

population in many districts. Reports were recently made of its presence in North Wales at Bettws-y-Coed (*Field*, Jan. 1943), and in Scotland in the Forestry Commission and deer forest areas of the Highlands and in a cairn in the Grampians (H. M. Batten, *Scotsman*, Jan. 30, 1943). In Lakeland it has recently been reported from Ennerdale. The polecat is also increasing in the wilder parts of Great Britain. Foxes have increased at an alarming rate in most parts, even where there were no organized hunts as in Lancashire, while in Lakeland, where the Eskdale Hunt killed a record total of sixty foxes in January, there is considerable controversy over organized fox hunts.

The Scottish mountain hare, which inhabits only a few parts of the Pennines at Penistone above Sheffield, has wandered from the Cheviots, where it is plentiful, to inhabit some of the moors on the extreme northern fringe of Cumberland above Gilsland and Bewcastle. The increase of stoats, weasels and badgers is of considerable agricultural value, because rabbits form such a large part of the food of stoats and badgers, and weasels feed mainly on field mice. The increase of foxes is responsible as much as is trapping for the reduction of rabbits, which form the chief food of foxes, but their depredations upon poultry have necessitated a campaign against them.

### A Laboratory in Physical Geography

A DEVELOPMENT in geographical research and teaching is the subject of an article in the *Geographical Journal* of November-December by Prof. F. Debenham, in which he describes the laboratory for physical geography which he has planned and equipped at Cambridge, even though the exigencies of the times have necessitated its temporary dismantlement. The object of the laboratory is to study field processes, usually in miniature, under conditions of close observation and control with the view of ascertaining their mechanism, stages and effect. An amazing array of apparatus has been crowded into one room barely 50 ft. long by 19 ft. broad. In the wave trough, waves are generated by various methods and ingenious devices allow the measurement of period, height, length, etc. Here also beach building with sand and shingle can be studied. The wave tank, on a smaller scale, provides, among other aims, for the study of land forms produced by long-shore drift. An even more ambitious piece of apparatus is the tidal tank in which the difficulties of producing tidal currents seem to have been overcome, and good results are expected. The stream flume or delta tank seems to work well in the study of alluvial deposition, and the stream curve apparatus is to be used for the investigation of water movement in the bed of a stream. Other problems, too, are to be studied, and the whole laboratory is a promising step in the introduction of quantitative methods in the problems of physical geography.

### Public Library of South Australia

THE first report of the Public Library of South Australia, which was formed under the Libraries and Institutes Act, 1939, creating a Libraries Department under a Libraries Board of South Australia, with a Principal Librarian as administrative head, covers the half-year ending June 1940, and stresses the need for the permanent allocation of sufficient land

for the natural growth of such an essential service. The various properties of the Public Library, the Museum and the Art Gallery have now been re-allocated, but despite adaptations the accommodation for library work, particularly for staff and for the country lending service, is entirely inadequate. War conditions have not affected adversely the use made of the Library, as is shown by an increase in readers of more than 7,000 during the year, and the Library staff has been taxed to its utmost to provide information regarding all sorts of conditions arising from the War. Financial provision for books is still inadequate and the Board has recommended the establishment of a research department for handling requests for scientific, technical and economic information. For this a more extensive range of periodicals is urgently required. The country lending service has also been called upon for books beyond the limit of its capacity, and its work has grown so rapidly that early extension of accommodation is necessary to provide adequate working space. The Archives Department has reached the limit of its shelving accommodation and offers of many important series of documents, arising from the present extensive pulping of old records, cannot be accepted because of lack of accommodation.

### Joints in Submarine Cables

R. Miller and C. T. Rose contribute an article on this subject in the *Engineering Supplement of Siemens Magazine* (Oct.-Nov., 1942). In submarine cables particular care has always to be exercised in dealing with the joints, and every endeavour is made to limit their number by manufacturing individual cable lengths as long as possible, consistent with the methods of transport, storage accommodation, etc., available, and the scheme of laying to be adopted. With submarine cable-laying under normal conditions, it is unlikely that more than one sea joint will be necessary, the cable being laid in two parts, one section from each shore termination. This necessitates cutting the cable at a convenient position, buoys the end, and picking up again after the other section has been laid. The joint is then made on the ship and on completion is cast overboard, after due precautions have been taken. The article refers to both communication cables and power cables, the latter for voltages, for example, up to 33 kV. In the section on communication cables the authors discuss gutta-percha joints, splicing the sheathing wires, rubber joints, rubber to gutta-percha joints, and paper joints. The section on power cables is confined to those of the impregnated paper-insulated and lead-covered types and describes the making of subaqueous joints, super-tension joints and the handling of the shore ends of the cable. The article is illustrated and several photographs are included showing different stages in the operations of laying submarine cables.

### Conference of X-Ray Analysis

THE analysis of substances and the examination of their behaviour by X-ray diffraction methods has become of considerable importance in the war effort. The Institute of Physics is therefore arranging a second conference on the subject to take place in Cambridge during April 9-10. The provisional programme includes a lecture on "Future Developments in X-Ray Crystallography" by Prof. J. D. Bernal, and discussions on "Quantitative Treatment of

Powder Photographs", "The Fine Structure of X-Ray Diffraction" and "Line Broadening". A report is to be presented to the Conference on the progress made in the preparation of an index to X-ray diffraction photographs, for which the Institute has undertaken to be jointly responsible with the American Society for Testing Materials and the American Society for X-Ray and Electron Diffraction. Further particulars of the Conference and of the Index can be obtained from the Secretary of the Institute of Physics (temporary address: at the University, Reading).

### The Night Sky in March

NEW moon occurs on March 6d. 10h. 34m. U.T., and full moon on March 21d. 22h. 08m. Conjunctions with the moon are as follows: March 3d. 03h., Mars 3° S.; March 4d. 19h., Mercury 2° S.; March 8d. 08h., Venus 3° N.; March 12d. 11h., Saturn 4° N.; March 15d. 18h., Jupiter 4° N.; March 31d. 22h., Mars 2° S. Occultations of stars brighter than magnitude 6 are as follows: March 12d. 16h. 40.2m.,  $\alpha$  Tauri (*D*); March 12d. 17h. 51.8s.,  $\alpha$  Tauri (*R*); March 17d. 22h. 43s.,  $\alpha^1$  Cancri (*D*); March 17d. 23h. 03m.,  $\alpha^2$  Cancri (*D*). The times are given for Greenwich, and *D* and *R* refer to disappearance and reappearance respectively. Mercury is a morning star at the beginning of the month. Venus is a conspicuous evening star and sets about 2h. 40m. after the sun in the middle of the month. Jupiter souths at 19h. 36m. in the middle of the month and is visible for the greater part of the night. Saturn is becoming an evening star and sets about midnight towards the end of the month. Vernal equinox commences on March 21d. 12h.

Comet Whipple will probably still be visible through a small telescope. An ephemeris is given below.

Date 1943	R.A.		Dec.	$\rho$	$r$
	h.	m.			
March 1	12	11.2	+ 55.2°	0.532	1.392
5		19.1	54.8	.552	.407
9		25.3	54.1	.574	.424
13		31.2	53.2	.597	.443
17		35.5	52.3	.620	.464
21		38.4	51.0	.647	.487
25		41.2	49.7	.674	.512
29		43.8	48.3	.703	.539

### Announcements

THE War Office announces that in deference to a request from the Lord President of the Council, it has been agreed that Sir Charles Darwin, scientific adviser to the Army Council, shall return to his duties as director of the National Physical Laboratory on March 1. He will be succeeded as scientific adviser by Prof. C. D. Ellis, Wheatstone professor of physics, King's College, London, who has been serving as deputy scientific adviser.

PROF. F. C. LEA, emeritus professor of engineering in the University of Sheffield, has been elected president of the Institution of Mechanical Engineers.

SOUND films of honorary members and Faraday medallists of the Institution of Electrical Engineers are being shown before the Institution as follows: March 4: Sir J. J. Thomson and Lord Rutherford;

April 1: Sir Ambrose Fleming and Dr. A. E. Kennelly; April 29: Lord Hirst and Dr. F. B. Jewett. Each meeting will be at 5 p.m.

THE Herbert Jackson Prize for 1942 of the London Midland and Scottish Railway has been awarded to Mr. J. Dearden, of the Metallurgical Section of the Railway's Research Department, for papers entitled "The Inspection of Welded Steel Joints in Relation to their Static Mechanical Strength" and "The Influence of Welding Defects on the Resistance to Fatigue of Welded Steel Joints".

THE third Pan-American Congress of Endocrinology will be held at Buenos Aires during July 1-6, when discussions will be held on the endocrine factors in diabetes, gonadotropism and the suprarenal cortex. Further information can be obtained from the Office of the Congress, Córdoba 2122, Buenos Aires.

THE British Laboratory Ware Association, Ltd., has recently formed a technical committee, the objects of which are as follows: (1) To promote closer co-operation between bodies responsible for the design of standard laboratory instruments and apparatus and the manufacture of same. (2) To assist in rationalization of the design of apparatus and to eliminate overlapping, with the aim of securing economical production. (3) Collaboration to these ends with standardizing authorities, research associations, etc., in the drafting of specifications. It is hoped that research and other associations will avail themselves of the facilities offered in order that improved service and quality may result to users of the apparatus. All communications should be addressed to the secretary of the Technical Committee, British Laboratory Ware Association, Ltd., 73 Basinghall Street, London, E.C.2.

WE have received a copy of the catalogue entitled "Medical Miscellany Lot 'G'", published by Schuman's, 20 East 70th Street, New York, of which the special feature is an extensive section on psychiatry and neurology. Among these mention may be made of the following works: Esquirol's "Mental Diseases in relation to Medicine, Hygiene and Medical Jurisprudence" (first French edition, 1838), Griesinger's "Mental Pathology and Therapeutics" (Sydenham Society, 1867), Charcot's "Diseases of the Nervous System" (New Sydenham Society, 1877-89), Ramon y Cajal's "Structure of the Optic Chiasma" (first German edition, 1899), and Freud's "Three Contributions to the Sexual Theory" (first English edition, 1916). Other interesting works contained in the catalogue are Fracastoro's "Poem on Syphilis" (Latin text and French translation, 1753), the "Genuine Works of Hippocrates" (Sydenham Society, 1849), Hirsch's "Handbook of Geographical and Historical Pathology" (New Sydenham Society, 1883-86), and Hirsch's "Biographisches Lexikon" (second edition, 1929-35).

ERRATUM. In NATURE of February 20, p. 219, paragraphs on "Science and Government" and "Parliamentary and Scientific Committee", reference was made to the "scientific advisers to the Ministry of Supply"; it should have read "scientific advisers to the Minister of Production", as is indicated on the chart on p. 206.