

An examination of the animals now living, amounting to some hundred thousand species, perhaps to one or two millions, shows that they may be arranged in four great classes.

The first class embraces the vertebral animals, distinguished by having a vertebral column, or back-bone, a regular skeleton, and a regular nervous system. It comprehends all the quadrupeds and bipeds, with man at their head, and is much superior to all other classes in complexity of organization and strength of the mental powers. The second class embraces the mollusks, or animals inhabiting shells. They are destitute of a spinal marrow, and for the most part their muscles are attached to the external covering, called the shell, although this shell is sometimes internal. The third class are called articulated animals, having envelopes connected by anulated plates, or rings. It includes such animals as the lobster, bloodsucker, spider, and insects generally. The fourth class have a radiated structure, and often resemble plants, or their habitation is a stony structure. Hence they are sometimes called zoophytes, which means *animal plants*; or lithophytes, which mean *stony plants*. They swarm in the ocean, and some of them build up those extensive stony structures called coral reefs.

Now, if we examine the descriptions of the organic remains in the rocks, we find that in all ages of the world these four great classes of animals have existed. But in the earliest times, the three last classes (the mollusks, the articulated, and the radiated tribes) vastly preponderated, while the vertebral class had only a few representatives; and it is not till we rise as high as the new red sandstone, that we meet with any, except fishes, save a few batrachians in the old red sandstone, and the carboniferous group, detected alone by their tracks. Then the reptiles began to appear in abundance, with tortoises and enormous birds of a low organization, but no mammiferous animal is found, until we reach the oölite; and scarcely any till we rise to the tertiary strata, when they became abundant; but not so numerous as at present, though for the most part of a larger size. Thus we find that the more perfect animals have been developed gradually, becoming more and more complex as we rise on the scale of the rocks. But in the three other classes, there does not appear to have been much advance