SOME LABORATORIES OF MARINE BIOLOGY.

THE description of some of the Marine Biological Laboratories of Europe, contributed by Mr. Bashford Dean to the *American Naturalist* for July, and reprinted in NATURE, August 24, was continued by the author in the August number of our transatlantic contemporary. Some of the most important laboratories were omitted in the first article, but they are included in the second, from which the following account has been taken :—

"The Stazione Zoologica at Naples during the past twenty years has earned its reputation as the centre of marine biological work. Its success has been aided by the richness of the fauna of the Gulf, but it is due in no small degree to careful and energetic administration. The director of the station, Prof. Dohrn, deserves no little gratitude from every worker in science for his untiring efforts in securing its foundation and systematic management. Partly by his private generosity and partly by the financial support he obtained, the original or eastern building was constructed. Its annual maintenance was next assured by the aid he secured throughout (mainly) Germany and Austria. By the leasing of work tables to be used by representatives of the universities, a sufficient income was maintained to carry on the work of the station most efficiently. A gift by the German government of a small steam launch added not a little to the collecting facilities."

After commenting upon the attractiveness of the Naples station, and the general air of quietness which results from the excellent system that prevails in every branch of the station's organisation, Mr. Dean goes on to describe the aquarium room, which is lighted only through wall-tanks. "There are in all about two dozen large aquaria embedded in the walls of the sides and of the main partition of the room. The water is clear and blue. The background in each aquaria, built of rockwork, catches the light from above and throws in clear relief the living inmates."

"There is no more interesting department of the station than that of receiving and distributing the material. . . . Neapolitan fishermen have learned to bring all of their rarities to the station. The specimens are quickly assorted by the attendants ; such as may not be needed for the immediate use of the investigators are retained and prepared for shipment to the universities throughout Europe. The methods of killing and preserving marine forms have been made a most careful study by Cav. Lo Bianco, and his preparations have gained him a world-wide reputation. Delicate jelly-fish have to be preserved distended, and the frail forms of almost every group have been successfully fixed. The methods of the Naples station were kept secret only until it was possible to verify and improve them, as it was not deemed desirable to have them given out in a scattered way by a number of investigators."

There are at present two American tables at Naples, one supported by the Smithsonian Institution, and the other by gift of Agassiz.

"The entire Italian coast is so rich in its fauna that it is due perhaps, only to the greatness of Naples, that so few stations have been founded. Messina has its interesting laboratory well known in the work of its director, Prof. Kleinenberg. The Adriatic, especially favourable for collecting, has at Istria a small station on the Dalmatian coast, and at Trieste is the Austrian station. Trieste possesses one of the oldest and most honoured of marine observatories, although its station is but small in comparison with that of Naples, Plymouth, or Roscoff. Its work has in no small way been limited by scanty income ; it has offered the investigator fewer advantages, and has, therefore, become outrivalled. During a greater part of the year it is but little more than the supply station of the University of Vienna, providing fresh material for the students of Prof. Claus. Its percentage of foreign investigators appears small ; its visitors are usually from Vienna and of its university."

Dr. Graeffe is the director of this station. With regard to laboratories of marine biology in Germany, Norway, and Russia, Mr. Dean says :—

"The German universities have contributed to such a degree to the building up of the station at Naples that they have hitherto been little able to avail themselves of the more convenient but less favourable region of German coasts. The collecting resources of the North Sea and of the Baltic have perhaps been not sufficiently rich to warrant the establishment of a central station. On the side of the Baltic, the University of Kiel, directly on the coast, may itself be regarded a marine station. At present the interest in founding local laboratories has, however, become stronger. At Plön, not far from Flensburg, is established a small station under the directorship of Prof. Zacharias, and the first number of its contributions has recently been published. In addition the newly-acquired Heligoland has become the seat of a well-equipped Governmental station, under the directorship of Dr. R. Heincke. The island has been long known as most favourable in collecting regions, and its position in the midst of the North Sea fisheries gives it especial importance.

"Norway, like Germany, is strengthening its interest in local marine laboratories. It has succeeded in establishing two permanent stations, one near Bergen, the other, most recently, on an out-jutting point of the North Sea almost westward of Christiana. The former is interested especially in matters relating to the North Sea fisheries, and is supported partly by the contributions of a learned society and partly by a subsidy from the Government in view of its relation to the practical fisheries. The second and smaller station is devoted almost exclusively to research in morphology. It is a dependency of the University of Christiana, and is under the directorship of one of its professors, Dr. Johan Hjört. With the richest collecting resources these new stations may naturally be expected to yield most important results.

"Russians have ever been most enthusiastic in marine research, and their investigators are to be found in nearly every marine station of Europe. The French laboratory on the Mediterranean at Ville Franche, as has previously been noted, is supported essentially by Russians. At Naples they are often next in numbers to the Germans and Austrians. The learned societies of Moscow and St. Petersburg have contributed in no little way to marine research. The station at Sebastopol on the Black Sea has become permanent, possessing an assured income. That near the convent Solovetsky on the White Sea, though small, is of marked importance. It is already in its thirteenth year. Prof. Wagner, of St. Petersburg, has been its most earnest promoter as well as constant visitor. He in fact caused the Superior of the convent to become interested in its work and secured a permanent building by the convent's grant ; he was then enabled by an appropriation from Government to provide an equipment. Its annual maintenance is due to the Society of Naturalists of St. Petersburg. The matter of the appointment of a permanent director for the summer months is now being agitated. The station Solovetskaia is said to possess the richest collecting region of the Russian coasts. It is certainly the only laboratory which has at its command a truly Arctic fauna."

The article concludes with a brief description of the Swedish zoological station on the west coast near Gothenberg. The station was founded by Dr. Regnell about fifteen years ago, and Dr. Hjalmar Theel is its present director. The students are mainly from the university of Upsala ; indeed, no foreigners are admitted to it.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

OXFORD.—The accommodation for students in the Radcliffe Library has been improved by the removal of the sub-librarian's office to the room under the central tower and the provision of several new reading tables in the space thus created. But as the numbers of scientific students continue to increase, it is clear that some more extensive and permanent addition will very soon be necessary. The number of regular readers in the library this term is seventy-nine ; ten years ago it was only thirty-one, and in the previous decade it was seldom that more than five or six students made use of the library in a single day. These figures give some idea of the gradual growth of scientific studies in the University. A proposal has been set on foot, which, if it is carried out, is likely to affect scientific studies in Oxford very beneficially. It is, that besides the existing means of obtaining a degree by examination, facilities shall be given for obtaining a degree for research in any recognised subject. It is proposed that a residential qualification of two years shall be imposed on any candidate for such a degree, and that evidence must be brought forward of continuous research and study, to the satisfaction of the board appointed for the purpose. At