

period to the present day, coincides also with the gradation of their subdivisions, as determined by their structure; and it was not until the present period, that the highest Echinoderms, the Holothurioids, have assumed a prominent position in their class.

Among Acephala there is not any more uncertainty respecting the relative rank of their living representatives, than among Echinoderms. Every zoölogist acknowledges the inferiority of the Bryozoa and the Brachiopods¹ when compared with the Lamellibranchiata, and among these the inferiority of the Monomyaria in comparison with the Dimyaria would hardly be denied. Now if any fact is well established in Palæontology, it is the earlier appearance and prevalence of Bryozoa and Brachiopods in the oldest geological formations, and their extraordinary development for a long succession of ages, until Lamellibranchiata assume the ascendancy which they maintain to the fullest extent at present. A closer comparison of the different families of these orders might further show how close this correspondence is through all ages.

Of Gasteropoda I have nothing special to say, as every palæontologist is aware how imperfectly their remains have been investigated in comparison with what has been done for the fossils of other classes. Yet the Pulmonata are known to be of more recent origin than the Branchifera, and among these the Siphonostomata to have appeared later than the Holostomata, and this exhibits already a general coincidence between their succession in time and their respective rank.

Our present knowledge of the anatomy of the Nautilus, for which science is indebted to the skill of Owen,² may satisfy everybody that among Cephalopods the Tetrabranchiata are inferior to the Dibranchiata; and it is not too much to say, that one of the first points a collector of fossils may ascertain for himself, is the exclusive prevalence of the representatives of the first of these types in the oldest formations, and the later appearance, about the middle geological ages, of representatives of the other type, which at present is the most widely distributed.

Of Worms, nothing can be said of importance with reference to our inquiry;

¹ ORBIGNY, (A. D.) Bryozoires, Ann. Sc. Nat., 3e sér. 1851, vol. 16, p. 292. — CUVIER, (G.) Mémoire sur l'animal de la Lingule, Ann. Mus. I., p. 69, fig. — VOGT, (C.) Anatomie der Lingula anatina, N. Mém. Soc. Helv. 1843, VII., 4to. fig. — OWEN, (R.) On the Anatomy of the Brachiopoda, Trans. Zool. Soc., I. 4to., p. 145, fig. — On the Anatomy of the Terebratula, 1853, 4to. fig. (Palæont. Soc.) — BRECH, (L. v.) Ueber Terebrateln, q. n., p. 97. — DAVIDSON, (TH.) Monogr. etc., q. n., p. 97. — POLI (XAV.) Testacea utriusque

Sicilie, eorumque Historia et Anatomia, Parmæ, 1791-93, 2 vols. fol. fig., continued by Delle Chiaje.

² OWEN, (R.) Memoir on the Pearly Nautilus, London, 1832, 4to. fig. — VALENCIENNES, (A.) Nouvelles Recherches anatomiques sur le Nautilé. C. R., Paris, 1841, 4to. — CUVIER, (G.) Mémoires pour servir à l'Histoire et à l'Anatomie des Mollusques, Paris, 1817, 4to. fig. — EDWARDS, (H. M.) QUATRE-FAGES, (AR. DE.) et BLANCHARD, (EM.) Voyage en Sicile, Paris, 3 vols. 4to. fig. (without date.)