

done. The same may be said of our town schools in the grade below the high school. Put algebra into the grammar school, and perhaps geometry, and perhaps also Latin. Let us give up the idea that a lad who has begun arithmetic must never lay it aside for anything else till he has become master of it. The idea is simply absurd. As well keep a blacksmith's apprentice at work at horseshoes till he is perfect in them, not allowing him to strike a blow at a piece of iron in any other form.

These statistics should be remembered: Arithmetic, 61 per cent; twenty-one other branches, including history, algebra, natural philosophy, etc., etc., 5 per cent. And this in the enlightened State of Ohio.—*Ohio Educational Monthly*.

Oliver Optic.

This widely-known and popular writer for children is a school-teacher. Mr. Wm. T. Adams—more generally known under the above name—was born in Medway, Mass., July 3d, 1822, and therefore is forty-five years of age. He became a school-teacher at the age of twenty, and for twenty years occupied that responsible position with credit to himself, and to the satisfaction of the parents whose children were under his charge. For six years he was Principal of the Boylston and Bowditch Schools in Boston, and at one time had twelve hundred scholars and twenty-five teachers under his immediate supervision. But not alone in 'common schools' has he labored; for twenty years he has been a Sabbath-school teacher, and seven years a superintendent. The first volume of the Boat-Club was published in 1854—and since then he has written the various series herein enumerated, the sales of which have amounted to the numbers annexed: Boat Club Series, 6 volumes, sale 100,000 copies; Woodville Series, 6 volumes, 100,000; Army and Navy Series, 6 volumes, 75,000; Riverdale Series, 12 volumes, 125,000; Young America Abroad, 3 volumes (3 out and 3 in process), 25,000; Starry Flag Series, 3 volumes (3 out and 3 in process), 21,000;—total, 36 volumes, with a sale of 446,000 copies. In addition to these, Mr. Adams has written a popular spelling-book, two novels which have been well received by the public, and one volume of miscellaneous stories, thus making *forty volumes* from his prolific pen!—*Illinois Teacher*.

Where Lies the Blame?

Great complaint is often made, at the present day, that the Natural Sciences have not assigned to them sufficient prominence in the course of studies pursued in our schools; and complaint *might* be made, also, oftener than it is, that where they are introduced and used, they fail to furnish much mental discipline, or to supply the pupil with any considerable amount of practical information. Even more,—they do not often enkindle in the mind of the pupil that love for nature and nature's principles, and those habits of observation and investigation, which constitute so large a share of the benefits derived from this class of studies. Now where, we ask, lies the blame? In attempting to answer this question, somewhat briefly, let it not, by any means, be anticipated, that we are going to re-open the discussion of that vexed question, relating to the comparative merits of the Classics and the Natural Sciences. We have no such intention.

It is quite generally allowed, we believe, by teachers and scholars, that our most enthusiastic and successful naturalists are not made so by a study of the natural sciences, after the manner of the schools; and it is not too much to say that the young student of nature often throws down the text-book in disgust, and goes forth to pluck flowers, chase squirrels and butterflies, or to hunt for pollywogs and dragon-flies. Now there must be something wrong in such a state of things. To healthy minds the aspect of nature is certainly attractive, and the study of her works and laws, inviting.

It seems to us that the source of failure in this class of studies, is to be found principally in the character of the text-books, and

the methods of teaching. Our text-books are radically defective and wrong; and teachers confine themselves to books too exclusively. They teach books too much, and nature too little. We can but confess that many of those books are artificial in the extreme, and rigidly mechanical, in the treatment of subjects which are, in themselves, easy and natural. They deal too much in the dry details of science, which are principally devoid of interest, except to the professional student; while the more popular treatment of the subjects is often so meagre as scarcely to deserve the name.

In school text-books on Natural History, altogether too much prominence is given to the uninteresting details of classification; and the animals described are mostly foreign, and those which the pupil never sees. The numerous forms of animal life in our common fields and waters, with their instincts and habits, which are always so intensely interesting to the young, are either entirely ignored, or treated in the most superficial manner.

How many students in chemistry can say, what a majority of the subjects treated in the text-book in that branch thoroughly enlist their interest by their method of treatment? They may discourse flippantly and parrot-like in regard to the nature of heat, and the most recent theory therefor, but can they tell you why they blow their cold fingers to warm them, and blow their hot pudding to cool it? Many authors would consider such an explanation of the *uses* of knowledge as actually marring a scientific text-book.

Text-books in the sciences are generally too large and voluminous for the purposes for which they are intended. There are honorable exceptions, but they are most plainly in the minority. We have before us two works on Botany. One is a simple treatise, of not much more than two hundred and fifty small duodecimo pages, including the Flora, with numerous illustrations of the vegetable world; and the text gives, in very easy and racy language, the outlines of the science, and abounds in details of descriptions and facts which are attractive, and even fascinating. The Cedar of Lebanon and the Banian of the Orient, are probably not mentioned upon its pages; but the violet and the daisy, the crocus and the honeysuckle, and many common plants, grasses and shrubs, are described in language happily adapted to the understanding of children and youth. It is a book convenient and reasonable in size, and with very few, if any, superfluities.

The other work is a portly octavo volume, of more than eight hundred and fifty pages. It does not, perhaps, profess to treat of the whole vegetable kingdom, but it must include a good portion of that which is known. It gives a view of the subject in general and there is no lack of the minutiae of the science, *scientifically treated*. That it is a perfect thesaurus of Botany, and highly valuable as a book of reference for the expert in the science, is quite evident; but that one student in ten of those who study it will ever make use of a fifth part of the work in school, or even afterwards, is not to be reasonably expected.

In no one of the sciences has there been, comparatively speaking, so little success in making good text-books for school use, as in Astronomy. The science itself is so happily adapted, when properly studied, to extend the faculties of the learner and to give him profitable conceptions of the works of creation and their Great Author, that it seems a pity that he cannot have better helps for the pursuit of so noble a study.

What we have said in regard to the character of text-books in a few of the branches of Natural Science, will apply equally well, we think, to most of those books in other branches not mentioned. When we add to this the fact, too well known, that the teaching is not so good as the books, a bad matter is certainly made worse. We have known a person to teach a class—we beg pardon—to hear the recitations of a class in Botany for a whole summer, without carrying a dozen specimens of flowers or plants before the class during their whole course. Had the pupils been compelled to rely entirely upon the book—even an inferior book—would they not probably have obtained a better knowledge of