

have been corrected long ago, and I should have been too late with the results of my investigations upon this subject, now published in this volume. And it should be remembered, that a well-marked blank in a library may be as suggestive as a well-filled shelf, and may induce the young naturalist to take up some branch of study which has been neglected. For my own part, I well recollect, that, on my first visit to the University of Heidelberg,¹ at the age of nineteen, on asking the librarian to show me all that had been published upon the subject of Fishes, he pointed me to a meagre shelf, and on examining its contents I found that many important facts, with which my youthful rambles and my early love of Natural History had made me familiar, were unknown to naturalists. "And is this all?" was my repeated inquiry. But the librarian, as well as the professor of Zoölogy, assured me that these volumes contained all that was then known to the scientific world on the subject of Fishes. Afterwards, I mentioned to Professor Leuckart the facts which observation had taught me with respect to the seasons of spawning, the mode of growth, the geographical distribution, and the habits of the Fishes of Switzerland; and, when I found that they were new and interesting to him, I no longer doubted as to the field in which to commence my labors. That blank in the well-ordered library taught me more, as to the scientific path which I should choose, than shelves crowded with volumes could have done. I mention this anecdote merely to show the importance of systematic arrangement in our libraries, in order that our young students may perceive at once in what departments their investigations are most needed. Otherwise, much time may be lost by toiling in already well-ploughed fields, and valuable facts may be left unrecorded.

For the same reason I would urge upon the consideration of those interested in the progress of science in America the value to the student of well-stored museums, and especially of local collections containing series of specimens of every species of animals, plants, minerals, rocks, and fossils found in the vicinity of every school throughout the country, with precise indications respecting their origin.² With reference to this last topic, too much cannot be said of the impor-

¹ This was in the spring of the year 1826, two years before the publication of the first volume of the great "Histoire naturelle des Poissons" by Cuvier and Valenciennes.

² It is a great mistake to suppose that large museums are necessary for the study of Natural History, and that show specimens from distant countries add much to the interest of a scientific collection. I deliberately assert, that there is not a school-house in the

United States, in the immediate vicinity of which it would not be easy to make, in a few years, a collection of native specimens sufficient to illustrate the fundamental principles of any branch of Natural History. Nay, it is not too much to add, that such collections would contribute greatly to the advancement of science, if simple catalogues of their contents were published from time to time. I am satisfied, from my own experience, that every such collection could, in