

MARINE BIOLOGY IN THE UNITED STATES.

THERE has recently been issued the first Annual Report of the Marine Biological Laboratory at Wood's Holl, Mass. The Laboratory is an outgrowth of a smaller predecessor maintained at Annisquam, Mass., for six years, by the Woman's Education Association of Boston, in co-operation with the Boston Society of Natural History; and the locality where it is pitched is one which has been in especial favour with marine zoologists of the New World, from Alex. Agassiz downwards. The edifice is a small one (63 × 28 feet), two stories high, of plain but very substantial build. It has been especially designed for the purpose to which it is put, and there are eight private rooms available for the use of investigators. Conspicuous among the names of those chiefly concerned in its maintenance are those of persons known to be familiar with the workings of the leading biological laboratories abroad; and Dr. C. O. Whitman, of Milwaukee, has accepted the office of Honorary Director. It is thus manifest that, in the selection of those who are to control the working of their enterprise, the promoters have secured the services of those of their countrymen whose influence would be most conducive to a successful issue.

The Laboratory is regarded by the Director as a "first step towards the establishment of an ideal biological station, organized on a basis broad enough to represent all important features of the several types of laboratories hitherto known in Europe and America." In a very interesting opening address, the same gentleman lays it down as a tenet that "a biological station should be a purely scientific affair from beginning to end," and the spirit of his words appears to have entered into the very organization of the institution over which he presides. Competent investigators not requiring instruction are invited to carry on their researches free of charge, and a small fee is asked only of those whose work requires supervision; while, with a view to developing the resources of the country, provision is made for the conducting of short seven weeks' courses of instruction in marine zoology and microscopical technique. Arrangements are also to be made for the delivery of "occasional lectures, or informal accounts of results obtained in special lines of research carried on at the Laboratory."

The above-named short courses of instruction are no mere vacation ones, whereby the Laboratory would be in danger of conversion into a summer *rendezvous*, but recognized portions of a working scheme; and, in providing for them, our American brethren have taken a new and most important departure in the advance of biological education, and one upon which we ourselves might well act. To many of us it has long been obvious that our own methods of teaching elementary biology are being overstrained. The type-system, in which we justly glory, is being pushed to an extreme not dreamt of by its founders; but while some such method must always be relied upon for a first beginning, we stand in need of a supplementary system, whereby there may be assured to the advanced student a field of labour less restricted than that now largely adopted. We would have him brought face to face with unfamiliar forms of life—forms of which he might probably never have heard—and left to himself (competent assistance being accessible in case of emergency) to identify and to determine them. The student is, at present, nurtured on too great a regard for authority; he is taught to rely too fully upon his teacher, and his powers of independent judgment become thereby stunted; and, unless some means be taken to dispel this delusion, the systematic work of even the near future must suffer. We are of opinion that the remedy is to be found in some such action as that instituted by the officers of the Wood's Holl Laboratory. We need more field-work, and the advanced student should be compelled to supplement the special training which he now receives with, say, a

two to three months' course at the sea-side. Many of our existing schools are already located in situations favourable to the requirements of the case, but their movements are so hampered by the demands of the narrow "syllabus" that little opportunity is left them for the development of their special resources. Setting these institutions aside, however, we believe that access to a fully equipped laboratory is not a *sine quâ non* for the fulfilment of that which we desire. It is true that "any enthusiastic young person who may unfold his umbrella on the sea-shore" cannot be said to have "opened a zoological station"; but it is none the less certain that a born biologist will pursue his calling even under a sunshade, and it should be one of the highest aims of our educational system to single him out. To this end, let the student find his own laboratory in a convenient room in some good locality; set him to collect, to identify, and to preserve; let him rely upon his ingenuity for the construction and arrangement of his accessories; give him ample opportunity to make the most of the resources of the surface-net; and leave the rest to nature. The student who, granted a previous sound elementary training, free of bias, would most readily rise to the emergencies of the case we picture, would be he to whom we would most confidently intrust the future development of our science; and it cannot be denied that our existing methods of training fall short as a sure means of securing him.

Our American brethren are content with humble beginnings. Their Laboratory is small, but it is managed as such an institution should be. We believe our dream to be indicative of a general want; and, should its realization ever come about, to the women of the United States will be due the honour of having inaugurated a recognized system of training such as, to us, seems most desirable for its attainment. Better this than empty glory in a costly edifice.

Young as is the Wood's Holl Laboratory, a record is published, without ostentation, of work commenced in five definite subjects, and efforts are being made to establish a scholarship fund in connection with the institution. The citizens of the United States are now striving by private enterprise to do, for the pure science of aquatic biology, that which their legislators have so nobly done for the fish industries. We heartily wish them success.

G. B. H.

NOTES.

THE next International Archæological Congress is to be held in Christiania in 1891. It was originally intended that it should be held in London. Dr. Ingvald Undseth, of Christiania, is the General Secretary.

MORE than 500 members will take part in the forthcoming Oriental Congress in Stockholm, among them being official delegates from Egypt, Persia, India, Siam, China, and Japan. Two famous Arabic scholars of Medina—Mahomed Mahmud and Mahomed Chingîtbî—will also be present.

THE programme of the second summer meeting of University Extension students and others, to be held in Oxford next month, is now published. The programme, as compared with last year's, shows one remarkable difference. The summer meeting of this year is to be divided into two parts, the first of which, lasting from Tuesday, July 30, to Friday, August 9, reproduces the main features of the meeting of last year—meetings, *conversazioni*, excursions, lectures and visits to libraries, museums, and so forth. On the list of lecturers appear the names of Prof. Max Müller, Sir Robert Ball, Mr. Herkomer, Mr. Lewis Morris, Prof. Henry Morley, Mr. W. J. Courthope, Mrs. Fawcett, Prof. Thorold Rogers, Prof. Pritchard, Prof. A. H. Green,