

ADDRESS

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TO THE

CHESTER COUNTY CABINET

OF

Natural Science,

AT THE

ORGANIZATION OF THE SOCIETY,

ON THE 18TH OF MARCH, 1826.

BY WM. DARLINGTON, M. D.

Published by order of the Cabinet.

WEST-CHESTER, PA.

PRINTED BY SIMEON SIEGFRIED.

1826.

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copy of *Florula Cestrica*.

ADDRESS.

GENTLEMEN,

Although but ill qualified for the task which you have assigned me,—and interrupted, as I have repeatedly been, since my appointment, by an attention to other, and indispensable duties,—yet it is with unfeigned pleasure that I approach the subject committed to me, and attempt a hasty sketch of what I conceive to be the leading objects connected with our Association. Having long been impressed with a sense of the importance of *Natural Science*, in promoting the welfare, and enhancing the character of our species,—and having, for a number of years, found the cultivation of one of its branches to be a source of the purest delight of which my own mind was susceptible,—I cannot conceal the gratification which I experience, on witnessing the laudable spirit with which you have embarked in the study of Nature; and the cheering auspices under which our Society has been instituted.

It is a pleasing circumstance, amid the arduous and perplexing duties of our respective vocations, and the turmoils inseparable from our condition in society, that there is a *common object* to which we can all occasionally turn, as with one heart, to find relief from the ruder cares of the world—and indulge in a recreation which is calculated at once to promote our usefulness as Citizens—to chasten our affections—and elevate our intellectual character as Men. That object is the Study of Nature—an acquaintance with her various productions, founded on scientific principles, by which we may be enabled to comprehend and appreciate the wisdom of their structure, the harmony of their

arrangement, the laws by which they are governed, and the properties with which they have been endowed by a beneficent Creator. I hesitate not to aver, that no pursuit has ever yet engaged the attention of Man, more happily calculated to enlarge his mind,—to wean and purify it from sordid passions and grovelling views,—or to exalt it to just conceptions of the power and goodness of the Deity, than a rational and philosophical study of the objects of Natural Science.

But it is not merely for its intellectual and moral advantages, that this Science is entitled to our regard, and deserving of cultivation. A portion of it is indispensable to the success of many of our most important practical operations,—especially of those connected with Agriculture, and the useful arts. We are obliged continually to draw from this fountain, much of the information which is necessary to constitute a decent share of intelligence in the common concerns of life: and the question so often asked,—“of what *use* is such knowledge to the man of business?” evinces a deplorable deficiency in those who seriously propound it. It is not pretended that it is necessary for every one to pursue the various branches of this, more than of any other science, to their minutest ramifications. That is an undertaking, interesting indeed, and often attended with important results,—but which is adapted only to the condition of persons of leisure. Yet I contend that the elementary principles of Natural knowledge are not only accessible to every man, of ordinary capacity,—but that they are in a high degree subsidiary to all his most valuable temporal pursuits: for the principal business of this life is with the natural productions which the Creator has distributed around us—and surely it must be of some impor-

tance to us, that we should be correctly acquainted with them.

They are the subjects of all our practical operations. To comprehend their true character—to avail ourselves of their valuable properties, and obviate, or counteract their pernicious tendencies,—is the very end and aim of all our labors. And what is this but a definition of the science of which I am speaking? This science has for its object all created products of which man can take cognizance by his senses. It comprizes a knowledge of their distinctive characters,—their relations to each other,—and their capabilities to contribute to the enjoyments of life. Can it, then, be alleged that there is no *utility* in such knowledge? Where is the pursuit so lofty, or the occupation so humble, that it does not, either directly or indirectly, draw largely upon our Science for the means of success? What useful business is so abstracted from materiality, that it has no connection with either the Mineral, the Vegetable, or the Animal kingdom? Shall the suggestion be listened to, in this age and country, that natural knowledge is an useless and frivolous acquisition? or that it is beneath the dignity of Man to make himself acquainted with the works which God has made? I trust not. I am sure it will not within the pale of this Society.

But it is alleged that the science is abstruse, and almost unattainable, by reason of the technical difficulties thrown in the way by those who have treated of it. This is an objection which, as in many other instances, vanishes in great measure as we approach the subject.

It is true that the science has been somewhat oppressed with the technical lumber of erudite System-makers, who, in the exercise of their inge-

nity, not unfrequently wander from the beaten track, and sometimes lose sight of practical advantages: But the evil has been magnified by those who seek to palliate their own deficiencies by decrying the labors of the learned. Amid all the mischiefs complained of, from the projects of scientific reformers, there has resulted much good from their speculations and researches. New views have been obtained, and improved methods devised for facilitating the acquisition of knowledge. The denunciation of *Systems*, and *Nomenclature*, as obstacles in the high way of science, frequently springs from the want of a just conception of their value. It is admitted that they are only the *implements* of Learning, and not the ultimate object of our pursuit; but I apprehend that without a skilful acquaintance with those implements, and the modes of using them, the work itself would make a sorry figure. Instead of lucid order, and a language of precise and definite meaning, we should witness all the confusion and uncertainty which inevitably result from imperfect views, and from the use of terms of which the significations vary with every neighborhood. There must be method, and nomenclature, in every art and science. Every business has its idioms—every artist has his peculiar phrases, to designate the apparatus, and processes, of his occupation. The most illiterate ploughman, with all his aversion to technicalities, talks of his *Clavis*, and his *Swingle-tree*, &c. and scarcely disguises his contempt for those who are ignorant of the meaning of his terms! Then surely it will not be denied that the various objects in nature should each have a significant and well defined name. To answer the purpose, it must be a name, too, which has not been appropriated to any other object.

Hence we may perceive the difficulties which Naturalists had to encounter, in framing a Nomenclature adapted to popular apprehension. To form a technical language from the vernacular tongue, which should be intelligible to all nations, —or even exempt from confusion among their own people, —was obviously impracticable. But happily, the Classic stores of antiquity presented a rich and ample fund, on which they might draw for the use of the whole scientific world, without the fear of exhaustion. A nomenclature has been constructed which, doubtless, appears formidable at first view; but it ought never to be regarded as a mere mass of *names*. The learning of a *name* should invariably be simultaneous with a practical knowledge of the *object* to which it is applied. In that way, it is not only acquired without effort, —but the mind takes an interest in the attainment. The moment we have a conception of the characters which identify an object, we feel the want of a name to associate with it: And thus it is, that terms and definitions, applicable to new objects, are never deemed useless, or burthensome, by those who are enlarging the boundaries of their knowledge. What should we think of the sagacity of a stranger, who, desirous to become acquainted with the inhabitants of a large City, would commence his undertaking by committing to memory the contents of the *Directory*? The absurdity of such a mode is palpable: and yet, if he went to work rationally, and extended his personal acquaintance with the citizens, he would soon feel the necessity of *names*, and perceive the utility of the book referred to. Just so it is with the various objects in nature. It is upon

similar principles that nomenclature is beneficial; and it is upon the same plan that it ought to be acquired. Nothing can be more unfavorable to the progress of sound knowledge, nor more disgusting and repulsive to the student, than the mistaken practice of suffocating the mind with a mass of names and technicalities, abstracted from a clear conception of the objects to which they belong. I have been led into these cursory remarks, in vindication of the general merits of our Science, from a knowledge that there are still some who proscribe it, as being amongst the frivolous and unprofitable pursuits of the idle and visionary—or who find fault with the technical difficulties which present themselves at the threshold of the study. I am sensible, however, that those prejudices are rapidly departing from the minds of the intelligent and thinking portion of the community. Let us hope that a final period will speedily be put to them, by the diffusion of rational information: and that the Elements of Mineralogy, Botany, and Zoology, will ere long be considered an indispensable branch of education, in all our Schools. When I witness the zeal and interest in the cause, manifested by the members of this Cabinet, I cannot but flatter myself that it will prove to be the *punctum saliens* of Natural Science, in our County,—whence a taste for such studies will be communicated to every ingenuous youth within its borders.

We have associated for the purpose of devoting a portion of our leisure to the acquisition

and promotion of Natural Knowledge. Our primary object is to collect the materials for a complete history of the natural productions of the County in which we live. By the formation of a Museum, in this place, we may hope to possess Specimens of every such production; accompanied by an accurate notice of their localities, characters, and such other information as may be interesting. We cannot doubt the willingness of our intelligent fellow citizens, generally, to aid us in the laudable undertaking; and that their contributions of specimens, from the various parts of the County, will be numerous and valuable.—With a complete collection of our *Minerals*, duly arranged, and a geological exploration of the County, an interesting chart of this region may be formed, which will exhibit at one view the character of the country, and the distribution of its mineral treasures.

By forming an *Herbarium*, which shall contain specimens of all our vegetable productions, we can not only contribute our quota towards the completion of an *American Flora*, whenever some master hand shall undertake to arrange the materials,—but we may, in the mean time, by exchanges with Botanists of other districts, enrich our collections, and extend our knowledge of the plants of the United States, with comparatively trifling labor or expense. The same remark may also be applied to our Mineral collections.

A more precise knowledge than we now possess, of the *Animals* of our County, would also be interesting. Although many of those which originally inhabited our woods have gone, with the red man of the forest, never to return,—and others are daily becoming more rare; yet it

would be satisfactory to know what, and how many, still remain. A complete catalogue of the *Fishes* which inhabit the waters of Chester County would, of itself, be a gratifying acquisition. An accurate knowledge of our *Insects*—more especially those which commit such ravages among the products of our farms, and gardens,—is a most desirable object. My limits forbid me to enlarge upon the many interesting considerations connected with these topics: but I waive the attempt the more willingly, as I know you are familiar with the most of them.

Did time permit, I could expatiate in detail upon the benefits afforded by Natural Science in exploding vulgar errors—expanding the mind, and fortifying it against the devices of knavish impostors, who are always on the watch to take advantage of ignorance and credulity. For want of this knowledge, worthy citizens have often been subjected to the grossest imposition. They have been led, by designing adventurers, to incur great expenses in searching for mineral treasures, in regions where a moderate acquaintance with Geology would have taught them it was in vain to look. An ignorance of Mineralogy has likewise led to many absurd expenditures in quest of the precious metals. It is indeed humiliating to reflect on the frauds which are practised upon worthy men, who become a prey to speculating Empirics, from the sheer want of a little elementary knowledge of Natural History. A destitution of Botanical information is also a disadvantage in the practical pursuits of life; and often gives rise to, or favors the propagation of, the most absurd and ridiculous notions. There are many plants which it is always desirable to be able

to recognize with certainty,—whether they be valuable or pernicious;—and yet serious mistakes are very frequently made. Active poisons have been mistaken for esculent vegetables; and the error attended with fatal results. Even some of the common obnoxious weeds, which it is so desirable to extirpate from our farms, are unknown to many agriculturists. I have seen an industrious farmer who was anxious to rid his premises of that notorious pest, the Ox-eye Daisy,—but, from his utter ignorance of the plant, was directing all his energies against one of a totally distinct, and comparatively harmless, character. Such practical blunders, and defective information, touching the immediate objects of their profession, are any thing but creditable to American Agriculturists, in this enlightened age. If there be those who do not choose to inform *themselves* beyond the manual operations of the field and the barnyard, it is at least due to the future good standing of their *children*, in an intelligent community, that the youths should have some chance to escape from the chrysalis condition of darkness and prejudice.

But there are other, and still more disreputable errors, growing out of an ignorance of the Natural History of Plants. We have all seen respectable men—some of them the owners and cultivators of valuable farms—who were yet so little acquainted with the laws of Nature as to believe that plants are often converted, during growth, into others of a distinct kind, or genus. A farmer in this unfortunate state of mind, can of course take but little interest in procuring clean seed for sowing his fields, if the best of it is subject to such untoward pranks as that!

The vulgar error of the transmutation of *Wheat* into *Bromus*, or *Cheat*, is familiar to every one. Nay, there are some so strangely credulous as to imagine, (I will not dignify the fantasy with the name of *belief*;) that our cultivated *Flax* is often changed into a plant, not only of a different genus, but of a remote *class*, and wholly distinct in all its natural botanical characters! I allude to the *Alyssum sativum*, of the Botanists:—a plant to which, in reality, the *Flax* has no more affinity, than it has to the *Shepherd's Purse*, or the *Horse Radish*! Such wretched absurdities are a reproach to the honorable profession of Agriculture; and ought to be exploded without delay.

There is another subject connected with our Institution, which, in my estimation, ought likewise to command our attention. I mean a collection of *Biographical Notices* of those Citizens of Chester, who have heretofore devoted their time and talents to the promotion of our favorite Science. Although the Study of Nature, hitherto, has not prevailed extensively in our County, we shall find that we have abundant reason to be proud of the character and attainments of our MARSHALLS, our BALDWIN, our JACKSON, and other estimable predecessors in the walks which we have selected for our recreation and instruction. A faithful sketch of the lives and labors of those worthies, who have left us the fruits of their industry, and the example of their virtues,—will be at once an appropriate tribute to the memory of departed merit, and an honorable evidence of the correct taste, and feelings, of an Association emulous of their laudable career.