the last (Station 214, off Meangis Islands) the principal hosts were *Antedon angusticalyx* and *Pentacrinus alternicirrus*, several examples of the latter being remarkable for the number of cysts on their arms. Two views of one of these cysts are shown in Pl. XXVII. figs. 7, 8, in the former of which the edge of the parasite is just visible at the opening of the cyst. This cyst is principally formed round a pinnule; but the same kind of thing is sometimes formed in the substance of the arm itself, as shown in Pl. XXVII. figs. 9 and 10, the inhabitant of the cyst being again visible through its mouth.

Thus then, while *Stylifer* bores holes into the calyx of a Crinoid, *Myzostoma* produces swellings and inequalities of growth in the arms and pinnules. I have never met with any distortion of the stem which could be considered as resulting from the action of a parasite; and it is therefore curious that abnormal growths in the stems of fossil Crinoids should have attracted the attention of so many palæontologists. Rofe showed, for example, that one cause of the enlargement of the stems of Carboniferous Crinoids arose from the attachment of a parasitic coral, and the subsequent endeavours of the Crinoid to envelop the latter by an undue secretion of calcareous matter.[1] It has also been shown by Mr. R. Etheridge, jun.,[2] that a similar distortion may be due to the adherence of certain Brachiopods (*Productus* or *Chonetes*). These grew less quickly than their hosts, and so became gradually surrounded and enveloped by the calcareous deposit secreted by the latter. The attachment of Polyzoa, again, may also give rise to enlargement, and even the accidental approximation of the stems of two individuals seems to have sometimes resulted in a complete but irregular union between them. Enlargement and irregularities of growth seem to be very common in the stems of *Apiocrinus* and *Millericrinus*, though not in *Pentacrinus;* and they have often been regarded as the results of injury. But their exact nature and causes have not yet been determined as satisfactorily as in the case of the Palæocrinoids.

There are, however, some stems of *Millericrinus* figured by de Loriol,[3] from the Jurassic rocks of France and Switzerland, which present characters of the same nature as those shown on the arms and pinnules of *Pentacrinus alternicirrus* (Pl. XXVII. figs. 7–10), *i.e.*, cystiform enlargements, each with an external opening. Both Prof. L. von Graff and myself are inclined to regard these as due to the action of *Myzostomida* or of similar parasites. But it is singular that they should be developed on the stem; for I have never found a *Myzostoma*-cyst on the stem of any recent Crinoid, though at some Stations (170, 214) they were abundant upon the arms, both of Comatulæ and of Pentacrinidæ.

[1] Note on the Cause and Nature of the Enlargement of some Crinoidal Columns, *Geol. Mag.*, vol. vi. p. 351.

[2] Observations on the Swollen Condition of Carboniferous Crinoid Stems, *Proc. Nat. Hist. Soc.*, Glasgow, vol. iv., 1879, pp. 19–36, pls. i., ii.

[3] Swiss Crinoids, pl. xi. figs. 18, 36–38. French Jurassic Crinoids, pl. 65, figs. 4–6, 8; pl. 80, figs. 2, 2*a*, 13; pl. 99, figs. 5*a*, 5*b*, 5*d*.