

so that the animal has a right and a left side. In the radiata the similar members radiate from the axis in a circular manner, like the petals of a regular flower.

The whole value of such a classification cannot be understood without explaining its use in enabling us to give general descriptions, and general laws of the animal functions of the classes which it includes; but in the present part of our work our business is to exhibit it as an exemplification of the reduction of animals to laws of Symmetry. The bipartite Symmetry of the form of vertebrate and articulate animals is obvious; and the reduction of the various forms of such animals to a common type has been effected, by attention to their anatomy, in a manner which has satisfied those who have best studied the subject. The molluscs, especially those in which the head disappears, as oysters, or those which are rolled into a spiral, as snails, have a less obvious Symmetry, but here also we can apply certain general types. And the Symmetry of the radiated zoophytes is of a nature quite different from all the rest, and approaching, as we have suggested, to the kind of Symmetry found in plants. Some naturalists have doubted whether<sup>9</sup> these zoophytes are not referrible to two types (*acrita* or polypes, and true *radiata*,) rather than to one.

This fourfold division was introduced by Cuvier.<sup>10</sup> Before him, naturalists followed Linnæus, and divided non-vertebrate animals into two classes, insects and worms. "I began," says Cuvier, "to attack this view of the subject, and offered another division, in a Memoir read at the Society of Natural History of Paris, the 21st of Floreal, in the year III. of the Republic (May 10, 1795,) printed in the *Décade Philosophique*: in this, I mark the characters and the limits of molluscs, insects, worms, echinoderms, and zoophytes. I distinguish the red-blooded worms or annelides, in a Memoir read to the Institute, the 11th Nivose, year X. (December 31, 1801.) I afterwards distributed these different classes into three branches, each co-ordinate to the branch formed by the vertebrate animals, in a Memoir read to the Institute in July, 1812, printed in the *Annales du Muséum d'Histoire Naturelle*, tom. xix." His great systematic work, the *Règne Animal*, founded on this distribution, was published in 1817; and since that time the division has been commonly accepted among naturalists.

[2nd Ed.] [The question of the Classification of Animals is discussed in the first of Prof. Owen's *Lectures on the Invertebrate Ani-*

<sup>9</sup> *Brit. Assoc. Rep.* iv. 227.

<sup>10</sup> *Règne A.* 61.