upper part of the stem is also distinguished from the more fully grown portion below it by the presence of the "interarticular pores." These are small pore-like openings between the successive joints which are situated in the re-entering angles between the interradial ridges, and are therefore radial in position (Pl. XI.; Pl. XIII. fig. 7; Pl. XV. figs. 1, 2; Pl. XIX. figs. 2, 3; Pl. XXV.; Pls. XXVIII., XXIX., XXXIV.–XXXVIII., XLIV., XLVIII.; Pl. XLIX. fig. 2; Pl. L. figs. 1, 3). They are produced by the apposition of two faint grooves radiating outwards from the centres of the contiguous joints, which are largest at their central ends and shallowest towards the periphery (Pl. XIII. fig. 9; Pl. XXII. figs. 8, 10, 12; Pl. XXXVII. figs. 10–18, 20, 22). They do not reach the central canal of the stem; and so there is no communication effected by the agency of these pores between the internal vascular axis and the exterior. Similar openings occur in many Comatulæ, leading into spaces between the upper surface of the centro-dorsal and the under surfaces of the radials which rest upon it;[1] but they effect no communication between the body-cavity and the external medium.

Until comparatively lately but little has been known respecting the termination of the lower part of the *Pentacrinus* stem. Nearly all the specimens obtained had a fractured stem, from which no conclusions could be drawn. From what we know of the development of the Comatulæ we may fairly assume that the young *Pentacrinus* commences life attached to some foreign body by means of a terminal plate (the dorso-central) at the base of its stem, and a calcareous expansion subsequently developed around it. Mature individuals have been found attached in this way to telegraph cables. Capt. E. Cole of the telegraph steamer "Investigator" has reported to Prof. Agassiz "that he has frequently brought up the West India telegraph cable on which *Pentacrini* were attached, and that they are fixed, the basal extremity of the stem spreading slightly, somewhat after the manner of *Holopus*, so that it requires considerable strength to detach them."[2] The condition of the lower part of the stem fragment of *Pentacrinus naresianus*, represented in Pl. XXXa. fig. 4, is perhaps due to this mode of attachment.

At the same time there appears to be ample evidence that a Pentacrinite may lead the same sort of free life that a *Comatula* does, attaching itself temporarily by its cirri. Sir Wyville Thomson long ago pointed out, in the case of *Pentacrinus decorus*,[3] "that the animal seems to have had the power of detaching itself" at any of the syzygies of the stem in the same sort of way as the arms are thrown off during life, or break up after death. He described an individual in which the stem terminated below in a worn and rounded nodal joint, and he supposed it "to have finally parted from its attachment and to have led a free life." He stated some years afterwards that this was the case in all the complete specimens which he had seen, "showing that the animal must have been for long free from any attachment to the ground."[4] He then went on to describe the same

[1] The Genus Actinometra, *loc. cit.*, pp. 88–90, pl. viii. figs. 5, 7.
[2] *Bull. Mus. Comp. Zoöl.*, vol. v. No. 14, p. 296.
[3] Sea Lilies, p. 7.
[4] The Depths of the Sea, pp. 442–444.