remainder, there are 1½ to 4 parts of organic matter, and some earthy ingredients amounting usually to less than 1 per cent. These earthy ingredients are phosphate of lime, with sometimes a trace of silica. A trace of fluorine also has been observed.

S. P. Sharples found the following constitution for the species below named (*Am. Jour. Sci.*, III., i. 168).

	CARBONATE OF LIME.	PHOSPHATE OF LIME.	WATER AND ORGANIC MATTERS.
Oculina arbuscula, N. Car.	95·37	0·84	3·79
Manicina areolata, Florida	96·54	0·50	2·96
Agaricia agaricites	97·73	0·53	1·64
Siderastræa radians	97·30	0·28	2·42
Madrepora cervicornis	98·07	0·32	1·93
Madrepora palmata	97·19	0·78	2·81

Forchhammer found 2·1 per cent. of magnesia in *Corallium rubrum*, and 6·36 in *Isis hippuris*.

The sea-water, and the ordinary food of the polyps, are evidently the sources from which the ingredients of coral are obtained. The same powers of elaboration which exist in other animals belong to polyps; for this function, as has been remarked, is the lowest attribute of vitality. Neither is it at all necessary to inquire whether the lime in sea-water exists as carbonate, or sulphate, or whether chloride of calcium takes the place of these. The powers of life may make from the elements present whatever results the functions of the animal require.

The proportion of lime salts which occurs in the water of the ocean is about $\frac{1}{24}$ to $\frac{1}{36}$ of all the ingredients in solution. The lime is mainly in the state of sulphate. Bischof states that the proportion of salts of all kinds in sea-water averages 3·527 per cent.; and in 100 parts of this, 75·79 are chloride of sodium, 9·16 chloride of magnesium, 3·66 chloride of potassium, 1·18 bromide of sodium, 4·62 sulphate of lime or