

LETTERS TO THE EDITOR.

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British Marine Zoology.

PROF. MACBRIDE'S letter in NATURE of September 15 does not require a detailed answer, as some of his statements are merely matters of opinion; but there are a few points on which I should like to comment.

(1) Prof. MacBride says we are unable to support properly one biological station, and that he does not see how we "could be expected to support two"—the second being evidently that proposed by Mr. Pace. But why does he try to ignore the three or four other existing stations? They are all supported; some of them, so far as regards students and researchers, are very well supported indeed.

(2) When he refers to some biological station as an "expensive toy," which in his experience its local friends "soon tire of supporting," one would like to ask of what station he is writing? The statement does not seem to apply to any of those mentioned.

(3) It is difficult for one who has followed the work of the U.S. Bureau of Fisheries Laboratory at Wood's Hole to understand Prof. MacBride's words in regard to it. He says it is "devoted entirely to economic work." A moment's thought of the scientific researches issued from that laboratory by Sumner and others shows the inadequacy of such a description.

(4) As to the Canadian stations, again I think Prof. MacBride does but scant justice to praiseworthy efforts. The western station at Nanaimo was visited last September by a party of biologists from the British Association, who were, to say the least, more appreciative than Prof. MacBride.

But the main thing I want to say is that Prof. MacBride, both in his original article and in his reply to my criticism, has, it seems to me, a false ideal. Expensive equipment, large funds, increased support—these are his keynote; and not a word is said as to a rich and varied fauna, physical features affording natural facilities for research and sympathetic personal service—the factors in the case that give character and tradition to a biological station.

W. A. HERDMAN.

It would be interesting to know what biological stations Prof. MacBride had in mind when writing the letter which appeared in NATURE of September 15.

Prof. MacBride states that it would be better to concentrate scientific support on one station than to have it spread over a number of stations poorly provided with funds and with staff, and, *ipso facto*, incapable of really first-class work. Surely there is more than one station in Great Britain which is capable of affording opportunities of first-class work, and I venture to think that the number of workers attending some of the smaller stations is ample proof of their usefulness.

The case cited by Prof. MacBride, of Chicago students travelling 1000 miles to Wood's Hole, will, I am afraid, not help many of our Liverpool students to attend vacation courses other than those held now at Port Erin, and Chicago students would have to travel nearly 1000 miles in any case to reach the sea.

There is, to my mind, a great advantage in having biological stations near to our universities, so that it is possible to reach them quickly and frequently. Such stations would serve the departments of zoology, botany, physiology, and biochemistry, and the staff of these departments would feel more at home there than at some station which was only visited at odd times, and in the control of which they would not be so immediately concerned. As a result there would be more encouragement for students to work at these laboratories, and little time lost in preparation.

With regard to the economic side of the controversy, one might quote from a paper by the director of the Fisheries Laboratory at Wood's Hole:—"But the life of the sea is an interrelated whole. Hence the futility of endeavouring,

even on economic grounds, to restrict our investigations to food fishes or other animals of obvious commercial importance."

WM. J. DAKIN.

Port Erin Biological Station, September 19.

THERE are one or two matters alluded to in Prof. Herdman's and Mr. Dakin's letters on which I should like to say a word or two.

(1) I had no desire to ignore existing biological stations other than Plymouth, but, until Mr. Pace's circular appeared, I think I am correct in saying that the Marine Biological Association was alone in making its appeal for support to all the zoologists in the United Kingdom. The other stations depend on local support.

(2) The curiosity of Mr. Dakin and Prof. Herdman as to the particular station which "local friends tired of supporting" is, I think, uncalled for. Prof. Herdman's unrivalled acquaintance with biological institutions in this country surely includes acquaintance with a station which has been closed.

(3) I held up the station at Wood's Hole as an example of a laboratory devoted to purely scientific ends, and supported solely by professional biologists. That valuable scientific work of general interest occasionally issues from the laboratory of the U.S. Bureau of Fisheries, which was founded and is maintained for research on economic lines, is totally irrelevant.

(4) As to my want of appreciation of "praiseworthy efforts" in Canada, is Prof. Herdman aware that every cent of expense in connection with all three stations in Canada is borne by the Federal Government, which also pays the travelling expenses of workers?

Finally, in regard to "ideals," I would in all modesty oppose my experience to that of Prof. Herdman. For the last twenty years I have been engaged in zoological research. On a good many occasions I have visited small biological stations, but the only stations where I have been able to bring research to a successful issue are those of Naples and Plymouth, which in the matter of boats and apparatus are thoroughly equipped, and which in the matter of "sympathetic personal service" are very near perfection. A biological station where senior students can handle living animals is one thing, and one where advanced research can be done is another. In Plymouth we possess a station of the second kind, certainly, to say the least, better equipped than any other in the kingdom. It will be a thousand pities if it has to curtail its usefulness for lack of support. It was this strong feeling of the absolute necessity of a well-equipped laboratory which led me in 1906, after several summers of futile attempts to utilise the small movable laboratory, to make the motion at the meeting of the Biological Board in Ottawa which resulted in the building of the permanent station at St. Andrews, New Brunswick.

E. W. MACBRIDE.

The Spotted Kudu.

IN the *Times* of September 23 and the *Field* of September 24 (vol. cxvi., p. 607) I have given preliminary notices of the skull and skin of a hitherto unknown kudu shot by Mr. Ivor Buxton to the west of the Arusi plateau of Gallaland, in the Sahatu Mountains, and south-east of Lake Zwi, at an estimated height of 9000 feet above sea-level. As the owner has promised to present the specimen to the British Museum, I take this opportunity of making it the type of a new species.

The specimen is an adult bull, its full age being indicated by the worn condition of the cheek-teeth. The head, neck, and body are covered with coarse dark-brown hair, much more like that of a Kashmir stag or a mule-deer than that of either of the striped kudus, and the fronts of the legs are dark greyish-brown, and the remainder grey. The throat and chest lack the abundant fringe of long hair characteristic of the typical kudu, but are marked by two broad patches of white, one above the other, while the body-skin shows large white spots on the flanks and hindquarters, but no kudu-like stripes. The face has the usual tragelaphine white markings. The horns are of the kudu-type, but with a much more outward direction, and are greatly inferior in length to those of the typical species, their tips being worn to a