THE death is announced of M. Raoul Gautier, honorary director of the Geneva Observatory.

PROFESSOR G. B. FROSTERUS, director of the Institute for Soil Science, Helsinki, died on March 1 at the age of sixty-five years. Dr. Frosterus took part in the development of soil science in Finland and was an active member of the International Society of Soil Science.

THE death at the age of ninety-two years is announced of Professor Welhelm Franz Exner. Dr. Exner was for some time professor at the College of Agriculture of the University of Vienna and later professor of mechanical technology and engineering.

Nature reports the death of Dr. Rudolf Marloth, who was president of the South African Association for the Advancement of Science in 1914 and author of works on the flora of South Africa, and of Dr. Alwin Berger, an authority on succulent plants and cacti, who contributed a monograph on the Crassulaceae to Engler-Prantl's "Natürliche Pflanzenfamilien."

SCIENTIFIC EVENTS

BOTANICAL RESEARCH STATIONS IN AFRICA

SIR ARTHUR HILL, director of the Royal Botanic Gardens, Kew, recently addressed the Dominions and Colonies Section of the Royal Society of Arts on the scientific research work he had seen during his recent tour in South and East Africa.

According to an abstract in the London *Times* the lecturer described the principal centers of research work that he visited and singled out the National Botanic Garden at Kirstenbosch as one of the most remarkable. Here, he said, with the unique and magnificent setting of Table Mountain and the groves of the beautiful Silver Tree (*Leucadendron argenteum*), there was being built up a garden which, with proper care and attention in the way of sufficient funds for maintenance and development, should be one of the great botanic gardens of the world. Kirstenbosch was bought by Cecil Rhodes, in 1895, as part of his far-sighted scheme for preserving the eastern slopes of Table Mountain and Devil's Peak as a National Park, and in 1913, thanks to the efforts of the late Professor Harold Pearson and Sir Lionel Phillips, a portion of the estate was set aside by government for the establishment of a National Botanic Garden.

It was very much to be hoped that no pains or money would be spared in order to carry out to the full the vision of those two benefactors to botany in South Africa, so that the garden might be fully developed; also that the slopes of the mountain might be adequately preserved both from the depredations of forest fires and from the incursions of exotic trees. Thus only could we hope to see Rhodes's vision of a great National Park on Table Mountain and Pearson's conception of a South African National Garden properly honored by memorials of supreme interest and value to the whole world.

Referring to the East African Agricultural Research Station at Amani, in the East Usambara Mountains, Tanganyika Territory, Sir Arthur said that the question of soils was also one of great importance to all the East African Territories and a Soil Museum was being built up at Amani, which in course of time should be as useful as a herbarium with its botanical specimens. Those soil samples would be of particular value in ascertaining the physical and chemical properties of those East African soils known to be subject to serious erosion, which was so important a problem in the tropics.

THE REFORESTATION PROGRAM

FOREST planting by all agencies in the United States amounted last year to 138,970 acres, a gain of 24 per cent. over 1929, according to completed reports from 43 states and territories made public on June 6 by the Forest Service of the Department of Agriculture. Last year's planting brought the cumulative record for all lands reforested to date in the United States to 1,798,048 acres. Federal, state, municipal and private plantings all made substantial gains despite drought and adverse economic conditions.

Other than the federal and state governments, 19,161 agencies and individuals participated in forest planting last year, which set the new record for acreage reforested. Of the more than 17,000 individuals about four fifths were farmers.

Forest Service plantings in the National Forests amounted to 21,678 acres, 19 per cent. more than the year preceding. Forest Service plantings are planned on a still larger scale this year, and spring planting has been active in several National Forests.

State forestry department plantings last year amounted to 41,038 acres, a gain of 30 per cent. over 1929. Plantings by municipalities aggregated 9,214 acres, an increase of 55 per cent. Industrial organizations planted 30,230 acres, a gain of 20 per cent., and organizations of other types, with 2,518 acres planted, gained 66 per cent. Schools and colleges put out 825 acres of trees, 53 per cent. more than the

year before. Individual plantings jumped from 28,475 to 33,467 acres, a gain of 17 per cent.

Last year's totals showed important progress and interest in renewing forest resources and putting idle lands to growing timber crops, although planting has never yet kept pace with losses through wasteful cutting, forest fires and erosion.

Michigan led all the states in acreage reforested for 1930, with a grand total of 38,302 acres planted by all public and private agencies. Of this area, the Forest Service planted 8,452 acres and the state 26,617 acres.

Forest planting in New York by various state, municipal and private agencies reached 24,250 acres. Pennsylvania planted 18,048 acres to public and private forest.

Planting in Delaware, Maryland and New Jersey aggregated 1,672 acres. New England reports show a total of 11,614 acres planted. The South Atlantic States planted 5,556 acres, Georgia leading with 2,542. Gulf States set out 7,869 acres, Louisiana's share being 6,556.

In Ohio, private and public agencies planted 2,633 acres, largely farm woodlands. Beginnings were made in several Central States with reforestation used especially as a check to erosion of farm lands. Part of Wisconsin's plantings of 6,086 acres were for watershed and farm.

THE GUATEMALA EXPEDITION

DESPITE a severe rainy season, tangled jungle trails and the illness of one of the party, the University of Michigan expedition into the interior of Guatemala has returned with an unusually large number of important specimens. Members of the party included Professor Harley H. Bartlett, botanist; Dr. Josselyn Van Tyne, ornithologist, and Dr. Adolph Murie, mammalogist, they having undertaken the biological phase of a broad survey by the Carnegie Institution.

Meeting with Carnegie archeologists at Belize, British Honduras, on January 26, the party planned to proceed at once to the old Maya city of Uaxactun, but were turned back by news that heavy winter rains had made jungle trails impassable. While waiting for the trails to become passable, the "Pine Ridge" area was visited. This involved a trip of three days and nights of travel in small boats up a shallow winding river. Sharply demarked from surrounding jungle, this "pine ridge" appears much as if a strip of northern Michigan's open pine woods had been transplanted in the tropics.

Finally the jungle trails were reported "passable for mules," and the party returned to their base at El Cayo. But "passable for mules" proved almost impassable for men, and the sixty-five miles inland required four days of the hardest kind of travel and the simple "bush" camp at Uaxactun looked luxurious when finally reached.

In these jungles 1,900 years ago the Mayas began the building of their great stone cities. They have now become a tangled jungle almost unknown to white men and specimens, exceptional both in quantity and in quality, were secured.

Due to the large amount of material and limited accommodations, the party broke up, Professor Bartlett going out first with his extensive botanical collection. On arriving at El Cayo, the mule train was to unload and return for Drs. Van Tyne and Murie, before the rains should set in making travel impossible. Unfortunately at this point Dr. Van Tyne was taken with a sudden and severe attack of jungle fever. Dr. Murie, however, and Mr. Monroe Amsden, of the Carnegie party, finally brought him and all the collections safely back to civilization.

The classification of the specimens will be carried out at the museum. It is probable that a second visit to this region will be made next year.

APPROPRIATIONS FOR GRANTS-IN-AID BY THE NATIONAL RESEARCH COUNCIL

AT its meeting in May the National Research Council's Committee on Grants-in-Aid made grants for the support of research as follows:

To S. J. Barnett, professor of physics, University of California at Los Angeles, magnetization by rotary fields; Harry E. Farnsworth, associate professor of physics, Brown University, electron diffraction and refraction by metal crystals; R. C. Gibbs, chairman of the committee on ruled gratings of the American Physical Society, professor of physics, Cornell University, improvement of facilities for the manufacture of diffraction gratings; Ernest O. Lawrence, professor of physics, University of California at Berkeley, the production of high velocity hydrogen ions without the use of high voltages; Arthur E. Ruark, professor of physics, University of Pittsburgh, measurement of wave-lengths and line-widths in the spectra of Gamma rays; Karl S. Van Dyke, professor of physics, Wesleyan University, the piezo-electric effect in quartz and Rochelle salt.

Wilber E. Harvey, instructor, Lehigh University, the combined effects of corrosion and fatigue upon welds.

Frank T. Gucker, Jr., assistant professor of chemistry, Northwestern University, the thermo-chemistry of solutions and the dielectric constant of the solvent.

M. R. Campbell, principal geologist, U. S. Geological Survey, the gravel deposits of the Piedmont Plateau and Atlantic coastal plain north of Virginia; C. H. Crickmay, assistant professor of geology, University of Illinois, the Jurassic deposits of Mt. Jura, California; Richard M. Field, associate professor of geology, Princeton University, the stability of the Bahama