during the last ten years have appeared from time to time in the pages of NATURE.

The alliance between a committee appointed by the Manx Government and the Liverpool Committee, which has now resulted in the provision of a much larger biological station on a better site at the southern side of Port Erin Bay, had its origin in the sea-fisheries work carried out on an experimental scale in the old station for the purpose of obtaining information for the Lancashire Sea-fisheries Committee.

The details of the arrangement concluded between the Manx and Liverpool committees are given in the report. It may suffice to say that the two committees have evidently worked most harmoniously together, and will no doubt continue to cooperate cordially and usefully. Of the three departments in the institution, the laboratory block will be wholly under the control of the Liverpool Committee, the fisheries block will belong solely to the Manx Committee, and the aquarium in the centre will be managed as a joint concern in the interests of both the scientific and economic work. The curator of the old biological station (Mr. H. C. Chadwick) has become curator of the whole institution, with a practical fisherman assistant under him, and the hon. director and chairman of the Liverpool Committee (Prof. Herdman) is recognised as being director also of the whole. This should secure unity of aim and economy of working, and will result in the various departments being mutually helpful. The fishery work will be instructive to the scientific students, and the investigations in the laboratory and experiments in the aquarium will be useful in connection with fishery problems. The aquarium, which, with its museum of local marine animals and plants in the gallery, occupies the large central block of the building, is the only part open to the public, and will, it is hoped, be useful alike (1) to the scientific workers in the laboratory, (2) for experiments and observations bearing on fishery questions and practice, and (3) as an educational influence which will be appreciated by the more intelligent visitors, and may, it is hoped, be taken advantage of by local schools for instruction in nature-study.

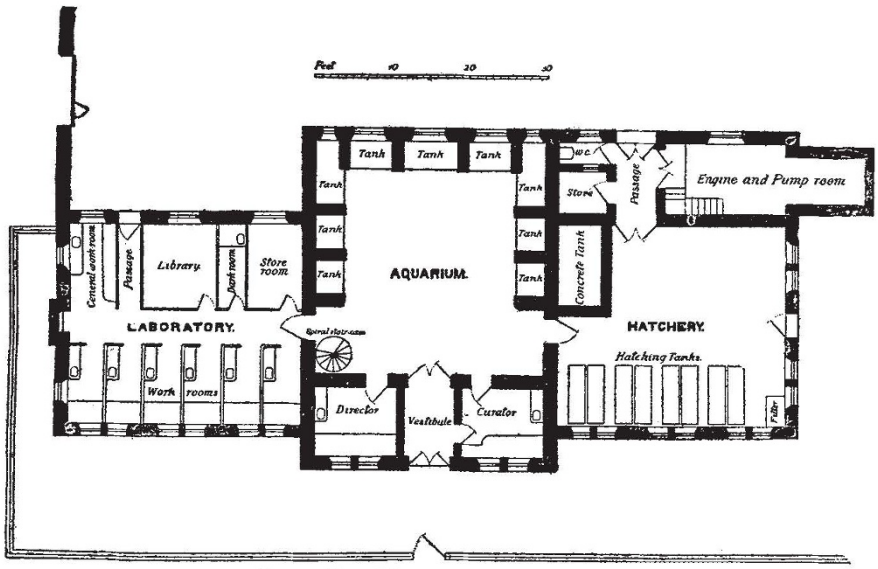

FIG. 2.—Plan of Ground Floor of Station.

The station is a plain but substantial two-storied stone building of nearly 100 feet in length by more than 40 feet in breadth, with a light railing in front and a large yard, enclosed by a wall, behind. At the western end (Fig. 1) is a large pond excavated in the rock, measuring about 90 feet in length, nearly 50 feet in breadth, varying from 3 to 10 feet in depth, and capable of containing about 130,000 gallons of sea-water.

The plan (Fig. 2) shows the division of the building into a central aquarium and lateral laboratory and fisheries wings, and gives the arrangement of the rooms on the ground floor. The upper storey has a broad gallery round the aquarium and large laboratories in the wings. Of the six small workrooms to the front on the ground floor, four are now permanently engaged by universities, leaving two still vacant. The junior laboratory on the floor above, it is announced, will be occupied by a class for school teachers during the Easter vacation.

For the information of students and other naturalists who may propose to visit the new biological station, it may be wel to state that Port Erin is at the south-west end of the Isle of Man and occupies a fairly central position in the Irish Sea, being about 30 miles from Ireland, 33 from Scotland, 40 from Wales and 45 or so from England. The bay faces nearly due west, has sand at the end, and is bounded by precipitous cliffs both to the north and south. From its position and the shape of the land, Port Erin has within a distance of a couple of miles in three directions—to Fleshwick Bay, to the Calf Island and to Port St. Mary—a long and varied coast line with a number of small bays furnishing good collecting ground and shallow water for dredging. Two of these bays, Port Erin and Port St. Mary, have harbours with sailing boats and face in nearly opposite directions, so that in most winds one or other is sheltered and has a quiet sea.

The rich fauna round the Calf Island and off Spanish Head is within easy reach; while at a distance of three to four miles from the biological station are depths of 20 to 30 fathoms, and at 14 miles 60 to 70 fathoms depth is found.

The aquarium of the new station was opened to the public in the middle of August, and in October more than six hundred visitors had already paid for admission.

The report from which these remarks are extracted gives also an account of the scientific work undertaken by the Committee during the last year and records many additions to the local marine fauna, chiefly amongst the microscopic crustaceans worked out by Mr. A. Scott.

The report points out, finally, that while the change to the new building is advantageous in giving better accommodation and larger opportunities, it also gives increased labour and responsibility and in no way relieves the Liverpool Marine Biology Committee of financial burdens. The Committee retains its identity and constitution exactly as before, and the subscriptions from those who are kindly supporting the work will be required fully as much in the new building as they were in the old. The Manx Government subsidy will be entirely applied to the economic work in connection with the local sea-fisheries and will not be available for the purely scientific work of the biological station.

BOTANICAL NOTES.

UNDER the title of "Vegetationsbilder," Messrs. Gustav Fischer, of Jena, announce a series of photographic reproductions which will illustrate characteristic types of vegetation. Each part, consisting of six plates and the explanatory text, will be devoted to one region or formation, and will be complete in itself. The photographs were taken by Drs. Schenck and Karsten, who undertake the arrangement of the work. The first and second parts now received depict the scenery of South Brazil and of the Malay Archipelago; other parts of the eight projected will illustrate botanical features of South-West Africa, Mexico, tropical economic plants, &c. The photographs are reproduced nearly full-plate size, and recall the illustrations of Schimper's "Pflanzengeographie," which is published by the same firm.

The Yorkshire Naturalists' Union is fortunate in enlisting the services of specialists to assist in the compilation of county records, both botanical and zoological. Several series representing different branches of natural history have been, and are being, published in its *Transactions*. One part, lately issued, completes the county list of fresh-water algæ, which has appeared in four instalments, and for which Mr. W. West and Mr. G. S. West are responsible. Another volume, which is produced under the joint authority of Mr. G. Massee and Mr. C. Crossland, constitutes the first instalment of the "Fungus Flora of Yorkshire," and enumerates the Gasteromycetes and Agaricineæ. Although only a small portion of the county has been thoroughly explored, the list will summarise the results obtained during several successive annual forays, and will also include the records noted by independent collectors.

At the meeting of the American Association held in Washington last December, Prof. Douglas Campbell selected as the subject of his address "The Origin of Terrestrial Plants." The subject is one to which the writer has contributed many valuable suggestions and arguments, but on the present occasion no new ideas are presented. It may be noted that although Prof. Campbell alluded to the possibility of the leaf arising by mutation as a sudden outgrowth on the sporophyte, he looks upon the apophysis of the moss capsule as an early form of such emergence. With regard to the origin of the root, the view is expressed that this arises as a modification of the foot.

A list of fresh-water algæ, collected in Java by Dr. Raciborski, and named by Mr. M. R. Gutwiński, appears in the *Bulletin International de l'Academie des Sciences de Cracovie*. Sixteen new species are recorded under the genera Closterium, Penium, Xanthidium, Cosmarium, Staurastrum and Spirulina.

A small brochure, published by the University College of Wales Scientific Society, furnishes a list of flowering plants and ferns which have been found in the neighbourhood of Aberystwyth. The compilation of such records is to be strongly commended, since it furnishes a definite objective, and is therefore certain to provide an extra stimulus for the excursions of local societies. The list now produced may, with advantage, be amplified by inserting notes on habitats, dates and descriptions of peculiar forms.

The first specimen-part of the "Prodromus Floræ Britannicæ" was issued by the author, Mr. F. N. Williams, in June, 1901, and since that date two more numbers have been published, the last bearing the date November, 1902. The orders Cucurbitaceæ, Lobeliaceæ and Campanulaceæ appeared in the first portion, while the remainder of the work, so far as it goes, is devoted to the Compositæ, under the disguised name of the Asteraceæ, and the last part is given up to and contains the whole of the genus Hieracium.

The presidential address on the "Rise and Progress of Ecology," delivered by Prof. V. M. Spalding before the Society for Plant Morphology and Physiology at the Washington meeting, appears in *Science*. The writer indicates two phases of the subject, the compilation of facts and the subsequent incorporation of these into conclusions, and refers to a recent paper, by Mr. Paul Jacquard, on alpine plants.

The Annual report of the Board of Agriculture and Department of Public Gardens in Jamaica, for the year 1901-2, also an authorised Guide to Hope Gardens, have been received. In the former certain changes in the disposition of the staff are recorded, and also the approval of the legislative council for the purchase of land on St. Jagos estate, part of which may possibly be utilised for experimental work. A survey is given of horticultural experiments and educational work. The Guide includes a description of the botanic gardens by Mr. W. Jekyll.

In the current number of the Trinidad *Botanical Bulletin* there appears an instructive article on the care of pastures. It is pointed out that native grasses are likely to be more successful than those grown from imported seed, or if imported they may with advantage be introduced from countries which possess a similar climate. For the destruction of parasol ants, carbon bisulphide, used with due precaution, is recommended. In connection with this and other uses, such as a seed fumigator, an article giving American experience is reprinted.

THE PREVENTION OF DEW DEPOSITS ON LANTERN SLIDES.[1]

LANTERN slides are so commonly used in lecture illustrations that the following hints may prove to be useful:—

The deposit of dew which frequently takes place is very annoying, but its cause is easily traced, and, I believe, can easily be removed. Dew means that the surface on which it is deposited is colder than some other surface with which the air must have previously been in contact, and at which it has become saturated with moisture; hence the problem consists in discovering that surface, and in preventing its becoming hotter than the glass slide.

There is a kind of tradition amongst makers of lanterns and their accessories that every surface should be black. There is no reason at all for this practice, which is probably in all cases the cause of the trouble I am dealing with. My attention was called to the subject by a lantern used for the projection of objects much larger than the ordinary slides. When these were used, they were put in a wooden frame which presented a large carefully blackened surface to the condenser. The condenser always became quickly covered with dew. On pasting a sheet of white paper over the blackened wood of the frame which held the slides, the trouble was at once removed. What had happened was that the black wood became heated, and gave up a large amount of moisture. When covered with a white reflecting surface, on the other hand, the heating was sufficiently reduced to prevent the distillation of moisture. The deposit of dew on the condenser lenses may therefore easily be avoided.

More troublesome is the dew which forms in the space between the photographic picture and the glass cover of the slide. I have not personally been troubled with this, and therefore I have not had any experience as to how to get rid of it, but I feel sure that a great deal could be done by removing the blackened paper frame which is generally inserted between the two glasses, and replacing it by tin foil or white paper. It is obvious that if we take care that the glass of a slide forms the hottest surface in the neighbourhood, no dew can be deposited on it. As the glass absorbs a good deal of the more intense rays, and the slide itself is appreciably warmed, there should be no trouble in securing that nothing else should get warmer. The only possible cause which could not be dealt with would be the evaporation of water from the silver deposits which form the photographic picture, but there is no reason to suppose that they condense a sufficient amount of moisture to do much mischief if the slides are carefully dried to begin with.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

SIR MICHAEL FOSTER has resigned the chair of physiology at Cambridge, which he has held since 1883, when the professorship was established.

PROF. J. A. EWING, F.R.S., professor of mechanism and applied mechanics in the University of Cambridge, has been appointed Director of Naval Education, under the new scheme of training. The scheme was discussed in connection with the Navy Estimates on Monday, and an amendment disapproving of it was moved, but upon a division the amendment was rejected.

THE Liverpool Marine Biology Committee has, in consultation with the Nature-Study Association of Teachers of Liverpool, issued a circular expressing its willingness to make arrangements for a special class in elementary marine biology, to illustrate the principles of nature-study, and to be held at the Port Erin Biological Station during the Easter holidays. The course will extend from April 10–17. Intending students should communicate with Mr. F. J. Cole, University College, Liverpool.

AT the annual meeting of the National Home-Reading Union on March 13, Dr. Richard Garnett delivered an address in which he dealt with the community of aim and feeling between the Union and the public library system. One great wish of the Union is through the systematic

[1] Read at the British Association Meeting in Belfast, September, 1902, by Prof. Arthur Schuster, F.R.S.