

gerated value to their own specialties, and are unable to appreciate those of others. Thus we find naturalists subdividing one group more minutely than others, or raising one group to a position of equivalency with others, to which, in the opinion of the students of these others, it is quite subordinate. So also we have some zoölogists basing classification wholly on embryology or on mere anatomical structure, or even on the functions of some one class of organs. Secondly, there is a failure to perceive that, if there is any order in the animal kingdom, some one principle of arrangement must pervade the whole; and that our arrangement must not be one merely of convenience, or of a desultory and uncertain character, but uniform and homogeneous.

The writer of these pages does not profess to be in a position to escape from these causes of failure; but as a teacher of some experience, and as a student of certain portions of the animal kingdom, he has endeavoured carefully to eliminate from his own views the prejudices incident to his specialties, and to take a general view of the subject; and is therefore not without hope that the results at which he has arrived may be found useful to the young naturalist.

Classification in any department of Natural History is the arranging of the objects which we study in such a manner as to express their natural relationship. In other words, we endeavour in classification to present to our minds such a notion of the resemblances and differences of objects as may enable us to understand them, not merely as isolated units, but as parts of the system of nature. Without such arrangement there could be no scientific knowledge of nature, and our natural history would be merely a mass of undigested facts.

At first sight, and to a person knowing only a few objects, such arrangement may appear easy; but in reality it is encompassed with difficulties, some of which have not been appreciated by the framers of systems. The more important of these difficulties we may shortly consider.

1. There are in the animal kingdom a vast number of kinds or species. To form a perfect classification it would be necessary to know the characters or distinctive marks of all these species. To make even a tolerable approximation to a good system, requires an amount of preparatory labour which can be estimated only by those who have carefully worked up at least a few species in these respects.