LETTERS

EDITORIAL
Science Books .......................................................... 317

ARTICLES
Numerical Weather Prediction in Daily Use: G. P. Cressman ................. 319
The tenth anniversary of calculations for daily weather forecasts finds forecasts more accurate and useful.

Chemical Coding of Behavior in the Brain: N. E. Miller ....................... 328
Stimulating the same place in the brain with different chemicals can elicit different types of behavior.

Sap Pressure in Vascular Plants: P. F. Scholander et al. ....................... 339
Negative hydrostatic pressure can be measured in plants.

NEWS AND COMMENT

BOOK REVIEWS
On Aquatic Microbiology Today: C. B. van Niel .................................. 353


REPORTS
Faint Ring around the Spiral Galaxy M82: H. Arp ............................. 363

Photometry at Cerro Tololo, Chile: Effects of Mount Agung Eruption: H. Moreno, N. Sanduleak, J. Stock ........................................ 364

Alaskan Glaciers: Recent Observations in Respect to the Earthquake Advance Theory: A. S. Post .................................................. 366

Split-Twig Figurines from Northern Arizona: New Radiocarbon Dates: R. C. Euler and A. P. Olson ........................................... 368


Fatty Acids in Blue-Green Algal Mat Communities: P. L. Parker and R. F. Leo .................................................. 373

Circulating DNA as a Possible Factor in Oncogenesis: A. Bendich, T. Wilczok, E. Borenfreund ............................................... 374

Myeloma Proteins and the Clinical Response to Melphalan Therapy: D. E. Bergsagel, P. J. Migliore, K. M. Griffith .................. 376

Electron Spin Resonance of Irradiated DNA: P. S. Pershan et al. .......................................................... 378

Peptides Attached to Thrombin: Their Influence on Proteolysis: R. H. Landaburu, O. Abdala, J. Morrone ................... 380

Chromosome Complement: Differences between Equus caballus and Equus przewalskii, Poliakoff: K. Benirschke et al. ....... 382

Hybrid Antibody Molecules with Allotypically Different L-Polypeptide Chains: M. Mannik and H. Metzger .................... 383

Rubella Complement Fixation Test: J. L. Sever et al. ........................................................................ 385

Density-Gradient Centrifugation: Non-Ideal Sedimentation and the Interaction of Major and Minor Components: M. K. Brakke and J. M. Daly .................................................. 387

Countercurrent Multipliers in Avian Kidneys: T. L. Poulson ..................................................................... 389

Lactate Dehydrogenases in Trout: Evidence for a Third Subunit: E. Goldberg .............................................. 391

Convection Plumes from Ulmus americana L.: E. B. Peterson and A. W. H. Damman .............................................. 392

Arthropod Preparation for Behavioral, Electrophysiological, and Biochemical Studies: W. C. Corning, D. A. Feinstein, J. R. Haight ........................................................................... 394

Selective Attentiveness and Cortical Evoked Responses to Visual and Auditory Stimuli: P. Spong, M. Haider, D. B. Linsdale .................................................. 395

Carotid Sinus and Aortic Reflexes in the Regulation of Circulation during Sleep: M. Guazzi and A. Zanchetti ........................................................................ 397

Impaired Recovery from Hypothermia after Anterior Hypothalamic Lesions in Hibernators: E. Satinoff ......................... 399

MEETINGS Stereospecificity: A. Sehon; Forthcoming Events ........................................................................ 401

COVER

Three long-exposure photographs, taken with the wide angle, 48-inch (120-cm) Schmidt telescope at Mount Palomar, are printed together to show a faintly luminous, previously unknown feature around one end of the spiral galaxy M81. The oval insert shows the spiral galaxy as it appears on a normal photograph taken with the 200-inch (500-cm) telescope. The whole inserted area and more is completely burned out on the combined print which shows the faint ring. The exploding galaxy M82 is at the top edge of the photograph. See page 363. [William Miller]