cation of an institution for the deaf, style of buildings, and best methods of lighting, heating, and draining. Among miscellaneous matter treated in the *Annals* we notice two reported cases of so-called cures of deafness by the "faith-cure" and "Christian science." One of these was a boy living in Japan, who was said to have had his hearing restored by the prayer of missionaries. This case was investigated by a trustworthy gentleman living in Tokio, where the case occurred. He writes: "The only foundation for the story of his cure by prayer was that at the time of the effort made in his behalf he seemed, or was imagined by those who so eagerly watched him, to hear the sound of the school-bell. I judge, from all I can gather, that there is nothing in the case which the intent watching of those interested will not readily account for."

The *Oregon Sign* remarks as follows on a reported restoration to hearing of a former pupil of the Oregon School by "mind-cure" or "Christian science:" "A Portland daily paper of a recent date names among others Miss Mary Lance, a deaf-mute young lady long a pupil in this school, as having her hearing partly 'restored' by nine 'treatments' by a 'mind-cure,' or so-called 'Christian science,' doctor. Miss Lance writes to friends here that she is as deaf as ever, and expects to return to school. There is, no doubt, science that is Christian, and Christianity that is science; but there is a great deal in the world that is neither science nor Christianity, for quackery has nothing to do with either. Newspapers do a great injury when they publish such nonsense, as deaf children are often kept out of school by a false hope that they may be cured."

THE MARINE BIOLOGICAL LABORATORY.

FROM Liebig's "*Welt im Glase*" arose the idea of public marine aquaria, first developed in London, then in many other cities on the Continent. The institution became popular, not only as a means of amusing and instructing the general public, but as an invaluable source of instruction for schools and universities. The hope was entertained for a time that such inland aquaria could be made useful to scientific men for the study of marine life. It soon became evident, however, that such study could be successfully prosecuted only at the seashore. The marine laboratory, with its aquarium, followed. The idea of maintaining marine stations for scientific work was first acted upon by Carl Vogt in Europe, and by Louis Agassiz in America; while one of the earliest, and by far the most successful, undertakings of this kind that the world has yet seen, is represented in the Naples Station, founded and directed by Anton Dohrn. The history of that institution has been often repeated, and is doubtless familiar, in all its essential features, to most of our readers. It is enough to say that it is an example of just what we have long needed in America.

"But what are the special attractions of marine life, that naturalists should so eagerly seek the seashore?" is a question sometimes asked. To this we may reply, that the ocean is the home of the lowest as well as the oldest forms of life, and it is in such forms that the mysteries of life can presumably be most nearly approached. Then there are abundance and variety, and certain important groups that do not occur in fresh water. To the luxuriance of the fauna and flora of the shore, is added that vagrant, pelagic life which is collected by ocean-currents, tides, and winds, and laid at one's feet as freely as if all nature pleaded for investigation. Moreover, the study of marine life has long been inadequately provided for, its advantages not having been generally recognized until within the last fifteen or twenty years. The comparative newness of the field, its infinite richness, and its importance in determining the origin, history, and relationships of living forms, account for the intense interest recently awakened in marine laboratories.

The new laboratory at Wood's Holl is nothing more than 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. It should be provided eventually with means for sending men to different points of the coast to undertake the investigation of subjects of special interest, thus adding to the advantages of a fixed station those of an itinerant laboratory.

The Marine Biological Laboratory is an outgrowth of a seaside laboratory maintained at Annisquam, Mass., from 1880 to 1886, by the Woman's Education Association of Boston, in co-operation with the Boston Society of Natural History. In 1886, efforts were made by the association to place the laboratory on an independent and broader foundation. A circular letter was addressed to many of the leading biologists of the country, reciting what had been already done at Annisquam, and asking for co-operation and counsel. The replies received were most encouraging, testifying to a general and hearty approval of the enterprise, and promising co-operation and support.

Accordingly, invitations were issued, and a preliminary meeting was held on March 5, 1887, in the library of the Boston Society of Natural History. Numerous addresses were made, and a committee was appointed to perfect plans for the organization of a permanent seaside laboratory, to elect trustees, and to devise ways and means for collecting the necessary funds.

The funds having at length reached such an amount as was deemed adequate to a modest beginning, the necessary steps were taken; and in March, 1888, the laboratory was incorporated under the name of the Marine Biological Laboratory, and the following were chosen officers of the corporation: trustees, William G. Farlow, Edward G. Gardiner, Alpheus Hyatt, Susan Minns, Charles S. Minot, William T. Sedgwick, Samuel Wells; treasurer, William Stanford Stevens; clerk, Anna D. Phillips. The trustees immediately organized, and elected Professor Alpheus Hyatt president, and Miss A. D. Phillips, secretary. Professor Farlow soon after resigned, and Professor E. L. Mark was chosen as his successor. Dr. Gardiner, who had kindly consented to enter the board to fill a temporary vacancy, also soon withdrew, and Miss Florence M. Cushing was chosen in his stead.

The trustees, who had already, through a committee, instituted thorough inquiries as to the best place for the laboratory, now set themselves actively to work to locate it, to build and equip it, and to make the necessary plans for the summer's work. Although the time was unduly short, and differences of opinion as to location, policy, etc., difficult to reconcile, had to be harmonized, it was still deemed wise to make a beginning at once, and, if possible, to open the laboratory in 1888. Accordingly, after prolonged and careful consideration, a piece of land (78 × 120 feet) was purchased at Wood's Holl, Mass., close to the shore, and near the buildings of the United States Fish Commission. A plain but very substantial building, 63 × 28 feet, and two stories high, was erected, and was completed within the specified time and at the estimated cost. It was equipped with unusual thoroughness, and was finally opened for work on the day appointed; viz., July 17, 1888.

Dr. C. O. Whitman had already been appointed director of the laboratory, and Mr. B. H. Van Vleck, instructor. Two circulars were issued in June, much later than could have been desired, announcing the opening of the laboratory, and stating the facilities to be provided for investigators and students. One was addressed chiefly to teachers and other workers; the other, to colleges likely to be specially interested. It was so late, however, before it was deemed safe to issue them, that no great response was looked for, or, in fact, occurred.

On the opening day, a small company of students, investigators, and invited guests were present, and the laboratory was formally opened with an address by the director (see *Science*, xii. p. 37). Somewhat earlier than this, Mr. Joseph S. Fay had signified to the trustees his willingness to place at their disposal for the season, a small house on the main street of Wood's Holl, known as "Gardiner Cottage." This gift was most timely, as it enabled the trustees to establish headquarters for the board and lodging of those connected with the laboratory, and contributed directly to its attractiveness and success, as well as to the comfort and welfare of the students.

Owing to the uncertainty connected with the finishing and equipping of the laboratory, it was not possible to issue public circulars until many colleges had disbanded for the summer, and students generally had formed other plans. Nevertheless, during the season there were connected with the laboratory eight students and seven investigators.

The laboratory has now made a beginning. It has secured a

solid foundation and a sound working organization. On what has thus far been done there is every reason for congratulation. This is, however, but the mere beginning of what there should be. More room will soon be needed, more and better boats. A special landing-place must shortly be purchased. An increased equipment of microscopes and aquaria will certainly have to be provided. A working library of good size and quality, placed in the laboratory itself, is absolutely indispensable. The indications point to a large influx of investigators and students, and the trustees foresee the possibility of more applicants than they can accommodate. To meet these new needs and emergencies, more funds are urgently demanded; and the trustees earnestly appeal to the corporation, and to the supporters of science everywhere, for sympathy and active support, so that they shall be enabled to carry on aggressively a work already begun, and proven not only possible but worthy.

REPORT OF THE HEALTH-OFFICER OF THE PORT OF NEW YORK.

THE annual report of the health-officer of the port of New York, Dr. William M. Smith, to the Board of Commissioners of Quarantine, contains much valuable statistical and other material. During the year 1888, 5,291 vessels arrived at New York from foreign ports, and 1,053 from domestic ports, which are subject to quarantine regulations. As compared with 1887, the number from foreign ports was less by 637. Dr. Smith states that the arrivals are diminishing each year, and gives figures to sustain this statement. The number of steerage passengers inspected by the medical officers of the department was 383,595, arriving by more than twenty different lines of vessels; the North German Lloyds bringing the largest number, 52,926. In speaking of this subject of immigration, Dr. Smith says: "There are few subjects of greater importance for the consideration of maritime quarantine officials, and of our municipal health authorities, than the immense immigration which has been flooding our country for the past nine years, and which there is reason to believe will continue for years to come. The same political and economic conditions which existed in 1879, when the immigration from the Old World increased from 135,020 in that year, to 327,371 in the year following, have continued to this time, and bid fair to obtain for years to come. Our vast unsettled area of country is likely to continue to invite, and the inexhaustible resources of our mines and forests will stimulate, an exodus of the surplus population of Europe for a long period in the future. Under these circumstances, it is the duty of health authorities to adopt such measures at ports of entry for immigrants as will contribute to land them upon our shores in such physical condition that they will add to the material prosperity of the country, instead of taxing its resources and increasing its burdens. Those who derive a profit from the transportation of immigrants, as well as those who come to share the blessings which our country affords, are under obligations to supply all the means and to take all the precautions necessary to secure the health of immigrants, and protect our communities from the diseases, developed or latent, with which they too frequently come hand in hand. Improper or insufficient food, imperfectly ventilated and overcrowded steerages during the voyage, are far too frequent. During the early part of the year 1888, the steamer 'Comorin' arrived with 1,263 immigrants; the 'Cachemere,' with 1,411; the 'Bohemia,' 1,280; 'Chateau Yquem,' 1,228; 'Alesia,' 1,018; and the 'Cashar,' with 1,520. These poor people were crowded between decks most of the time for two weeks, and some for twenty days. During the cholera epidemic in 1887, among the passengers of the 'Alesia' there was a larger percentage of deaths among those taken sick during the voyage than among those who suffered from the disease while in quarantine. While the passengers of the steamer 'Britannia' were detained at quarantine the same year on account of cholera, an epidemic of measles developed among them. The symptoms in most cases were more severe, and the fatality much greater, than is usual in that disease, the percentage of fatal cases being something more than fifteen per cent. There is no cause of death given so frequently by the surgeons of immigrant passenger-steamers as *marasmus*. The diagnosis should be starvation. The victim is always a child at the breast. The mother, prostrated by seasickness, her vitality depressed by the crowd-poisoned air of the steerage, and exhausted for want of proper food, is unable to supply the child with sufficient nourishment. The immigrant mother often ceases entirely, for the time being, to afford her infant its accustomed food. The child is then given the only substitute, the coarse fare of the adult immigrant: indigestion, diarrhœa, and death are often the result."

In speaking of contagious diseases among immigrants, Dr. Smith says that small-pox continues to be one of the most frequent, and is by far the most difficult, latent contagion to arrest by maritime quarantines. The incubative period of the disease being fourteen days, and the average passage of steamers from ports of Europe and the British Isles several days less than that time, the disease may be contracted at the port of departure, or in the interior of Europe, and not develop until the immigrant reaches some far interior community in this country. To prevent or limit to a possible minimum the importation of this contagion has enlisted more earnest effort, and has been productive of more anxious reflection on the part of the health-officers, than any other subject during the past nine years. He recommends that all persons who have not been vaccinated within six or eight years should be vaccinated within the first two days after they go on board ship.

The history of the yellow-fever which occurred on the United States Cruiser "Boston" and the United States sloop-of-war "Yantic" is given in considerable detail. In discussing the origin of the fever on these vessels, Dr. Smith says that neither the "Boston" nor the "Yantic" received any thing on board from the shore, while at Port au Prince, except meat and fruit. The fruit, consisting of bananas and oranges, was taken to the vessels by natives in what is called "bumboats," and sold to those on board. The main decks of the "Boston" and "Yantic" are so low, that communication between those on them and the "bumboats" was easy, and doubtless frequent, while the natives were vending their fruit. The wet, dirty, and sun-heated bottoms and timbers of the boats of the natives, exposed, as they must be at all times when at the shores or wharves, to an infected atmosphere as well as to the infected filth of the gutters that drain into the bay, certainly supply all the conditions necessary for the propagation of the infection. It would be rather a matter of surprise than otherwise, if the boats of the natives were not impregnated with the infection of yellow-fever when it prevails at Port au Prince. The history of the disease on the "Boston" and the "Yantic" affords satisfactory evidence to Dr. Smith that the persons who suffered from it contracted the infection while at Port au Prince, and that the infection did not infect either vessel; in other words, that the infection was limited to the individuals who contracted the infection at that port.

Dr. Smith refers to the disappearance of cholera from Europe and America. The confident prediction, he says, has not been fulfilled, which was frequently made by wiseacres during the winter of 1887–88 and until the spring of 1888 was well advanced, in reference to the cholera infection among the passengers of the "Alesia" and "Britannia" in the fall of 1887; to wit, that the germs of the disease had escaped with the baggage when the immigrants were released from quarantine, and would be propagated the ensuing summer until the disease developed into epidemic proportions. The history of this terrible disease since its first advent in Europe in 1829–30 warranted the suspicion that its arrival at our quarantine was the forerunner and herald of a disastrous epidemic of cholera throughout our country. There are but few instances in the history of this disease in which it has not become epidemic in a country soon after it appeared at its threshold. He gives the following interesting history of the cholera during recent years:—

"In 1882 cholera commenced its deadly march from its home in the Ganges. Its first attack was upon Aden on the Red Sea. Early in 1883 it appeared at Damietta in Egypt, and in June of that year reached Cairo, and subsequently extended to most of the cities and towns of Lower Egypt. Those familiar with the history of cholera then confidently predicted its speedy advent in Europe. These predictions were fulfilled early in the ensuing summer. The first victims of the disease in Europe were at Toulon in the early part of June, 1884. It reached Marseilles the 28th of the same