

they lead to conclusions which we know to be geographically false, and we therefore refuse to accept them.

Royal Naval College, Oct. 16

J. K. LAUGHTON

Fossil Oyster

Ostrea callifera from the Hampstead beds is described at page 145, and figured on Plate I., of Forbes's "Tertiary Fluvio-marine Formation of the Isle of Wight." Perhaps this is the one "Inquirer" has found.

T. G. B.

THE PENNATULID FROM WASHINGTON TERRITORY

I PRESUME this disputed organism, referred to in two communications in your number for September 26, is specifically identical with a specimen from Frazer River, British Columbia, presented to me in the autumn of last year, for the Museum of the University, by Mr. Selwyn, Director of the Geological Survey of Canada, and which had been obtained by Mr. Richardson, one of his assistant geologists. I at once recognised it as the axis of a Virgularia, or some similar creature; but there being no means of reference here for the West Coast species, I submitted it to Prof. Verrill, of Yale College, who had no doubt as to its nature, but believed it probably to belong to an undescribed species. There being no sufficient materials for its description, Mr. Whiteaves of this city, who undertook the description of the marine animals procured by the Survey in British Columbia, merely noticed it in his report as an undescribed pennatulid. Its characters were stated by him in a paper read before the Natural History Society of Montreal last winter, and printed in abstract at the time. Mr. Richardson, who returned to British Columbia in the spring, has undertaken to procure, if possible, a perfect specimen, and to have it preserved in alcohol. Should he succeed, we may hope soon to have materials for the description of the species. Mr. Selwyn's specimen, though it has probably lost several inches of its length, being broken at both ends, is five feet one inch in length. It retains, attached to the granulated lower extremity, some traces of animal matter, in which I think I can detect, under the microscope, a few club-shaped spicules.

McGill College, Oct. 11

J. W. DAWSON

DR. HOOKER'S REPLY TO PROF. OWEN

THE Blue Book issued in August last, containing the correspondence between Dr. Hooker, Mr. Ayrton, and others respecting the management of and control over Kew Gardens, included also, in the form of an appendix, a statement addressed to Mr. Ayrton by Prof. Owen, containing various allegations detrimental to the present management of the gardens, herbarium, and museum. The following reply by Dr. Hooker to these allegations has just been printed by order of the House of Commons:—

"Prof. Owen divides the 'aims and applications' of the Royal Gardens of Kew, according to his view of them, under seven heads.

"It is sufficient to state that some of these are recognised by the Government, and specified in their instructions under which the Director carried out his duties; but that others, and those of a most comprehensive nature, have no place there, and are not such as pertain to botanical gardens elsewhere. Amongst these are the agricultural operations specified by Prof. Owen, 'the application of manures, demonstrations of the fittest species of grasses for particular soils . . . methods of irrigation, subterranean pipe, conveyed liquid manures, and so forth,' all of which are being carried out with vigour and success by various agricultural societies and private individuals throughout the country.

"To establish such operations at Kew would involve an enormous expenditure, and occupy many acres of ground

now devoted to the legitimate purposes of a botanical garden.

"Illustrations of rock-works, garden sculpture, and ornamental waters, also recommended by Prof. Owen, appear to be equally out of place.

"Prof. Owen is in error in stating that the arrangement of plants in natural groups, with conspicuous labelling, &c., is at Kew 'at present limited to the herbaceous grounds;' as he is also in implying that there is no illustration of 'geographical distribution,' which is, in truth, carried out to an incomparably greater extent at Kew than in any other garden known to me at home or abroad. Prof. Owen cannot have visited the houses devoted to ferns, orchids, succulents, aroids, &c., nor the arboretum, fruiticetum, and pinetum, nor observed the arrangement on the shelves of the two great buildings, the palm stove and the temperate house.

"The fact that a first-rate herbarium and library must be maintained for the purposes of a botanical garden, and in immediate proximity to it, has not only been uniformly admitted and acted upon by successive Governments, but is so universally recognised by naturalists everywhere, that I am surprised that Prof. Owen should dispute it.

"I am sure that were he acquainted with the nature and amount of the duties devolving on this establishment, he would abandon his opinion without hesitation.

"In support of the contrary opinion he refers to that early period in the history of Kew, when its new and rare plants were named at the Banksian herbarium in London. But the naming of a few new and rare plants cultivated at the beginning of the century in a private garden of nine acres, probably at no one time containing more than 4,000 species, is a very different matter from keeping accurately named public collections that occupy 300 acres, and are estimated to contain 20,000 species; and this in an establishment that is annually called upon to name literally thousands of plants from other botanic gardens and nurseries in England and similar institutions abroad. A great deal of the naming, and keeping correctly named, the plants at Kew, can be conducted only by skilled botanists visiting the grounds daily. Large classes of plants are now cultivated that must be named in the houses where they grow; and many more, the tropical especially, could not be sent to a distance to be named, without serious damage *in transitu*.

"To this must be added the necessity of naming and ticketing with copious information the vegetable products of economic interest, in three museum buildings, the illustration of which products by specimens, Prof. Owen admits to be a legitimate object of the Gardens of Kew.

"Nor was the naming of the Kew plants carried out in London, as is supposed; there was a large herbarium in constant use at the Royal Gardens at the very period alluded to, the breaking up of which, when it was proposed to give up the Gardens, necessitated the formation of another.

"No comparison whatever can be instituted between the needs in these respects of the Royal Gardens at Kew and the Zoological Society's Gardens in the Regent's Park.

"The reflections that follow on the conduct of the late and present Directors of Kew Gardens are not suited for official discussion.

"Prof. Owen is in error in asserting that the main end or drift 'of Dr. Hooker's evidence before the Scientific Commissioners is to impress upon them the necessity of the transfer of the collection of dead plants' from the British Museum to Kew.

"My evidence is unequivocally opposed to such a transfer.

"Herbaria are not costly establishments, but the least expensive of all natural history collections; and the objects and applications of botany in its largest sense, are now so numerous and so important, as to render a division of the subject necessary; whence the expediency of