

"degrees of organization," to designate orders. It is true Lamarck uses the same expression to designate classes. We find, therefore, here as everywhere, the same vagueness in the definition of the different kinds of groups adopted in our systems. But if we would give up any arbitrary use of these terms, and assign to them a definite scientific meaning, it seems to me most natural, and in accordance with the practice of the most successful investigators of the animal kingdom, to call orders such divisions as are characterised by different degrees of complication of their structure, within the limits of the classes. As such, I would consider, for instance, the Actinoids and Halcyonoids in the class of Polypi, as circumscribed by Dana; the Hydroids, the Discophoræ, and the Ctenoids among Acalephs; the Crinoids, Asterioids, Echinoids, and Holothuriæ among Echinoderms; the Bryozoa, Brachiopods, Tunicata, Lamellibranchiata among Acephala; the Branchifera and Pulmonata among Gasterpods; the Ophidians, the Saurians, and the Chelonians among Reptiles; the Ichthyoids and the Anoura among Amphibians, etc."

It would be injustice to the author not to state that in the succeeding paragraph he carefully guards the reader against supposing that he denies or ignores distinction of rank in other groups, as in classes, for instance; but he holds that here it is predominant. We could have wished that the view had been followed farther into detail; for, taking orders as we now have them, there are some evident exceptions. In the birds, for instance, the orders differ far more markedly in adaptation to conditions of life and structures depending on these, than in grade. In the orders of insects there is the same idea, along with that of type or pattern in a subordinate form; for we must bear in mind that type, and the homologies which express type, descend in different degrees through all our sub-divisions from the great leading types to the genera. It is expressed as distinctly in the elytra of beetles and the scales of butterflies as in the skeletons of vertebrata or articulata; it is curious, too, that naturalists have differed so very much as to the rank of the orders of insects. In other groups again, as the reptiles, the idea of rank is quite patent in the orders, but is much obscured when we add the fossil forms to those now living. In the orders of Mammals, as lately proposed by Owen, it is clearly exhibited. Dana has well shewn its existence in the Crustacea. It is pretty evident also in the orders of the several classes of Molluscs, and is very manifest in the Echinoderms. On