

"A SUMMER AT THE WOOD'S HALL MARINE BIOLOGICAL LABORATORY."

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THE Marine Biological Laboratory at Wood's Hall is one of many similar institutions in different parts of the world. They are all founded with the intention of making a thoroughly scientific study of the marine fauna, and in many cases the flora of that part of the world in which they are situated. Some are sustained by the government, which recognizes the enormous economic importance of a thorough acquaintance with the inhabitants of the sea; some are university institutions, maintained as a department of the university proper; others again are founded and maintained by private enterprise and incorporated as a company. Of the last sort is the Marine Biological Laboratory at Wood's Hall, Mass.

Perhaps the most celebrated laboratory of the kind is the Naples Zoological station, under the able management of Dr. Dobson. This may very properly be styled the Mecca of Zoologists; here the enthusiastic naturalist will meet with the most able exponents in Biology of the present day, and at the same time obtain unrivalled advantages for the study of his favorite science. Into such an institution as this entrance can be procured only through the courtesy of the director, or through appointment by some institution which supports a "table" there, and sends each session some promising and favored student to occupy it. Among other celebrated institutions of the kind I may mention the stations at Trieste, under the direction of the celebrated Dr. C. Claus, and at Kiel, under Dr. K. Möbius. In all these and similar institutions a large body of investigators are at work, solving the problems of anatomy, embryology and of the action and inter-action of living forms one on the other, helping forward the most modern of all sciences, Biology. For the publication of the discoveries annually made, the Naples institute publishes a journal under the title of *Mittheilungen aus der Zoologischen Station zu Neapel*; the Trieste station occupies a large part of the journal known as *Arbirten aus der Wiener Zoologischen Institute*, and other stations have their special means of publishing their annual discoveries.

It is only comparatively lately that any such institution has existed in America. To be sure, private laboratories have existed and do exist, but these have not been of such a character as to afford advantages to any large number of students. The first attempt made in this direction in America was Louis Agassiz's laboratory at Penekise, an island lying some twenty miles south of Wood's Hall. Here a large laboratory was built and equipped in 1878 by the kindly munificence of Mr. Benjamin Anderson, of New York; and here for one year Agassiz superintended the work of a number of enthusiastic naturalists, among whom I may mention Dr. C. O. Whitman, the present director of the Wood's Hall laboratory, until the good work was prematurely stopped by his death. The laboratory remained standing unoccupied till last year, when it was destroyed by fire. The Annisquam laboratory was the lineal descendent of this.

The Marine Biological Laboratory is an extension of the Annisquam laboratory, carried on for six years by the Woman's Educational Association, with the assistance of the Boston Society of Natural History. Founded in 1888, the growth of the laboratory has been steady and markedly great. In 1888 seventeen were in attendance, while in 1891 the numbers were reversed and seventy-one attended. Since its inception seventy-eight different institutions have been represented, and I think I may say benefited.

Wood's Hall is situated on the north shore of Vineyard Sound, at the entrance to Buzzard's Bay, within two and a-half hours of Boston by the Old Colony Railroad. While not in itself a beautiful place, being in fact a small fishing town, it has nevertheless surroundings of unusual interest

and beauty. Lying across the Sound at a distance of about five miles is the beautiful island of Martha's Vineyard; thirty miles beyond this is quaint old Nantucket. Through the Sound passes all the coasting trade of the Eastern States, and daily the number of vessels passing through exceeds 100. I myself have counted as many as seventy sail in sight at one time, forming, with the sun glancing from their white sails, a sight never to be forgotten. In exactly the opposite direction, across Buzzard's Bay, lie New Bedford, Narraganset Bay and pier, and a little farther down the coast fashionable Newport.

The laboratory, as at present constituted, contains two departments, located each in one of the two stories; the lower for the use of students, the upper for investigators.

Perhaps I could not better give an idea of life there than by outlining the routine of a typical day. Work begins early, and so by 6.30 nearly every man is up, and the ladies, too, whom by the way I must not forget; breakfast begins at seven, but the lazy members do not begin till 8.30 or 9. After this all repair to the laboratory, and the regular work of the day begins. At about ten, depending on the time of low tide, one of the officers comes around to announce that the launch is ready to start; then those who wish to go out collecting don their hip boots, take up a pail, and perhaps a spade or a net, and start off. Generally some ten or twelve go, including always several ladies. We are soon seated in the pretty little steam-launch "Sagitta," and away we go; often the Fish Commission launch starts out at the same time, but as our launch is far the faster, we always win in the race that is sure to follow, and we head out for "the Hole." This, I must explain, is a narrow piece of water connecting the harbor with Buzzard's Bay; as the tide rises from two to four feet higher in the harbor than in the bay outside, there is a great rush of water through "the Hole" at the turn of the tide. The current there runs from five to seven knots per hour as the tide falls. A great many people will have it that the village receives its name from this, and should therefore be written Wood's Hole, but the usual spelling being more classic better suits those Bostonians who spend their summers there. In about twenty or twenty-five minutes the collecting grounds are reached and each man starts to work. By this time the water has left Hadley harbor, and a broad stretch of mud, with shallow pools, marks its site. Here all manner of marine forms, much more interesting to the zoologist than to the general reader, are to be found, the description of which I shall, therefore, spare the readers of VARSITY. Perhaps an hour or an hour and a-half spent collecting, when the shrill whistle of the launch calls us together, and soon we reach the laboratory; here we dispose of our treasures in whatever way best suits us, and after discussing dinner return to the laboratory, each to his own special department. Only one line of work, which may interest the general reader, will I mention; and that is the watching the development of some marine worms and mollusks. Some of these have a habit of depositing their eggs early in the evening, and these at once start out on the long series of changes which at the last result in the adult form. The consequence of this is that the enthusiastic student who desires to become acquainted with their method of development must sit up all night long, and perhaps for some time in the morning, rewarded for his devotion to science by the wonderful changes taking place under his eye, which never lose their interest. That this is hard work I can give my testimony, having tried it. To sit alone in a large laboratory, hour after hour through the night, peering through a microscope all the time, to see, perhaps, one change in a half-hour or more, requires a certain definite amount of devotion.

But not all our time there is spent in work; punctually at 5 p.m. every day, all the men who can swim leave the laboratory, and seeking a certain secluded spot where a plunge into deep water can be obtained, we disport in the briny deep. Then after supper, in the hour or so of light