

Echinoderm, which seems to be inseparable from Lovén's use of the term. Should Prof. Lovén ever write anything more upon the apical system of Echinoderms, he cannot avoid referring to the radial plates between the dorsocentral and the so called genitals (costals or basals) of an Asterid. He cannot speak of them by the name which was given them by Sladen who discovered them, viz., "under-basals," for this term would be meaningless and confusing unless the plates outside them (the costals of Lovén) were also called basals; and he would therefore have to invent a new name for them, a proceeding to which he objects, or else adopt the terminology of Sladen and myself. I am sanguine enough to hope, not only that this will be the case, but also that the presence in Asterids and Ophiurids of plates homologous with the under-basals of Crinoids will lead him to abandon his theory of the homology of these under-basals with the dorsocentral of an Urchin or Starfish. I little expected six years ago to get so complete a confirmation of the views I then expressed as the presence of a "dicyclic base" in several Asterids and Ophiurids as well as in *Cyathocrinus* and *Marsupites*. The similarity in structure of the apical system in all the groups of brachiote Echinoderms thus becomes exceedingly striking; and it affords a further proof (if such were needed) of the homology between the apical systems of the Echinozoa and the Pelmatozoa respectively.

Two authors, however, have been led to an entirely different conclusion respecting the interradial abactinal plates of the Starfish larva from that of Lovén, Agassiz, Sladen, and myself. Ludwig regards them as homologous with the orals of a Crinoid, because one of the latter is pierced by the primitive water-tube;¹ while the madreporite of an adult Starfish is in relation with one of the so called genital plates (costals or basals). The morphological difficulties inseparable from this inversion of the relations between a Starfish and a Crinoid, as ordinarily conceived, have been discussed by Sladen² and myself.³ With the exception of Studer,⁴ whose errors have been discussed elsewhere,⁵ no other writer has alluded to the subject; though it has recently made its appearance in a somewhat modified form. Perrier stated two years ago⁶ that the primary interradial plates around the dorsocentral of the young *Brisinga* develop into the so called odontophores of the adult. The former are the plates which are usually known as the genitals (costals of Lovén; basals of Sladen and myself); and if Perrier's statement be correct, the views of Lovén, Agassiz, Sladen, and myself respecting the homology of the apical plates through the whole group of Echinoderms are no longer tenable. No proofs of it have yet been offered, however, though in a later note by Perrier⁷ the following passage appears, "Les jeunes Astéries, les jeunes *Brisinga* présentent aussi, comme Lovén et nous-même

¹ *Zeitschr. f. wiss. Zool.*, Bd. xxxiv. p. 318, 1880.

² *Quart. Journ. Micr. Sci.*, 1884, vol. xxiv., N. S., pp. 35-40.

³ *Ibid.*, 1880, vol. xx., N. S., pp. 322-329.

⁴ Uebersicht über die Ophiuriden welche während der Reise S.M.S. "Gazelle" um die Erde, 1874-76, gesammelt wurden, *Abhandl. d. k. Akad. d. Wiss. Berlin*, aus dem Jahre 1882, Phys. Kl. Abh., i. p. 10.

⁵ *Quart. Journ. Micr. Sci.*, 1884, vol. xxiv., N. S., pp. 15-18.

⁶ Note sur les *Brisinga*, *Comptes rendus*, t. xciv., 1882, p. 63.

⁷ *Ibid.*, p. 1381.