

A PLEA FOR NATURAL HISTORY MUSEUMS.

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To the increasing number of those who give especial attention to the study of science, the effort to impress the importance of natural history collections may seem superfluous. Not so, however, to those who teach it. And while there is a more or less vague idea in the minds of many that the study of nature has in it somewhat of interest and a little of profit, something more is needed to give its value greater prominence and make more real and tangible its interest. There are too much pleasure and profit in it to be lost for the mere lack of a little appreciation, when this can be so readily acquired. The fact that the State of Massachusetts and the friends of the Museum of Comparative Zoology have contributed over a million dollars to this means of popular instruction, that a vast amount has been devoted to the Museum of Natural History in Central Park, New York, and also to the National Museum at Washington; that museums of varying size and value are accessible to the public in all the best universities and colleges of the land; and that zoological gardens, at great expense, are founded, maintained and well patronized, in most of our large cities, shows that there is some popular appreciation of such collections. Showmen, like Barnum and others, know, from the popular interest in animals, how profitable paid exhibitions of them in museums and menageries are. And even circus managers are shrewd enough to anticipate the public taste and provide for its gratification by attaching menageries to their performances, in order to attract those who crave something more profitable and instructive than mere amusements, as well as to give moral weight to a business sadly in need of it.

The safety of our land is in the education of its people. But interest and attention must first be excited before the mind can receive and comprehend valuable information. One's interest in any object is just in proportion to what he knows of it and does for it. Ancient Rome had her baths and gymnasia for the benefit of her people, and the national games of the Greeks were instituted for a similar purpose. Heathen culture of past ages ought not to shame the intelligence of the present day. The committee appointed to establish a memorial to the late Prof. Louis Agassiz decided that "The most fitting memorial must be the completion of his life's work. The completion of the museum in accordance with his plans and its liberal endowment, would be of infinite value to the educational interests of the whole country." Dr. Newberry, State Geologist of Ohio and Professor in Columbia College, New York, says in regard to natural history collections: "To the public at large they arrest attention and excite interest, the first step toward scientific education in the individual or community." The late Joseph Henry, of the Smithsonian Institution, also says: "They are well calculated to arrest attention and give definite impressions." Dr. Winchell, of Michigan University, says: "A donation of natural history specimens is a monument not only *aere perennius* but *aere utilius*. Would that our people might learn, like the Germans, to place less faith in brick and mortar, and more in books and the materials of science." Seeing a thing impresses the mind more forcibly than reading or hearing about it.

Ward's gigantic restored mammoth, as large as a house of moderate size, and his casts of monstrous animals of ages past, are grand educators because they call attention to natural objects and excite a desire to know their history. None can look upon them without astonishment and increased mental activity. Less striking specimens are, in their degree,

equally potent in the same direction. A complete series of natural history specimens gives an ordinarily thoughtful spectator, or even a casual observer, many ideas in regard to the classification and relations or affinities of past and present organisms, their geographical distribution and grouping in different localities, and many other facts which can hardly be obtained in any other way. In short, it gives ample illustration of all that science has thus far deciphered of the plan of creation. The Agassiz memorial committee say: "The Museum he labored for is a presentation of the animal kingdom—fossil and living—arranged so as to picture the creative thought. The study of such a subject is the highest to which the human mind can aspire." A good museum should show, first, as full a representation as practicable of all the quadrupeds, birds, fishes, insects, plants and fossils which together constitute the complete fauna and flora of the vicinity in which it stands, and then, as soon as possible, of the whole territory represented by its friends and patrons. Its collections in botany should illustrate every obtainable peculiarity of vegetable structure, in wood, bark, root, leaf, flower and fruit. In the line of zoology there should be a full showing of the whole animal kingdom. In agricultural sections especial attention should be given to entomology, than which nothing can be of more interest to grain, fruit and vegetable cultivators, who lose millions of dollars annually by the ravages of insects. The cabinet should associate with the various noxious and beneficial insects, in their several stages, the food on which they live, their parasites and victims, so as to present to the eye an instructive history of each, such as every farmer's son to say the least, should be familiar with. The mineral and fossil collections should show the characteristics of every group of rocks in that section of the country, so one could hardly fail to see the plan in the order of creation, could see where coal may or may not be found, and also determine the probable presence or absence of iron, lead, zinc, baryta, ochres, clays, etc. A complete museum would also show the plants, animals, fruits, and other products from every quarter of the globe, so one in reading about different countries, or who has a special interest in some one, can see what organisms belong there and can get a good idea of the country without going to see it.

The wanton destruction or waste of valuable scientific material is a matter for very serious consideration. This unintentional, though not less impoverishing vandalism, is lamentably frequent and prevailing. Skeletons, pottery, stone and flint implements, and other remains of our prehistoric inhabitants are frequently plowed up in the fields. They attract a moment's notice, perhaps, are picked up then laid away and forgotten, or more frequently are crushed and scattered by the plow till they are rendered utterly worthless. Mastodon and other remains often share the same fate. It is exceedingly trying to the sensibilities of a lover of nature to see the almost criminal carelessness of the unappreciating possessors of these instructive objects. Sometimes they are held, from some indefinable fancy, with a tenacity which might argue a love of nature, and yet the way the precious things are abused and ruined dispels at once this charitable delusion, and is often enough to stir up the righteous indignation of a saint. May not the lover of science under these circumstances obey the command of Scripture, "be ye angry and sin not." Among several somewhat similar experiences, the writer distinctly remembers one in which a student solicited a valuable specimen for him as a curator of a growing museum, and was indignantly refused with the statement that the owner thought more of the specimen than of the curator. Yet its beautiful angles and faces were destroyed and the

whole ruined by the nocks and kicks it received by being tumbled about in a dingy out-building. In nearly every home, or about it, objects of scientific value are to be found lying about where they are liable to be injured and lost. They are doing nobody any good, yet they could readily command valuable returns to those possessing them, and at the same time would contribute very greatly to the interest of people in science and, hence, to its rapid advancement. These are held as curiosities or given to children for their amusement; and whether held by young or old, if they elicit no thought or study, and create no knowledge or inquiry concerning their history, they are merely *children's toys*, affording no profit—simply idle amusement. A child can be amused with either a watch or a jumping-jack to play with, but the latter is more economical and equally effectual. These valuable historic objects, as mere curiosities, in the hands of old or young, are virtually watches for children's playthings, instead of jumping-jacks. It may be of interest to such delighted owners to know that all scientific material has a certain money value—"a value which," says a dealer in this material, "can be as surely and as speedily realized as that of any description of property." Holders of such specimens can also exchange them, with any well-stocked museum, to mutual advantage, for others not so easily obtained in their vicinity and thus, in time, form a collection, while not less amusing and attractive, much more varied and instructive. Material thus received can easily be accompanied with instructive facts concerning its position, relations, habits, etc., which will be doubly valuable because they stimulate thought as well as furnish pastime and amusement.

National and State governments make laws to protect fish, birds, etc., at certain seasons of the year for a greater public benefit at other seasons. They should also provide some way of preventing the destruction and misapplication of archaeological and other scientific material, so it may be legitimately employed for the advancement of science and for the increase of popular intelligence. The Danish government requires that scientific collections made on its territory shall be deposited in the national museums. A scientific commission in England is intended to accomplish a similar end there, and such a commission or department in our government is a consummation devoutly to be wished, and one which the growing intelligence of our people will doubtless, at no far distant day, demand and then supply. May friends of science and of national progress speed the day.

Museums are also of great advantage for encouraging and fostering original investigation. As the question of evolution or of creation is racking the whole scientific and religious world, and is so largely to be settled by having an unbroken series of all life in chronological order for examination, the vast importance of extensive collections of fossils can hardly be overestimated. A writer in the *Advance*, some time ago, said: "The science of geology, dealing as it does with the only visible record of any considerable age, in regard to the history of life upon our planet, must settle the vexed questions—if they are ever to be settled—of the origin of species, the antiquity and perhaps the unity of man. To many, the acceptance of the new theories on these points is equivalent to legislating God out of the universe. If so many are wrecked upon these questions, the correct understanding of them is a matter of no little importance." Mr. Agassiz has said: "The question of the geographical distribution of animals lies at the very bottom of the question as to their origin." This must be shown by complete faunal collections from all localities, which can be seen only in large museums. Museums are valuable, too, for studying the life history of various animals,