

to be brought to a close before its size amounted to what it should be ; but in the succeeding volumes full compensation will be made for this, and measures taken to bring them forward with more promptitude.

With reference to the future progress of Zoölogy in this country, it is particularly desirable that investigators should not allow themselves to be carried away by the almost inexhaustible diversity of species, so as to confine their efforts to describing merely what is new, for however desirable it may be that all our species should be correctly named, described, and delineated, such labors are, in fact, only the preliminary steps towards deeper and more philosophical studies ; and the sooner attention is turned to the mode of life of all our animals, to their geographical distribution, their natural affinities, their internal structure, their embryonic growth, and to the study of fossil remains, the sooner will the investigations of American naturalists contribute largely to the real advancement of science, and the investigators themselves acquire an independent standing among scientific men. I am well aware, while writing this, that there are already many who pursue the study in that truly scientific spirit which has brought Natural History to its present prosperous state ; my remarks, therefore, do not apply to these noble devotees of truth. But I know equally well, that there are too many who fancy that describing a new species, and hurrying to the press a hasty and mostly insufficient diagnosis, is a real scientific achievement. These I would warn from the deceptive path, adding, that a long experience has taught me that nothing was ever lost to an investigator by covering, as far as possible, the whole ground of any subject of inquiry ; and that, though at times a subject may seem to have lost some of its value for being less novel, it generally gains tenfold in scientific importance by being presented in the fullest light of all its natural relations. It is chiefly this conviction which has induced me to keep to myself for so many years the results of my investigations in this country ; and if, in the course of this publication, I am occasionally compelled to offer fragmentary information upon many parts of my subject, it is simply because the time has come with me when I must publish what I have been able to observe, if I would publish at all.

Scandinavia, Germany, and France afford us striking examples of the new impulse science has received, in consequence of the gradual exhaustion of the field afforded them for descriptive Zoölogy. As soon as most of the species of these countries had been described, after Linnæus had begun to register systematically the whole animal kingdom, those who were denied the opportunity of visiting foreign countries, or of receiving large supplies of new species from distant lands, applied themselves to the investigation of the internal structure of the animals already described, and to the study of their habits, their metamorphoses, their embryonic growth, etc. Never did Zoölogy receive a more important impulse than at the time when German students began to trace with untiring zeal the earliest development of all the classes of the animal kingdom, and some Scandinavian observers pointed out the