

body to one another. Cuvier speaks of form in general with reference to these four great types as a sort of mould, as it were, in which the different types would seem to have been cast. Again, form is alluded to in characterizing orders; for instance, in the distinction between the Brachyourans and the Macrourans among Crustacea, or between the Saurians, the Ophidians, and the Chelonians. It is mentioned as a distinguishing feature in many families, ex. gr. the Cetacea, the Bats, etc. Some genera are separated from others in the same family on the ground of differences of form; and in almost every description of species, especially when they are considered isolatedly, the form is described at full length. Is there not, in this indiscriminate use of the term of form, a confusion of ideas, a want of precision in the estimation of what ought to be called form and what might be designated by another name? It seems to me to be the case. In the first place, when form is considered as characteristic of Radiata or Articulata, or any other of the great types of the animal kingdom, it is evident that it is not a definite outline and well-determined figure which is meant, but that here the word form is used as synonym for plan. Who, for instance, would describe the tubular body of an *Holothuria* as characterized by a form similar to that of the *Euryale*, or that of an *Echinus* as identical with that of an *Asterias*? And who does not see that, as far as the form is concerned, *Holothuræ* resemble Worms much more than they resemble any other Echinoderm, though, as far as the plan of their structure is concerned, they are genuine Radiates, and have nothing to do with the Articulates?

Again, a superficial glance at any and all the classes of the animal kingdom is sufficient to show that each contains animals of the most diversified forms. What can be more different than Bats and Whales, Herons and Parrots, Frogs and Sirens, Eels and Turbots, Butterflies and Bugs, Lobsters and Barnacles, *Nautilus* and Cuttlefishes, Slugs and Conchs, Clams and compound *Asidians*, *Pentacrinus* and *Spatangus*, *Beroe* and *Physalia*, *Actinia* and *Gorgonia*? And yet they belong respectively to the same class, as they are coupled here: Bats and Whales together, etc. It must be obvious, then, that form cannot be a characteristic element of classes, if we would understand any thing definite under that name.

But form has a definite meaning understood everywhere, when applied to well-known animals. We speak, for instance, of the human form; an allusion to the form of a horse or that of a bull conveys at once a distinct idea; everybody would acknowledge the similarity of form of the horse and ass, and knows how to distinguish them by their form from dogs or cats, or from seals and porpoises. In this definite meaning, form corresponds also to what we call figure when speaking of men and women, and it is when taken in this sense, that I would now consider the value of forms as characteristic of different animals. We have seen that form