

studying their physiology and geographical distribution, and, above all, in examining and describing fossil species, is so vast, that the additions made to our knowledge probably exceed all that was previously known; and what Lamarck then foretold has come to pass; the more new forms have been multiplied, the less are we able to decide what we mean by a variety, and what by a species. In fact, zoologists and botanists are not only more at a loss than ever how to define a species, but even to determine whether it has any real existence in nature, or is a mere abstraction of the human intellect, some contending that it is constant within certain narrow and impassable limits of variability, others that it is capable of indefinite and endless modification.

Before I attempt to explain a great step, which has recently been made by Mr. Darwin and his fellow-labourers in this field of enquiry, I think it useful to recapitulate in this place some of the leading features of Lamarck's system, without attempting to adjust the claims of some of his contemporaries (Geoffroy St. Hilaire in particular) to share in the credit of some of his original speculations.

From the time of Linnæus to the commencement of the present century, it seemed a sufficient definition of the term species to say, that 'a species consisted of individuals all resembling each other, and reproducing their like by generation.' But Lamarck, after having first studied botany with success, had then turned his attention to conchology, and soon became aware that in the newer (or tertiary) strata of the earth's crust there were a multitude of fossil species of shells, some of them identical with living ones, others simply varieties of the living, and which, as such, were entitled to be designated, according to the ordinary rules of classification, by the same names. He also observed that other shells were so nearly allied to living forms, that it was difficult not to suspect that they had been connected by a common bond