LETTERS

EDITORIAL
Science Policy and National Goals 521

ARTICLES
Spectral Distribution of Solar Radiation at the Earth’s Surface: D. M. Gates 523
The spectral quality of sunlight, skylight, and global radiation varies with atmospheric conditions.

A Metric for the Social Consensus: S. S. Stevens 530
Methods of sensory psychophysics have been used to gauge the intensity of opinions and attitudes.

Science and the Problems of Development: H. J. Bhabha 541

NEWS AND COMMENT
Pittsburgh: The Rocky Road to Academic Excellence (I)—Education Budget: Difficult Options—National Council on the Humanities: Members Named 549

BOOK REVIEWS

REPORTS
Application of High-Resolution Semiconductor Detectors in X-ray Emission Spectroscopy: H. R. Bowman et al. 562

Crystal and Molecular Structure of a Double Complex of Manganese with Phthalocyanato and Pyridine Ligands: L. H. Vogt, Jr., A. Zalkin, D. H. Templeton 569

Distribution of Uranium in Some Natural Minerals: E. I. Hamilton 570

Structure and Organization of the Living Mitotic Spindle of Haemathus Endosperm: A. Bajer and R. D. Allen 572

Pentobarbital Sodium: Variation in Toxicity: H. A. Lindsay and V. S. Kullman .... 576

Ozone: Nonlinear Relation of Dose and Injury in Plants: W. W. Heck, J. A. Dunning, I. J. Hindawi ................................................................. 577

Chromosomal Aberrations in a Population of Ground Squirrels: C. F. Nadler and C. E. Hughes ................................................................. 579

Cell Wall of Melampyrum lineare Seed: Carbohydrate Components: E. J. C. Curtis and J. E. Cantlon ................................................................. 580

Sex-Linked Anemia: A Hypochromic Anemia of Mice: R. M. Bannerman and R. G. Cooper ................................................................. 581

Simian Virus 40: Replication in the Presence of Specific Antiserum and Adenovirus 4: J. M. Easton and C. W. Hiatt ................... 582

Major Components in the Exocrine Secretion of a Male Butterfly (Lycorea): J. Meinwald et al. ................................................................. 583

Nuclear Number in the Rotifer Asplanchna: Intraclonal Variation and Environmental Control: C. W. Birky, Jr., and B. Field ................................................................. 585

Auxin Effects on the Mobility of Kinetin in the Plant: A. K. Seth, C. R. Davies, P. F. Wareing ................................................................. 587

Swimming Speed of a Pacific Bottlenose Porpoise: T. G. Lang and K. S. Norris .... 588

Sialic Acid Binding Sites: Role in Hemagglutination by Mycoplasma gallisepticum: B. Gesner and L. Thomas ................................................................. 590

Correction to One of MacArthur's Species-Abundance Formulas: E. C. Pielou and A. N. Arnason ................................................................. 592


Puromycin Effect on Successive Phases of Memory Storage: S. H. Barondes and H. D. Cohen ................................................................. 594

MEETINGS Protozoology: R. W. Hull; Molecular Basis of Differentiation: G. L. Cantoni and A. Monroy; Forthcoming Events ................................................................. 596

The American Association for the Advancement of Science was founded in 1848 and incorporated in 1874. Its objects are to further the work of scientists, to facilitate cooperation among them, to improve the effectiveness of science in the promotion of human welfare, and to increase public understanding and appreciation of the importance and promise of the methods of science in human progress.

Cover

Many details of plant mitosis in living cells have been made visible for the first time by differential interference microscopy. For example, spindle fibers appear as bundles of refractile elements extending from the kinetochores to the spindle poles (about × 5000). See page 572. [Andrew Bajer and Robert D. Allen, University of Oregon and Princeton University]