

Teachers, which are members of the Institute, have unanimously ratified a change in the constitution under which members of the societies automatically become individual members, without additional subscriptions, of the Institute, thus creating a large unified professional body of physicists. The amended constitution and the new rules are printed in full. No change is made in the organisation, functions or activities of the member societies; but the way is opened for all persons interested in physics to play, individually, a greater part in the affairs and interests of physics, where these are of common concern and can prosper best by the combined active support of all. Provision is made under the new constitution for others, not members of the participating societies, to become associate members of the Institute.

It is intended, when sufficient finance is available, to establish an official monthly journal of the Institute, to be sent without additional charge to all members of the Institute. This journal will contain news about physicists, their meetings, work and other activities, and about similar features in related fields; information about the action of government and other non-physical agencies affecting physics; articles and letters expressing views of physicists on problems of general importance; references to current literature in physics; book reviews, etc. When this journal, for which the title *Physics* has been suggested, appears, the *Review of Scientific Instruments* will revert to a journal devoted exclusively to the science of instruments. It is hoped that associate members, who will be recruited from the very large number of school teachers, students and others who have graduated in physics and thus have an interest in the subject, will be encouraged through the medium of the new journal to become members of one or more of the participating societies.

### Fresh Water Biology in Italy

FOUNDED in 1939 by private endowment, the Istituto Italiano di Idrobiologia de Marchi, at Pallanza (Province Novara), is scarcely known abroad. It is situated on the north shore of Lake Maggiore in one of the most suitable and beautiful sites for carrying out research and enjoying the surroundings. Its excellent equipment for field and laboratory research, its spacious accommodation and its sub-station—in a beautiful villa on Lake Como—provide full facilities for any kind of limnological investigation on the great lakes at the foot of the Alps; and a number of smaller lakes all the way up the slopes of the Alps are within easy reach. The main activities of the staff are freshwater ecology, systematics and genetics, a series of papers having already appeared as the Institute's *Memorie*. Free lodging and free laboratory facilities are offered to foreign guests (up to five at one time). Other facilities may be arranged for by agreement with the director, Dr. E. Baldi. Pallanza is easily reached from either of the two international railways, the Simplon and the St. Gotthard.

### Radiolocation Convention Papers

As already mentioned in *Nature* (February 1, p. 174), the *Proceedings* of the Radiolocation Convention held at the Institution of Electrical Engineers in 1946 are being published as a series of special numbers of Part 3 of the *Journal of the Institution*. Five such numbers have now been issued, and reference has already been made to the first two. No. 3 contains two papers dealing with some aspects

of the propagation of radio waves overland in the wave-length range 10 cm.–10 m.; and nine papers describing the development for radar purposes of special aerial systems for use in the metre band of wave-lengths between 1.5 and 15 metres. The corresponding developments in aerial systems for centimetre wave-lengths are dealt with in a series of six papers forming part of the fourth number (Vol. 93, Part III A, No. 4) of this special publication.

Since it is in the centimetre range of wave-lengths that the wave guide replaces wire circuits and cables for connexions between different parts of the radio-frequency equipment and between the equipment and the aerial system, it is natural to find the twelve papers on wave guides also in this fourth special number. These papers deal with some of the problems involved in design and in the application of wave-guide technique to very short wave radio equipment. The fifth number (Vol. 93, Part III A, No. 5) contains five papers on cathode-ray tubes and twelve on valves. In the first place, these describe some of the advances made in the use of cathode-ray tubes, with special screens in many cases, for radar display purposes. The second series of papers provides a comprehensive record of the special valve development conducted in Great Britain during the War, ranging from triodes for very short waves, the conception and development of that important device, the resonant cavity magnetron, to the high-power pulsed magnetron and the velocity-modulation reflexion oscillator. Since a crystal detector, now termed a crystal valve, is an essential part of all centimetre wave radio receivers, a paper on this subject is included in this particular number of the publication.

### National Museum of Wales

THE report for 1946 of the National Museum of Wales again exhibits that activity of service (external as well as internal) which is conformable with the purport of a great institution. In this report the acquisition of St. Fagans Castle and grounds for use as a Welsh folk museum is fully discussed; plans for its future organisation are outlined, and it is stated that part of the new folk museum and grounds will be opened to the public during the present year. An interesting development, and one which would seem to offer scope for the future, was the circulation in 1946 of a travelling exhibition of the Llyn Cerrig and Valley aerodrome finds—finds which had "excited so much interest throughout the Principality and especially in the island" (Anglesey). The exhibits were first set up at Holyhead, where an official lecture was given, then at Llangefni, and finally at Bangor. At each of the first two places it remained four weeks, and at Bangor for a longer period. It is of further interest that this movement was made in response to a request from the Anglesey Education Committee and the Committee of the Museum of Welsh Antiquities at the University College of North Wales, Bangor.

Departmental reports are primarily concerned with routine work, and the work of reorganisation which necessarily follows the return of collections from war-time storage. During the year some of the reference collections were again available for use. Those who believe in the practical educational value of museums under adequate schemes of organisation will be interested in the development regarding the proposed schools service mentioned on p. 20 of the report. This states that the Parliamentary Secretary to the Ministry of Education, Mr. D. R. Hardman,