

IN your issue of July 9 there is an article on "The Position of Science at Oxford," and though I am not very well acquainted with that position, and am entirely in sympathy with the writer in his endeavour to get that University to encourage the science student more than it does, yet there are some remarks in the article to which I must take exception.

The statement that men of a year's standing at Cambridge, who come up with a moderate acquaintance of science, have an opportunity of bringing themselves up to scholarship standard at the end of their first year, sounds rather as if this was of importance in attracting the science student to Cambridge. But is this opportunity really of importance? Do many men in reality get scholarships in science at the end of their first year? Is not the scholarship money rather used in increasing the value of the scholarships already gained, than in forming new ones? Are not those who go up with "a fair general education and only a moderate acquaintance with science," more often advised by their college tutor to go in for the general examination than to specialise in science at once?

But after making the above statement, unsupported by statistics, the writer goes on to make an onslaught on science teaching at our public schools as the cause of the inferiority of the science student at Oxford.

Taken as a whole, he says the science teaching at our public schools is bad. The arguments he brings forward to support this statement are that, firstly, the inducements offered to learning science are very few; secondly, it is openly discouraged; and thirdly, boys neglect those studies which may safely be neglected. He seems to try, moreover, to prove the absence of good science teaching by the fact that the average boy comes up to the university destitute of scientific ideas. Let us take these points separately. The teaching is bad because the inducements to learning science are nil. This will be news to many who spend their lives in teaching science. What are the inducements to learn anything? At an early age two, at least, of the inducements to learn are interest and fear. Now the interest taken by the average boy in learning about the things around him—the earth, the air, plant or animal life—is undeniable, and it is far easier to get him interested in events which occur in the natural world than in G.C.M. or *Mensa*. While if fear is to be called on as an inducement, it is as easy to cane him for not doing his science work as it is to cane him for neglecting his classics. But later in life a boy begins to think of his future; and if he chooses a career in which a knowledge of science will help him, it will be just as great an inducement to work hard at science as it would be to work hard at classics if he had chosen a career in which classical learning was of importance. Still later he may learn to look at learning for its own sake, and he will feel that if he has a bent towards science, he will be able to educate himself by working hard at science, just as if he had a bent towards any other study he would be induced to work hard at that particular study. So that the statement that the inducements offered to the study of science are very few, is a somewhat extraordinary one to make.

Secondly, the statement that learning science is openly discouraged is, happily, becoming a false one. There are few of our public schools now that are not doing a great deal of science teaching; and though it is to be hoped that science teaching will spread still more, yet one must gladly acknowledge the enormous advance of science teaching during the past decade, and must feel that the open discouragement of science is now no longer in existence.

But what shall be said of the argument that the product of public school science teaching is a failure because boys neglect those studies which may safely be neglected? This is a direct attack on the science teachers at all our public schools as being inefficient teachers, and is an argument for calling on all headmasters to dismiss their present staff of science teachers. Before accepting this conclusion it would be of interest to know who your correspondent is, that one might know what sort of authority he speaks with, and what knowledge he has of the science teaching at the public schools. Moreover these schools, with their absence of inducements to learning science, and their absence of efficient teachers in that subject, send science scholars in large numbers to Cambridge.

But the final argument that science teaching at the public schools is bad, is because the average schoolboy comes up to "the University" destitute of scientific ideas. There is no clue to what he means by "the University"; but, taking Cambridge

as an example, a considerable percentage of its undergraduates who go in for an honours degree, take up the Natural Science Tripos, a large number go in for medicine, and others go in for the study of science in order to get an ordinary degree. Most of these have done a considerable amount of science at school, and cannot be said to be destitute of scientific ideas. But many of the others, who go in for classics, mathematics, or other studies, although they may not remember the equation representing the action of sulphuric acid on chalk, yet, if they have been taught elementary science in their youth, may have learnt from it some of the accuracy and method which should characterise their work in any direction; while the training given to the mind in forcing it to appeal from written words or spoken statements to experimental facts is of immense importance, even though the particular facts may themselves be forgotten.

But the cry that Oxford is not attracting the science student in large numbers, is no doubt true; and the reason is to be sought inside, not outside, her walls. Cambridge, it is confessed, is not in the like predicament; and Cambridge has attracted many, who would not otherwise have gone to a university at all, by her medical and engineering schools.

A vast number of boys who do science at school, go straight to the hospitals or to technical institutions; and if Oxford is to attract the science student, she must develop that side of her teaching.

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Capture of a Specimen of "*Lepidosiren*" in the River Amazons.

I HAVE just received a letter from Dr. Émil Goeldi, Director of the rising Museum at Pará, in which he informs me of the interesting discovery of *Lepidosiren* at the mouth of the river Amazons (or rather of the river Tocantins). I had better give the part of his letter which refers to this capture. The letter is dated Pará, June 9.

"I have the pleasure of informing you of the discovery of *Lepidosiren* at the mouth of the river Amazons, viz. on the island Marajó. This afternoon I received, from a friend who has large possessions in the island, a specimen in spirits. The mail leaves in a few hours, so that I can scarcely do more than send you a few lines announcing this fortunate event.

"Often, since my arrival in Brazil, has my attention been directed to the search for this Dipnoan, especially by Prof. Karl Vogt and yourself. But it was only after my appointment to the Pará Museum, that I could take up the matter with a reasonable hope of success. I began with distributing thousands of copies of Natterer's figure in reduced size all over Amazonia, and sending paragraphs to the local newspapers in the interior. No local magistrate, no village schoolmaster escaped a notice.

"In consequence of this propaganda I received about a year ago a communication from Dr. Vicente Chermont de Miranda, who takes a great interest in all scientific matters; he informed me that the fish occurs in Marajó, and that he had seen already two specimens. The specimen sent to me now is therefore the third which has come under his notice. It measures, in the present state of preservation, about 58 cm., and is of a slate-colour. The ovaries are well developed, and show that the specimen was killed close to the spawning-time. No villi on the hind-limbs; vent asymmetrical, on the left side; greatest width of body 7 cm. Well acquainted with Ehlers's and Lankester's papers on *Lepidosiren paradoxa* and *articulata*, I looked immediately to the structure of the fin-cartilage. Its segmentation can be seen even without removing the skin, as figured in Lankester's memoir (Fig. 4). Therefore, our Amazons-specimen might be called *articulata* on the same ground as the Paraguay specimens collected by Bohls. But I agree with you and Prof. Lankester that there is one species only of *Lepidosiren*, viz. *L. paradoxa*—*L. dissimilis*, *giglionia*, *articulata* being synonyms.

"The exact locality for our specimen is Fazenda 'Dunas,' on Cape Magoary, Island of Marajó.

"One word more: Prof. Lankester speaks of five Amazons-specimens in European museums. I believe there are six. Only a few years ago the late Mr. Gustav Toepper obtained a specimen near Itaituba on the Tabajóz River which, as I have been credibly informed, has found its way into the Berlin Museum."

ALBERT GÜNTHER.