basals of *Bathycrinus* is extremely close, and in old individuals no sutures are visible externally (Pl. VII. figs. 1, 2, 11; Pl. VIIa. figs. 12–14), though they appear in transverse section (Pl. VIIb. fig. 2) and also in young examples. I have never succeeded, however, in separating the plates from one another by the usual methods.

The radials of *Bathycrinus*, on the other hand, are much less closely united. They are thin plates in contact with one another by quite narrow sides (Pl. VII. figs. 6, 6*a*). Those of *Bathycrinus aldrichianus* were described by Sir Wyville Thomson as being "often free; but in old examples they also are frequently anchylosed into a funnel-shaped piece."[1] All the specimens which I have examined are in the latter condition, though the plates are readily separable. But I do not think it possible that they could ever be perfectly free as the other two radials are; and I have always found them to be closely united by ligaments up to the level of the circular commissure (Pl. VIIb. fig. 4, *l*), though they become much more free near the top of the calyx (Pl. VIIb. fig. 5). The

FIG. 1.—*Promachocrinus kerguelensis*. Calyx, × 6.

A. Side view, showing the alternation of the five primary radials with the five others, which are separated from the centro-dorsal by the rays of the basal star. B. Upper view, showing the interior of the central funnel formed by the radials.

difference between the "free" and the "anchylosed" conditions is probably only due to variations in the extent to which limestone is deposited around the fibres of the above mentioned interradial ligaments.

The difference between the basal and radial rings in the amount of lateral union (*i.e.*, in the distinctness of the sutures) between their component joints, which is more or less evident in *Hyocrinus*, *Bathycrinus*, and *Rhizocrinus*, appears also in some fossil Crinoids. Beyrich has pointed out[2] that in young individuals of *Encrinus gracilis* the sutures between the basals are invisible, although those between the radials are distinct enough; and the same character has been noticed by Mr. R. Etheridge, jun., and myself as occurring in the Palæozoic *Allagecrinus austini*.[3]

[1] *Journ. Linn. Soc. Lond.* (Zool.), vol. xvi. p. 50.

[2] Ueber die Crinoiden des Muschelkalks, Berlin, 1857, p. 44.

[3] On Allagecrinus, the representative of a new family from the Carboniferous Limestone Series of Scotland, *Ann. and Mag. Nat. Hist.*, ser. 5, 1881, vol. vii. pp. 285–288.