

with regard to the inclusion of League of Nations teaching in schools, has recently presented its report to the President of the Board of Education.

Among the resolutions dealt with by the Conference was one which urged the necessity for connecting links between government departments concerned with education schemes (for example, Ministries of Health, Labour, Agriculture, and Education); and one which pleaded for legislation recognising for purposes of superannuation all full-time service in university colleges, prior to the introduction of the present university superannuation scheme, as service in a technical institution.

### University and Educational Intelligence.

LONDON.—Applications are invited for the Laura de Saliceto studentship for the advancement of cancer research. The studentship will be tenable for not less than two years, and the annual value £150. The latest date for the receipt of applications by the Academic Registrar, University of London, South Kensington, S.W.7, is July 1.

MANCHESTER.—A limited number of research scholarships in technology will be awarded in July next by the Manchester Municipal College of Technology. The value of each will not exceed £100. Research may be undertaken in any of the following departments: mechanical engineering, electrical engineering, municipal engineering, applied chemistry, textile industries, photographic technology, printing, and industrial administration. There are also scholarships of a yearly value of not more than £100 each, to part-time students of the College and others who are Manchester ratepayers or sons or daughters of Manchester ratepayers. Applications must reach the Registrar on June 27 at latest.

OXFORD.—In proposing the acceptance of the offer by Sir William Morris to place the Radcliffe Observatory site and buildings in the hands of trustees for the benefit of the Radcliffe Infirmary and the Medical School, Professor G. Dreyer directed attention to the unique character of the gift, spoke of the closer connexion between the University and the Infirmary which it would favour, and pointed out that it would provide room for the extension of the Infirmary, and for the development of post-graduate teaching.

The report just published of the Delegates of the University Museum announces that a scheme has been put into operation whereby details of certain vacancies requiring candidates with scientific training can be brought to the notice of the teaching staffs of the Museum departments.

The reports of the various scientific departments contain lists of research work published during the year, and accounts of accessions to the collections. These are especially copious in the case of the Pitt-Rivers Museum and the department of the Hope professor of zoology. Noteworthy among the former are a collection from the Bororó tribe of Brazil, made by Mr. George M. Dyott during his expedition in search of traces of the late Col. Fawcett, and a very remarkable series of wooden objects found in a cave in Tanganyika Territory; among the latter a fine series of Paraguayan butterflies presented by the late Dr. Charles Hose, a great collection of ants made by Mr. W. Cecil Crawley, a large number of Coleoptera from Windsor Forest given by Mr. Horace Donisthorpe, and a very full collection of British Lepidoptera by Dr. Nevil Sidgwick. This collection, part of which was made in the company of the late Mr. Arthur Sidgwick, contains a specimen of the North American *Danaida plexippus* caught at Lyme Regis in 1886.

A SCHOLARSHIP of the value of £100 for post-graduate research on wool has been instituted by the Weavers' Company. The research will be carried out in the laboratories of the Wool Industries Research Association. Applications should be sent not later than June 30 to the Secretary, Wool Industries Research Association, Torridon, Headingley, Leeds.

FROM the Imperial College of Tropical Agriculture, Trinidad, we have received a pamphlet containing a prospectus for 1930-31, the principal's report for 1928-29, and a register of staff and students. Courses are offered in agriculture, botany, chemistry and soil science, economics, mycology and bacteriology, tropical sanitation and hygiene, technology (chemical machinery, sugar technology, colloid science, physical chemistry, field and factory control), veterinary science, zoology, and entomology. A diploma course covering three years, a one-year course, refresher courses, and various post-graduate courses are provided. Fifty-five students were in residence last year, including twenty-seven graduates. The instructional staff numbered sixteen. In addition to numerous shorter notes and articles in the college journal, *Tropical Agriculture* (6d. monthly), twenty-one scientific papers were published during the year. Research is, in the main, concentrated, so far as concerns long-range investigations, on four crops, namely, sugar-cane, bananas, cacao, and limes. The plant includes a sugar-cane factory in which more than a thousand tons of cane were dealt with during the year.

### Historic Natural Events.

June 23, 1783. Severe Frost.—Great damage was caused in Britain by a severe frost. Trees and fruit crops suffered badly, and also barley, oats, and rye. Ice a quarter of an inch thick was formed on tubs of water.

June 23, 1783. Dust Haze.—Gilbert White, in the "Natural History of Selborne", describes a peculiar haze or smoky fog which prevailed for many weeks in Britain and many parts of Europe on June 23-July 20, "during which period the wind varied to every quarter, without making any alteration in the air. The sun, at noon, looked as blank as a clouded moon, and shed a rust-coloured ferruginous light on the ground and floors of rooms, but was particularly lurid and blood-coloured at rising and setting. All the time, the heat was so intense that butchers' meat could hardly be eaten the day after it was killed; and flies swarmed so in the lanes and hedges that they rendered the horses half-frantic and riding irksome." The haze was undoubtedly due to volcanic dust from the eruption of Asama.

June 23, 1921. Thunderstorm and Flood.—The city of T'ung Chuan, in the province of Sz Chuan, in the interior of China, was visited by a severe thunderstorm which began at 1 A.M. and continued for twelve hours. During that time the rainfall amounted to 7.45 in. The level ground surrounding the city was flooded knee deep and corn was beaten down everywhere. The water entered the west gate, destroying many huts, and even some more solidly built houses fell down. Several people were drowned and many others rendered homeless. Two soldiers were struck by lightning and killed, others were rendered speechless. The Chinese said that they had not experienced such a storm for many years, and that it occurred because a dragon had been stolen from one of the temples outside the west gate.

June 24, 1034. Frost.—The Anglo-Saxon Chronicle records that "On Midsummer Day there was such a vehement frost, that the corn and other fruits of the

earth were blasted and killed, so that thereupon followed a great dearth in all the country."

June 24, 1897. Hailstorms.—The morning was very hot in England, and during the afternoon a series of violent thunderstorms developed at many widely separated localities. The greatest damage was done by a storm which crossed Middlesex and continued to Colchester in Essex, accompanied by violent winds and heavy hail, the stones being described as "as big as hens' eggs". The storm played havoc with the Diamond Jubilee decorations, broke thousands of panes of glass, smashed tiles, blew down chimneys and trees, ruined crops, and killed thousands of birds. There was great distress among the farmers in Essex, for there had not been a bad hailstorm for some years, and many of them had given up insuring against hail; the Lord Mayor of London opened a relief fund for the benefit of the sufferers.

June 25, 1545. Thunderstorm.—A great tempest occurred in Derbyshire, in which trees were overturned and churches, chapels, and houses unroofed. In Lancashire hailstones fell, said to be as big as a man's foot.

June 28, 1788. "The Midsummer Flood."—Whistlecraft, in "Rural Gleanings", states that the most remarkable rain ever known in northern Suffolk in June, "came down in awful torrents for some hours, until it caused the greatest inundation ever recorded in these parts. It has ever afterwards been called 'The Midsummer Flood'."

June 28—July 4, 1901. Heat Wave.—A spell of uniformly high temperature produced more serious effects in New York than had ever been experienced before. Even at night the thermometer rarely fell below 80° F., and the air was very humid. The asphalt with which the streets were paved softened with the heat, and the wheels of vehicles ploughed deep ruts in the roadways. Outdoor work was practically suspended, and even the Stock Exchanges in New York and Boston were closed. 150,000 people abandoned New York city, and thousands more slept in the public parks, which were kept open at night for that purpose. The hospitals were overcrowded with cases of heat prostration, while several hundred people and more than a thousand horses died from heat stroke.

June 28, 1917. Heavy Rain.—A depression passed along the English Channel, and very heavy rain fell over Somerset. At Sexey's School, Bruton, the amount measured was 9.56 in., a large part of which fell between 11 P.M. on June 28 and 1 A.M. on June 29. This is the heaviest fall in twenty-four hours on record in the British Isles. At King's School, Bruton, the amount was 8.48 in. It is estimated that during this storm 525,000 million gallons, or 2340 million tons of water fell in England and Wales. A great volume of water flowed along the valley of the Brue towards Burnham. At Bruton the valley narrows, and the town bridge confines the river still further, and here the water, unable to pass, flooded the low-lying parts of the town, doing much damage.

June 28, 1928. Heavy Rain.—Continuous heavy rain fell over the mountains of North Wales during strong south-westerly winds, the total reaching 7.77 in. at Blaenau Ffestiniog in Merioneth. The rainfall was largely due to the mountains, but an analysis of the weather charts showed that the winds were derived from two separate sources, a relatively cool current from the northern North Atlantic and a warmer current from farther south. These two currents were brought side by side, and it is probable that the cool current spread sideways under the warmer and moister air, raising it steadily and continuously throughout the day, and so greatly increasing the rainfall.

## Societies and Academies.

LONDON.

Linnean Society, May 15.—H. R. Hewer: Studies in colour-changes in fish (Pt. 5). The colour-patterns in certain flat-fish, and their relation to the environment. Microscopical examination of the chromatophores, which form the basis of the colour-patterns, shows that the spots occurring on the upper side of the body may be divided up into groups according to their characters, such as distribution, size, and constituent chromatophores. These groups constitute the 'patterns', and they act as distinct entities, all the spots belonging to any particular pattern reacting in the same manner to any one stimulus. The constitution of any given type of spot is remarkably constant with a species. Among the fish examined, those having the greatest number and complexity of colour-patterns and therefore possessing the machinery for the largest range of adaptation, are the turbot (*Rhombus maximus*) and the brill (*R. levis*), which are noted for their habit of moving over considerable areas. A study of the constitution of the spots in young forms in closely related species has demonstrated a series of stages of complexity approximating to the lines along which evolution has probably taken place.—E. M. Delf: The release of oögonia in the Fucaceæ. The first species considered was of *Bifurcaria brassiciforme*, one of the Fucaceæ common on the shores of the Cape Peninsula. Comparison was then made with other genera of intertidal habitats such as *Fucus*, which is habitually exposed during the fall of the tide and *Sargassum* and *Cystophyllum*, which are intertidal but constantly covered even at low spring tides in most localities.

Geological Society, May 28.—H. H. Swinnerton: The post-Glacial deposits of the Lincolnshire coast. The clays which underlie the Lincolnshire marshland crop out between the tide-lines along the coast, and many temporary exposures have been examined in the vicinity of Chapel St. Leonards and Ingoldmells. These deposits lie upon an uneven floor of boulder-clay, and may be divided into Lower, Middle, and Upper Series, separated by well-defined erosion-surfaces. The lower series consists of peat enclosing remains of oak, alder, and birch. It was formed during Neolithic times, when the area must have been at least 20 feet above its present level. The middle series consists almost entirely of purple and grey buttery clays, and rests upon an eroded surface of boulder-clay and peat. It is usually 7 feet thick, and is divisible into lower and upper portions by a marked difference in the contained flora. The upper series consists of grey, purple, and black sloppy clays, with numerous *Scrobicularia* and *Cardium* in their lowest portions. The thickness varies from 18 to 9 feet. There is evidence that this series was formed after the Roman occupation. The character and contents of these post-Glacial deposits indicate deposition under estuarine conditions, associated with the presence of an off-shore barrier, probably breached during the thirteenth and fourteenth centuries, thus establishing the present exposed condition of the coast.

Mineralogical Society, June 3.—L. J. Spencer: A new meteoric iron from Piedade do Bagre, Minas Geraes, Brazil. This mass, found in 1922 and weighing 130 lb., is of special interest in showing on one corner a well-marked octahedral fracture, and on a polished and etched section taken from this portion of the mass a complex system of very distinct Neumann lines. Neumann lines are twin-lamellæ