furnished by the Liassic *Extracrinus*, the stem of *Extracrinus subangularis* reaching a length of 50 to 70 feet. But even as regards *Democrinus* I cannot admit that the dimensions of the stem are so much greater than those of the arms. This may indeed be the case in Perrier's three specimens, of which "deux sont totalement dépourvus de bras; le troisiéme n'en présente que des restes très courts, d'après lesquels il est aisé de voir que les bras devaient être extrèmement peu développés." But in the Carribbean examples of *Rhizocrinus rawsoni* the longest stem (180 mm.) contains sixty-eight joints above the root, while there are five arms, each consisting of about eighty joints. Nearly half of these bear pinnules, so that even if the radicular part of the stem is taken into account, the superior dimensions would seem to be on the side of the arms rather than on that of the stem, which Perrier considers to represent five or six times the volume of the calyx and arms together.

It is likely enough that this may have been true in his three specimens of *Democrinus*, which had lost the whole or greater part of their arms, owing to fracture at the syzygies, as is only too often the case with both species of *Rhizocrinus*. But when a tolerably perfect individual is obtained the arms are found to be considerably more than "extrèmement peu développés," as was so easily inferred by Perrier upon totally insufficient evidence. He goes on to say, "Alors même qu'ils ne vivraient pas en colonie, le volume considérable de leurs racines ramifiées, la ressemblance de ces racines avec les bras qui surmontent le calice et dont elles sont probablement homologues, suffisent à démontrer que la disposition arborescente des parties, préface en quelque sorte de la symmétrie radiaire, n'est pas plus étrangère au type des Échinodermes qu'au type des Cœlentérés."

The relationship of the Echinoderms to the Cœlenterates need not be discussed here; but the resemblance and "probable homology" which Prof. Perrier sees between the arms and the root of a Crinoid appear to me to be forced in the extreme. The arms are merely extensions of the body, containing the same nerves, vessels, and body-cavity as are found in the calyx, together with the fully developed genital glands which are usually sterile in the body. But the branches of the root have the same structure as the stem, as remarked by Perrier himself; and this is very different from that of the cup and arms. It is true that the rootlets, like the arms, are traversed by axial cords which are connected with the fibrillar envelope of the chambered organ; but there the resemblance ends. They support no soft parts as the joints of the arms and pinnules do; and being formed entirely on the right antimer are totally devoid of any of the ambulacral structures which are so important in the morphology of the arms. If the term "homologous" is to be employed for a mere superficial resemblance of this kind, a new word must be introduced to denote community of origin and morphological similarity. One might almost as reasonably say that the quills on the back of a porcupine are homologous with its limbs.