
EDITORIAL  Science in the State Department  1281

ARTICLES  Data Analysis and the Frontiers of Geophysics: J. W. Tukey  1283

Insect Survival and Selection for Pattern: H. B. D. Kettlewell  1290

Are Aptitude Tests Valid for the Highly Able?: H. Chauncey and T. L. Hilton  1294


BOOK REVIEWS  On Teaching High School Chemistry: P. G. Ashmore  1312


REPORTS  Aftershocks of the 4 February 1965 Rat Island Earthquake: J. N. Jordan, J. F. Lander, R. A. Black  1329


Solar Activity during the First 14 Months of the International Years of the Quiet Sun: H. W. Dodson, E. R. Hedeman, F. L. Stewart  1329

Periodic Compounds: Syntheses at High Pressures and Temperatures: H. T. Hall  1333

Immunologic Tolerance in Thymectomized, Irradiated Rats Grafted with Thymus from Tolerant Donors: K. Isakovic, S. B. Smith, B. H. Waksman  1333

Skin Grafts: Delayed Rejection between Pairs of Cattle Twins Showing Erythrocyte Chimerism: W. H. Stone et al.  1335
Potassium-40 Content as a Basis for the Calculation of Body Cell Mass in Man:  
W. Burmeister .................................................................................................................. 1336

Smooth Muscle: An Ultrastructural Basis for the Dynamics of Its Contraction:  
J. Rosenbluth .................................................................................................................. 1337

Gallstones Produced Experimentally by Lithocholic Acid in Rats: R. H. Palmer ........... 1339

Herpes-Like Virus Isolated from Neonatal and Fetal Dogs: S. E. Stewart et al. ............ 1341

Separation and Partial Purification of Plasma-Membrane Fragments from Ehrlich Ascites Carcinoma Microsomes: V. B. Kamat and D. F. H. Wallach .......................... 1343

Passive Transfer of the Action of Freund's Adjuvant by Serum of Rabbits Injected with the Adjuvant: D. L. Dawe, D. Segre, W. L. Myers ................................. 1345

Pancreatic Secretion Induced by Stimulation of the Pyloric Gland Area of the Stomach: R. M. Preshaw, A. R. Cooke, M. I. Grossman ................................................. 1347

Response of the Rabbit Oviduct to a Tissue Adhesive: P. A. Corfman, R. M. Richard, H. C. Taylor, Jr. .................................................................................................................. 1348

Hemoglobin and Oxygen: Affinities in Seven Species of Sciuridae: F. G. Hall .......... 1350

Control of Enzyme Activity in Growing Bacterial Cells by Concerted Feedback Inhibition: L. Burlant, P. Datta, H. Gest ........................................................................... 1351

Collagen: Structural Studies Based on the Cleavage of Methionyl Bonds:  
P. Bornstein and K. A. Piez .......................................................................................... 1353

Altered Effect of Potassium Ions on Cerebral Respiration in vitro Following Subcortical Lesions: B. F. Roth and J. A. Harvey ......................................................... 1356

Intracranial Reinforcement Compared with Sugar-Water Reinforcement:  
W. E. Gibson et al. ......................................................................................................... 1357

Age, Personality, and Somatosensory Cerebral Evoked Responses:  
C. Shagass and M. Schwartz ......................................................................................... 1359

Sequential Behavior Induced Repeatedly by Stimulation of the Red Nucleus in Free Monkeys: J. M. R. Delgado ...................................................................................... 1361

CELLULAR DYNAMICS: THE CELL CYCLE: E. W. Taylor; Forthcoming Events ........ 1364

NEW PRODUCTS: INSTRUMENTS AT THE FASEB SHOW: D. J. Prager ............... 1366

MEETINGS

DEPARTMENTS

Cover

Melanism in insects inhabiting industrial environments is one of the most striking evolutionary changes occurring today. Extensive investigations of Biston (Amphidias) betularia (peppered moth) reveal that its black form, carbonaria, may constitute up to 98 percent of industrial populations. The black form has a 30-percent chance of survival over f. typica on blackened tree trunks. A mechanism may exist in the gene complex, and may insure dominance of the black form at each mutation. See page 1290. [H. B. D. Kettlewell, University of Oxford]