knapping techniques and processes, and Sir Francis is to be congratulated that in the work under notice the reader, with only a very little concentration, will readily appreciate the way the author sets to work to make his specimens. M. C. BURKITT.

GEOPHYSICS AND GEOMORPHOLOGY IN U.S.S.R.

THREE numbers of the *Bulletin de l'Académie des Sciences de l'URSS, Série Géographique et Géophysique* (Nos. 4-5, 1941; No. 2, 1943; No. 3, 1943), which have recently reached us, give some idea of the progress made in geophysics and geomorphology in U.S.S.R. For convenience the papers are grouped under four headings: (1) Atmosphere, (2) Hydrosphere, (3) Lithosphere, and (4) Climatology.

(1) *Atmosphere*. A. M. Obuhov (453; 1941) presents a mathematical study of the energy distribution in the spectrum of a turbulent flow; M. E. Schvez, in his first paper (467; 1941), gives a mathematical study of the vertical velocities in a moving air mass, and in the second paper (No. 2, 55; 1943), a mathematical study of the velocity of wind and the turbulent diffusion; S. L. Ponisovski (432; 1941) discusses the state of the *E*-layer of the ionosphere at twilight; A. J. Driving, A. V. Mironov, V. M. Morozov and I. A. Khvostikov, in their study of the polarization and absorption of light in natural fogs (No. 2, 70; 1943), have found a discrepancy between observation and theory which they propose to solve by postulating the presence of submicroscopical droplets.

(2) *Hydrosphere*. Mathematical treatment of turbulence is attempted by M. Millionshchikov (433; 1941), who discusses the turbulent heat conduction of sea water; by W. Stockmann (483; 1941), who discusses the horizontal components of velocity of sea currents; and by K. V. Shutilov (447; 1941). L. S. Leibenson (411; 1941) presents a mathematical treatment of the movements of gas-containing liquid in a porous medium.

(3) *Lithosphere*. Magnetic anomalies in the Moscow region are discussed by A. G. Kalashnikov (No. 2, 83; 1943), thermal anomalies in the earth's crust caused by strata and rock masses of different thermal conductivities are discussed by N. N. Korytnikova (No. 3, 115; 1943); a new method of measurement of temperature in salt mines is proposed by S. A. Kraskovsky (No. 3, 134; 1943); a mathematical study of the processes of freezing and thawing is given by S. S. Kovner (No. 3, 143; 1943); and V. V. Belousov (No. 3, 147; 1943) outlines a new hypothesis of the development of the earth's crust as due to the migration of radioactive elements. J. A. Skvorzov (Nos. 4-5, 501; 1941) discusses the methods of geomorphological analysis and mapping; and V. V. Galitzky (No. 2, 89; 1943) gives an account of the geomorphology of the Kara-Tau region (north-west Tian-Shan).

(4) *Climatology*. The problem of the gradual rise of the temperature of the arctic regions is discussed by B. L. Dserdsejevsky (No. 2, 60; 1943) and the effectiveness of synoptical weather predictions is discussed by M. A. Omshansky (No. 3, 161; 1943).

All papers are provided with summaries, either in English or German, but some of these summaries are too brief to be of much value. S. I. TOMKEIEFF.

FORTHCOMING EVENTS

(Meeting marked with an asterisk * is open to the public)

Tuesday, November 14

SOCIETY OF CHEMICAL INDUSTRY (joint meeting of the CHEMICAL ENGINEERING GROUP, the AGRICULTURE GROUP, and the INSTITUTION OF CHEMICAL ENGINEERS) (at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1), at 2 p.m.—Conference on "Grass Drying" (Dr. S. J. Watson: "Grass Drying—Chemical Aspects"; Mr. A. Goldberg and Mr. A. C. Bartelli: "Grass Drying—Engineering Aspects"; Mr. D. Fairclough: "Grass Drying—The Farmer's Viewpoint").

CHADWICK LECTURE (at the Royal Sanitary Institute, 90 Buckingham Palace Road, London, S.W.1), at 2.30 p.m.—Mr. Guy Howard Humphreys: "Some Modern Trends in Sanitary Engineering" (Bosson Gift Lecture).

ROYAL INSTITUTION (at 21 Albemarle Street, Piccadilly, London, W.1), at 5.15 p.m.—Mr. Christopher F. C. Hawkes: "Prehistoric Britain", (ii) "The Later Prehistoric Centuries".

ILLUMINATING ENGINEERING SOCIETY (at the E.L.M.A. Lighting Service Bureau, 2 Savoy Hill, Strand, London, W.C.2), at 5.30 p.m.—Mr. J. N. Aldington: "Bright Light Sources".

INSTITUTION OF CIVIL ENGINEERS (ROAD ENGINEERING DIVISION) (at Great George Street, Westminster, London, S.W.1), at 5.30 p.m.—Mr. A. H. D. Markwick: "The Basic Principles of Soil Compaction and their Application".

Wednesday, November 15

ROYAL SOCIETY OF ARTS (at John Adam Street, Adelphi, London, W.C.2), at 1.45 p.m.—Dr. L. Hartshorn: "High-Frequency Heating".

INSTITUTE OF FUEL (at the Institution of Mechanical Engineers, Storey's Gate, St. James's Park, London, S.W.1), at 2.30 p.m.—Mr. B. F. Karthaus: "The Development and Design of Shell Type Boilers".

BRITISH INSTITUTION OF RADIO ENGINEERS (NORTH-EASTERN SECTION) (at the Neville Hall, Westgate Road, Newcastle-upon-Tyne), at 6 p.m.—Mr. A. H. Houl: "Theory of Rectification".

SOCIETY OF CHEMICAL INDUSTRY (FOOD GROUP) (joint meeting with the CARDIFF SECTION and the CARDIFF SECTION OF THE ROYAL INSTITUTE OF CHEMISTRY) (at the Newport Technical College, Clarence Place, Newport, Mon.), at 6.30 p.m.—Dr. E. B. Hughes: "Chemistry in the Kitchen".

SOCIETY OF CHEMICAL INDUSTRY (BIRMINGHAM SECTION) (joint meeting with the ROYAL INSTITUTE OF CHEMISTRY) (in the Chamber of Commerce, New Street, Birmingham), at 6.30 p.m.—Mr. C. W. Bonnicksen: "Some Properties and Applications of Alginic Acids and Alginates".

Thursday, November 16

CHEMICAL SOCIETY (at Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Mr. G. M. Phillips, Mr. J. S. Hunter and Mr. L. E. Sutton: "Investigation of the Occurrence of the Co-ordinate or Dative Link by Electric Dipole Moment Measurements"; Mrs. G. A. Gilbert, Mr. F. Smith and Mr. M. Stacey: "A Constitutional Synthesis of Cellobiose and Gentibiose".

ROYAL INSTITUTION (at 21 Albemarle Street, Piccadilly, London, W.1), at 2.30 p.m.—Sir James Jeans, O.M., F.R.S.: "Old and New Descriptions of the Astronomical Universe", (iii) "Galaxies".

ROYAL SOCIETY OF ARTS (INDIA AND BURMA SECTION) (at John Adam Street, Adelphi, London, W.C.2), at 2.30 p.m.—Dr. R. MacLagan Gorrie: "The Place of Mechanized Equipment in Indian Soil Conservation".

LONDON MATHEMATICAL SOCIETY (at the Royal Astronomical Society, Burlington House, Piccadilly, London, W.1), at 3 p.m.—Prof. S. Mandelbrojt: "On the Regularization of Sequences".

ROYAL SOCIETY (at Burlington House, Piccadilly, London, W.1), at 4.30 p.m.—Sir Harold Hartley, F.R.S.: "Antoine Laurent Lavoisier" (Lavoisier Bicentenary Lecture).

CHEMICAL SOCIETY (in the Department of Chemistry, University College of North Wales, Bangor), at 5.30 p.m.—Prof. R. D. Haworth, F.R.S.: "Oxidation of Phenols".

BRITISH INSTITUTE OF RADIOLOGY (in the Reid-Knox Hall, 32 Welbeck Street, London, W.1), at 8 p.m.—Symposium on "Physical, Biochemical and Therapeutic Aspects of Volume Dose".

Friday, November 17

SOCIETY OF CHEMICAL INDUSTRY (PLASTICS GROUP) (at the Chemical Society, Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Discussion on "Polymer-Plasticiser Interaction" (to be opened by Dr. R. F. Tuckett and Miss E. M. Frith).

ROYAL INSTITUTION (at 21 Albemarle Street, Piccadilly, London, W.1), at 5 p.m.—Vice-Admiral Sir John A. Edgell, K.B.E., F.R.S.: "Ocean Passages, Depths and Currents—the Work of the Hydrographic Department in Peace and War".

INSTITUTION OF MECHANICAL ENGINEERS (at Storey's Gate, St. James's Park, London, S.W.1), at 5.30 p.m.—Dr. H. E. Wimperis: "Research and Development in Aeronautics" (Thirty-first Thomas Hawksley Lecture).

INSTITUTION OF ELECTRICAL ENGINEERS (MEASUREMENTS SECTION) (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Mr. G. E. Moore: "Planning the Future Electricity Meter".

NORTH-EAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS (in the Lecture Theatre of the Mining Institute, Newcastle-upon-Tyne), at 6 p.m.—Mr. J. S. Thompson: "In Search of Efficiency".

CHEMICAL SOCIETY (in the Royal Technical College, Glasgow), at 7.15 p.m.—Mr. R. P. Bell, F.R.S.: "The Value of the Resonance Concept in Chemistry".