of the places with which the child was familiar, and objects, about the size of the sun and moon, or the of such acquaintance with the cardinal points, with the reasons for the different lengths of the day and night at different seasons of the year ; with the manner in which the form of land determines the course and length of rivers; and with such other elementary physical facts as his own observation and thoughtful-ness, with a little aid from the teacher, might enable him to discover for himself. It was a great mistake to suppose that costly models, globes, and other apparatus, were absolutely needed in order to make these rudimentary conceptions clear to learners. The most effective illustrations were often those which an ingenious and inventive teacher improvised for himself,—a little model in clay or sand; a plain globe on which he himself drew lines one by one, as he wanted to explain them; or good diagrams drawn *ad hoc*, and in relation to the particalar truth then under discussion — rather than those elaborate illustrations which were manufactured for sale, and which often bewildered children by their fulness of detail in relation to matters not yet comprehended. It was a good plan to avail oneself of any historical association which might happen to be connected with the place in which the scholar lived, or with any famous castle, cathedral, or other building which he knew. Much of history might thus be taught *obiter*, and incidentally in connec-tion with geography lessons. Mere knowledge of the names and positions of places, unless some interesting or useful associations were established with such names, was the most barren of all school acquisitions, and that which soonest dropped out of the mind. Among many directions given in relation to the teaching of History, it was specially insisted on that the subject should be so taught as to inculcate caution, fairness of mind, a sense of the great difficulty of obtaining perfect accuracy in the statement of facts, and consequently of the need of much suspension of judgment and generous consideration in estimating the characters of those who had played a great part in history. The fact that the whole of the data on which we can form a safe judgment on the character of a man or of an event are not always before us, should be frequently called to mind; and this pratice would not be without a reflex effect of great value on the moral habits of a pupil; and especially on the manner in which he would come to conclusions about the conduct and character of his own contemporaries. Some directions were given as to the order in which historical facts should be studied ; and the way in which lessons on the administration of justice, on the constitution of Parliament, on taxes and local government, should be interspersed with the more

regular teaching of the subject. In the concluding lecture, the subjets of Physical Science, information about the common objects and phenomena of nature, were discussed. The spécial objects of Physical and Experimental Science, and the claims which have been recently urged by Sir J. Lubbock and others, for a fuller recognition of these branches of knowledge as constituent parts of a liberal education, were examined at length. Those claims were justified by obvious practical utility of all researches into the beauty and marvellousness of the disclosures which science makes to us, and the delight with which a child feels wonder and curiosity stirred within him by the wise exposition of natural laws. And if the habit of observation and generalisation were duly encouraged in connection with the study of science, the indirect mental effect of such a habit would be found of great value Rousseau and others in France, and what at a later in solving many of the practical problems of life which period has been attributed to Pestalozzi. were not scientific. Mere information about common

structure of the mechanical powers, or the way in which water boils, is not science, and does not deserve the name. There is no true scientific teaching unless single facts are properly correlated with other facts, and seen as illustrations of some larger general truth, than is expressed in the statement of the fact itself. Training of this kind was not to be had from books only; though we might well congratulate ourselves that, in this department, the highest authorities, Huxley, Lockyer, Balfour Stewart, and others, had come to the aid of the schoolmaster. Nor was it to be gained from oral lessons only, valuable and indeed indispensable as these were. The pupil must himself be brought into actual contact with the facts of life, with the material forces around him, and learn their nature by handling and by regulated experiment. Some remarks on the way in which this might be most effectually done, and on the place which scientific teaching ought to hold in a well organised school course, brought this second series of lectures to a conclusion.-Educational Times.

Natural History in Schools.

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At the request of my colleague, the retiring President of the Association, I have undertaken to report "On Text Books and Methods of Instruction in Natural History." But inasmuch as the subject has not been discussed in this State, and the importance of stimulating such studies is very great, I trust you will pardon me for not confining myself strictly to the verbal contract, but permit me to make a review at such length as to give some information in regard to what has been written and done on the subject. In seeking to add to the efficiency of any established system, especially that of education, we are apt to regard any suggestion for improvement as something new; whereas, if we look back to ascertain what have been the sentiments and opinions of the great forerunners and pioneers of thought, we will generally find that we have been forestalled in many of the things we consider to be novel elements.

It is to the writings of Lord Bacon, perhaps, that we are first indebted for the idea of incorporating on the system of scholastic instruction the study of Natural History. Lord Bacon, while urging the study of the classics as necessary, and requisite for all future attainments, saw the necessity of withdrawing the youthful mind from the too exclusive pursuit of classical and mathematical knowledge. He had doubtless felt this need in his own experience, and his love of nature prompted the suggestion of incorporating into a system of classical education a certain proportion of natural objects as subjects of contemplation, in order to break up a mental train, the tendency of which was to lead the mind into classical routine, which, like all other routine, sooner or later degenerates into pedantry, bigotry and ignorance of a great deal worth knowing. That this need was felt by other minds than that of Lord Bacon, may be found in the accounts given of John Amos Comenius and Wolfgang Ratich, in the XVIth and XVIth centuries, as well as in the writings of

Comenius was a Mpravian, and his ideas on impor-