

valuable timber trees of the same genera or families, the knowledge of the secrets of the regeneration of which is absolutely vital to the work of replacing the often primeval stands he is dealing with.

It was the Indian forest officer (should we now say the Burman forest officer?) who first studied the effects of firing the forest floor in the interests of obtaining successful regeneration of a valuable timber species. In Malaya preliminary investigations show that burning of the undergrowth is a prerequisite for the regeneration of *Melaleuca leucadendron*. An intentionally burnt area and one accidentally fired were equally successful in a covering of germinating seedlings; whilst an adjoining unburnt area appears to be as devoid of regeneration as ever. These practical observations in the forest (they cannot be undertaken in a research laboratory) are of the very greatest importance and of absorbing interest. In the case of the tropical forest they had their first beginnings in India, where a considerable amount of information had been collected by the end of last century. The present century has witnessed in some cases the results being put to a practical use.

#### Antarctic and Sub-Antarctic Starfishes

THE Asteroidea of the Sub-Antarctic and the Antarctic and a few from South Africa collected by the *Discovery*, *Discovery II* and the *William Scoresby* have been described by W. K. Fisher (*Discovery Repts.*, 20; 1940). Seventeen new species and three new forms of previously described species are described. The author gives a critical list of all the valid species from the antarctic and sub-antarctic, which number 114. He himself deals with 113 different forms, not all separate species and not all from the main region, and from the number and wide range of specimens in some of them he is able to add considerably to our knowledge of these animals. The additional information thus gained has enabled him to revise certain groups. Thus the memoir is not merely a record of species obtained but also a noteworthy contribution to our understanding of the asteroids in southern latitudes. Perhaps the most interesting species is *Odinella nutrix*, which is the only known member of the *Brisingidae* to possess a marsupium, and this is entirely different from that in any other group of starfish possessing brood chambers. The work is illustrated by twelve photographic plates and eighteen plates of figures.

#### Earthquake in Japan

DURING the night of July 16-17 a strong earthquake shook the northern part of the Nagano Prefecture, some 140 miles north-west of Tokyo. It is not yet known whether there were any casualties or not, but more than thirty houses collapsed and the railway between Nagano and Niigata Prefecture was interrupted for a short while. Japan is well known at present to be in a seismically active zone for earthquakes of all focal depths. Tremors, minor shocks and even strong earthquakes as in the case

cited above are moderately frequent and very large earthquakes are by no means uncommon as, for example, the Kwanto earthquake of September 1, 1923, which nearly destroyed Tokyo and Yokohama, causing tremendous loss of property and the deaths of 250,000 people, the Tango earthquake of March 7, 1927, and the Idu earthquake of November 26, 1930.

#### Earthquakes Registered in Switzerland during 1939

THE complete bulletin of the Swiss Seismological Stations at Zurich, Chur, Neuchâtel, Basle and Sion for 1939, compiled by Dr. E. Wanner, has just been received. It contains, besides details of equipment, three tables and six maps. The first table and the maps concern earthquakes with epicentres in Switzerland, twenty-one of which were felt by people during 1939. The greatest intensity reached was five on the Rossi-Forel scale, this being on seven occasions: at Brig-Visp on May 18; at Martigny on August 23; at Unter-Engadin on September 26; at Aargau on November 17; at Sion Lokalstoh on November 20; at Oberes Baselbiet on December 5 and at Innerferrera on December 7. The second table contains a list of the details of ninety-one near earthquakes, whilst Table III contains a list with details of 178 distant earthquakes registered by the Swiss observatories during the year.

#### Max Jaffé (1841-1911)

PROF. MAX JAFFÉ, an eminent German biochemist and pathologist, was born at Grünberg in Silesia on July 25, 1841. He received his medical education in Berlin, where he qualified in 1862. While still a student he took a keen interest in chemical investigations and worked in the Pathological Laboratory under the direction of W. Kühne. During 1865-1872 he was an assistant in the medical clinic at Königsberg under Leyden, with whom he published a work on putrid sputum which led to the discovery of the spirilla and leptothrix characteristic of putrid processes in the lungs. In 1872 he was appointed extraordinary professor and in 1880 full professor of pharmacology and medical chemistry in the Königsberg faculty. His principal work consisted in the discovery of urobilin and urobilinogen in the urine and their origin in the bile, his studies of indican and creatinin, with the tests with which his name is associated, and his investigations in urocanic acid in the urine of dogs and of ornithin in the excrement of birds. Jaffé had an extensive consultant practice and enjoyed a high reputation as a teacher. He died on October 26, 1911.

#### Armauer Hansen (1841-1912)

DR. GERHARD HENDRIK ARMAUER HANSEN, the celebrated Norwegian leprologist, was born at Bergen on July 29, 1841. He received his medical education at Christiania and qualified in 1866. Two years later he was appointed assistant physician to the leprosy home at Bergen under the direction of Dr. D. C. Danielssen, the founder of the scientific study of leprosy. In 1874 he read a paper before the Medical Society of Christiania, which was published in a