grants from the Carnegie Institution of Washington, The Boyce-Thompson Institute for Plant Research, New York, and the Rockefeller Institute for Medical Research, Princeton, New Jersey, which is also financing research on the virus diseases of plants.

In India the study of Botany and Zoology in the schools and colleges was a late introduction, and quite naturally the attention paid to mycology, bacteriology and entomology is very limited. The second meeting of mycological workers of the Board of Agriculture in India held at Pusa in February 1919, passed the following resolution: "That this meeting desires to call attention to the neglect of mycological science in Indian Universities, and wishes to emphasize the importance of the subject in India, and to urge on the Universities to give courses and found lectureships or chairs in the subject." During the course of the discussion the late Dr. F. J. F. Shaw observed that even students taking the M.Sc. degree were totally ignorant of the fungi of their own country, although they could answer complicated questions on European fungi and plant diseases, and he said that some Indian Universities appeared even to resent any questions in their examinations on Indian mycology. The position to-day, after the lapse of nearly thirty years, is only slightly better. The curriculum in Mycology is not much improved, and the number of students offering mycology for the M.Sc., or M.Sc. Ag., is limited. The course in the Agricultural Colleges is slightly better, but still not of the standard to make the student an efficient plant pathologist. Until adequate facilities are available for a post-graduate course in the subjects the position will remain the same.

Regarding the recommendations for the future, the Plant Pests and Diseases Committee of Great Britain suggest the formation of a new Plant Pathology Training Centre or Centres, or in the alternative, the strengthening of certain existing University Departments of Botany and Zoology to allow of post-graduate training in plant pathology. The Centres should be out in the country where different types of crops could be grown, and liaison established with farmers, and not too far from towns so as to ensure attendance at meetings of scientific societies. In addition to class work it is recommended that there should be fully-equipped mycological and entomological laboratories where the students will receive a thorough training in laboratory technique to be supplemented by training and research in the field. The students should be trained in the methods of observation of disease in growing plants, in methods of plant protection and in the technique of field experimentation. In addition to this there must be an active research section where researches on plant diseases and pests is being carried out by senior research workers. The training and maintenance of students should be covered by adequate financial provisions, the number of scholarships being related to the estimated demand for the workers, and the scholars assured that on satisfactory completion of the training suitable positions will be offered to them.

The Indian Council of Agricultural Research has, as one of its aims, the granting of research scholarships and provision of post-graduate training, but since it can only utilize the existing facilities, and since the translation of agricultural improvements into practice is the function of Provincial Governments and States, not much headway can be made in this direction. It is to be hoped that the measures of income-tax and super-tax relief in the case of endowments for scientific research contemplated by the erstwhile Finance Member of the Government of India, Sir Archibald Rowlands, will start a stream of generous contributions for a National Institute of study and research in the various plant sciences in India.

1. *Applied Biol.*, 1946, **33**, 119.

EARTH'S MAGNETIC FIELD

INVESTIGATIONS of the mysterious changes in the magnetic pull of the earth experienced by aircraft flying over British Empire routes have been undertaken by a team of experts from the Empire Air Navigation School, Shropshire.

Research by the school into the earth's magnetic field has already yielded valuable scientific results. The flight of "Aries One" over the North Pole two years ago resulted in confirmation of calculations of the location of the magnetic field pole and gave practical experience of the behaviour of the magnetic compass when flying over these regions.

The changes in deviation now to be investigated were first noted when "Aries Two" flew to South Africa last April at the same time as the Transport Command Mosquito which broke the record to the Cape. Both aircraft experienced unexpected changes in deviation, sometimes as much as ten degrees, although these were found to have disappeared when the compasses were checked on their return home.

The equipment used for this new investigation included twelve magnetic compasses, and aircraft magnetometer, for measuring the strength of the earth's magnetic field, and a new type of electric compass which does not depend on a magnet for direction, but which incorporates an electronic control.

The route flown covered Malta, Habbaniya (Iraq), Negombo (Ceylon), Singapore and Darwin (Australia) outward; and Singapore, Negombo, Nairobi, Cape Town, Heany (Southern Rhodesia) and Khartoum homeward. Possible explanations arising from these investigations are awaited with interest.