

H. F. Dovaston (pp. 249-253). It is *P. Lolii*, and is possibly the perithecial form of *Helminthosporium siccans*. Other new species are described by N. C. Preston (pp. 271-276)—*Myrothecium jollymannii* from dried tobacco leaves in Nyasaland, and *M. striatiosporium* from clay soil in New Zealand.

Establishment and Care of Lawns

AMONG the more general matters dealt with in a recent issue of the *Journal of the Board of Green-keeping Research* (7, No. 24; 1948) are papers on the consolidation of lawn surfaces by bitumen, and a useful review of methods of earthworm control on lawns. R. B. Dawson and J. R. Escritt describe the method of stabilizing the surface of lawns by the application of sand and bitumen emulsion immediately after the grass seeds are sown. The treatment can also be applied to established turf. Lawn surfaces were much improved, and the process may be useful for small areas subject to heavy wear. Detrimental effects were not very marked, but the establishment of bent and timothy grasses was reduced. J. R. Escritt and J. H. Arthur review the methods available for earthworm control. Many species of earthworm do not form casts, and therefore are not a nuisance, but only help in aeration and soil mixing. Organic manures generally stimulate earthworm activity, while the presence of a turf 'mat' diminishes the production of unsightly casts. Factors of management and manuring are therefore important. The relative merits of mowrah meal, copper sulphate, potassium permanganate, derris, mercuric chloride, lead arsenate and other control substances are discussed and provide a very useful advisory review of this matter.

Sugar Beet Viruses

THE virus of sugar beet yellows has not hitherto been regarded as soil-borne. Phyllis E. M. Clinch and J. R. L. Linnane have shown, however (*Sc. Proc. Dub. Soc.*, 2, No. 27; July 29, 1948), that seed of a new variety of sugar beet (No. 41), when germinated, gives a considerable percentage of yellowed seedlings. The identity of this yellowing with sugar beet yellows is somewhat by implication; but the symptoms and physiological effects are similar. The paper also describes two types of yellows disease from commercial sugar beet crops in Eire. Sugar beet yellows is probably the most serious disease of this crop in England. R. Hull and Marion Watson have a useful paper in the *Journal of Agricultural Science* (37, Part 4, 301-310; 1948) on the relation of nutrition and variety with severity of yellows. Manurial treatments in general increase the yields of roots and sugar; but the losses caused by infection unfortunately increase proportionately as the mean yields increase. Fertilizers have little effect in varying the symptoms of the disease. Commercial varieties and some breeders' lines were tested for possible tolerance of the virus; but no useful indication of this was obtained.

Norwegian Strandflat

In a paper in the *Geographical Journal* of January on the "Geomorphology of Norway", Prof. K. M. Ström returns to the topic of the strandflat, a topic which has evoked much controversy in past years. He shows that marine abrasion is much in evidence, though corrie glacier abrasion has played its part. The low plain cuts across fjord deeps and corrie lake deeps, and though local glaciers have certainly played a notable part, it is in the main due to marine

abrasion. Prof. Ström cites the example of Moskenesøy, which has practically no strandflat on the inner or sheltered side, but has an abrasion platform 8 km. broad on the exposed side. The tendency to stress glacial action in the formation of the strandflat is probably due to the study of the strandflat where it shows a hummocky appearance through an overflow by ice during the last glaciation. The main features of the strandflat seem to have been abraded at successively lower levels since early Miocene times up to late Pliocene; this has been followed by excavation by glaciers from the inland ice and corrie glacier erosion and, finally, post-glacial marine abrasion in the peripheral areas where changes of level due to isostatic recovery have been least.

Earthquakes during January

FOURTEEN strong earthquakes occurred in various parts of the world during January. The strongest were those on January 23, 24 and 27, with epicentres in the Indian Ocean (about 600 miles south-west of Sumatra), near the Tonga Islands, and in New Britain respectively. Three earthquakes had deeper foci than is normal; two, having a depth of about 100 km., occurred on January 23 and 24, and the third, depth 600 km., on January 13 with an epicentre south of the Fiji Islands. It may be noted that no earthquake is so far known to have had its focus at a greater depth than 700 km. All the earthquakes during the month occurred in well-known seismic areas, though the one on January 28 in the Atlantic Ocean some 1,100 miles east of Bermuda is not in an area from which earthquakes often occur. Observatory records have been received from the central stations of the United States Coast and Geodetic Survey and from Strasbourg, and from individual observatories at Beograd (Yugoslavia), De Bilt (Holland), Durham, Kew, Strasbourg, Stuttgart and Toledo (Spain).

Mekran (Baluchistan) Earthquake of November 28, 1945

C. G. PENDER has discussed all available data for the earthquake at Mekran in Baluchistan on November 28, 1945 (*Ind. Met. Dept., Sci. Not.*, 10, No. 125; 1946). The epicentre was in the sea off the Mekran coast, and strength 10 on the Rossi-Forel scale was attained in the epicentral area. The instrumental magnitude was about 6.7, and the energy was of the order of 10^{21} ergs. The earthquake was attended by a seismic sea-wave which affected the whole of the Arabian seaboard. At Karwar, about 1,000 miles from the epicentre, the wave flooded the creeks and inlets, and boats anchored in the harbour were cut off from their moorings. There was serious loss of life and property at Pasni, the height of the second wave there being estimated at between 40 and 50 ft. At Karachi four distinct waves were distinguishable, and at Bombay a seismic sea-wave 6½ ft. high was experienced. It has been reported that two rocky oval islets, about three miles apart, appeared about the same time as the earthquake, some 180 miles west-south-west of Karachi. One islet rose about 30 ft. above the water and the other about 100 ft., the former having an area of about 1½ square miles and the latter about a square mile. Earthquakes have occurred in the past in the area off the Mekran coast on February 4, 1938, and January 7, 1940. Earthquakes on land near the point occurred on September 2, 1938, October 29, 1941, July 3, 1942, July 4, 1942, and February 6, 1943. Very strong

earthquakes have occurred in the past at Chaman (Baluchistan) on December 20, 1892; at Kachhi (Baluchistan) on October 21, 1909; at Mach (Baluchistan) on August 27, 1931; as well as at Cutch on June 16, 1819, and at Quetta on May 31, 1935.

Southwest Research Institute, Texas

THE Southwest Research Institute, San Antonio, Texas, has approved of the establishment of a division of oceanography and meteorology and a division of petroleum technology in Houston, Texas. The division of oceanography and meteorology will be of particular scientific importance, since oceanographic data on the Gulf of Mexico are particularly scanty. The research in this field will commence with a survey of currents, the shifting topography of the shelf area, and marine life in the Corpus Christi area, and the work will then be extended eastwards. The schooner *Harpoon* has already been earmarked for research in the Gulf. The oceanographic work will be in two phases: first, the project of the Institute, which will be freely published; and second, the fulfilment of private contracts, which will be paid for by the firms concerned on a cost basis. The establishment of the division of petroleum technology in Houston is the result of the widespread activity with regard to petroleum in that area and the fact that the local industries have immediate problems which can well be undertaken by the Southwest Research Institute. The Institute itself is a non-profit, endowed research organisation.

Unesco Fellowship Handbook

THE secretariat of Unesco has prepared a most useful handbook providing details of all available opportunities for trans-national study and organised arrangements made in this field, which should be of real assistance to those wishing to travel out of their own countries for purposes of study. The handbook, which is intended to be the first of a series, constitutes a repository of information on the considerable investments by governments, universities, foundations and charitable institutions in the promotion of international study. Whether these fellowships or awards are designed to assist the reconstruction or development of a particular country, to encourage scientific research, to stimulate artistic exchange or to promote international understanding in general, they represent a striking volume of assistance from many sources to individuals chosen for their capacity to advance the course of learning and to profit from the cultural heritage of countries other than their own. Copies of the handbook, which may be obtained from H.M. Stationery Office, price 5s., show that more than ten thousand opportunities for international study are available for the year 1948-49.

Gamma-Emitting Materials for Industry

THE Ministry of Supply has recently announced that radium and radon can now be supplied for use in industrial radiography. Radium is available on hire only, and will remain the property of the Government. It can be hired for periods of not less than six months, and the average time to fulfil an order is two months. Radon is sold outright, and notice of one week is required for an order. Demonstrations of gamma-radiography for industrialists can be seen by appointment at the Ministry's Armament Research

Establishment, Woolwich, London, and at the National Physical Laboratory, Teddington, Middlesex. Radium and radon are supplied by the Radiochemical Centre, Amersham, Bucks, and applications for purchase or loan should be addressed to that establishment.

Spectrographic Research Unit of the Medical Research Council

By arrangement with the London Hospital, the Medical Research Council has established there a Spectrographic Research Unit under the direction of Dr. E. R. Holiday. The primary function of the Unit is to undertake original research work in the field of absorption spectrophotometry as applied to biological problems of medical interest; but advice and assistance will also be given to other branches of the Council's organisation using such methods. The Unit has been based on the spectrographic department originally established by the London Hospital, and during the last five years partly supported by the Council for the purposes which are now being developed.

Education of the Young Worker

A SECOND Conference on the Education of the Young Worker, with a special subject for consideration, "The Entry into Work, Guidance and Initiation", will be held at Manchester College, Oxford, during July 23-29, 1949. Like its predecessor in 1948, it has been arranged under the auspices of the University Department of Education, the director of which is Mr. M. L. Jacks, and aims at bringing together representatives from industry, education, central and local government departments, voluntary organisations and other bodies which are concerned in the education and welfare of young people between the ages of fifteen and twenty who are no longer in full-time education. The Conference will work in commissions; but whereas last year each commission had a special subject to consider, this year the subjects will be the same for all commissions, each of which will report its findings to the whole Conference at plenary sessions. Further information can be obtained from the Director, University Department of Education, 15 Norham Gardens, Oxford.

British Social Hygiene Council: Summer School in Austria

OWING to various difficulties connected with foreign travel, the Summer School on "The Family and the Nation", which the British Social Hygiene Council had arranged to hold at the University, Berne, Switzerland, during August 17-September 1, has now been transferred to Pertisau in the Austrian Tyrol. There will be no change in the lecture programme, which will deal with different aspects of family life, such as marriage problems, nutrition, human heredity, population, the welfare of old people, the problem family, and juvenile delinquency. As in the past, only the first week will be devoted to study, the second week being entirely free for rest and recreation and for excursions to places of beauty and interest in the surrounding countryside. The cost, including travel, hotel accommodation and tuition, will be approximately £34. Further information can be obtained from the Secretary, British Social Hygiene Council, Tavistock House North, Tavistock Square, London, W.C.1.