

GENERAL SCIENCE

Special Honors at Fair

Nineteen Federal agencies and professional organizations selected outstanding finalists at the 14th NSF-I for special honors in their respective fields.

► **JUDGING PANELS** of specialists from Federal agencies and professional organizations selected outstanding finalists at the 14th National Science Fair-International for special honors in their relevant fields. These awards were announced at the NSF-I banquet in Albuquerque, N. Mex.

The American Chemical Society gave First Awards to Joyce A. Van de Vyver, 17, Felician Academy, Detroit, Mich., for "Magnetic Susceptibilities of Crystals," and to John B. Aasmundstad, 18, Dickinson Central H. S., Dickinson, N. Dak., for "Liesegang Rings." Both won plaques and \$100 awards to be used for science materials and study.

First Alternate awards of plaques went to Roberta L. Spicer, 16, Garrett H. S., Garrett, Ind., for "The Translocation and Malate Chelation of Iron in Soybeans," and Francis X. Smith, 17, Wakefield H. S., Wakefield, Mass., for "Organic Derivatives of Antimony Catechol." All four students received subscriptions to the Journal of Chemical Education and their teachers received special plaques.

The American Institute of Biological Sciences honored Carolyn A. Norman, 17, Park Central Sr. H. S., Bluefield, W. Va., for "The Cultivation and Utilization of Algae," and Arthur M. Shapiro, 17, Central H. S., Philadelphia, Pa., for "Sulphur Butterflies: A Study in Evolution." The winners received trips to participate in and exhibit at the AIBS annual meeting.

The American Society for Metals gave a First Award Plaque and \$100 to Arthur V. Riegert, 17, J. K. Mullen H. S., Fort Logan, Colo., for "Function of Metal Whiskers Growth in Corrosion Processes." The Second Award plaque and \$75 went to Daniel M. Hoban, 17, Central Catholic H. S., Fort Wayne, Ind., for "Effects of Heat on Stainless Steel and Titanium."

The American Society for Microbiology gave its First Award of a plaque, a certificate of merit and \$100 to further the winner's career in science to Deborah Chase, 17, Bronx High School of Science, New York, N. Y., for "Findings on the Simultaneous Production by Cells of an Anti-Viral Agent and a Halo-Producing Factor in Response to Inactivated Viruses." A Second Award Plaque, certificate and \$75 went to Rhea L. Keller, 17, New Haven H. S., New Haven, Ind., for "Subcutaneous Induction of Malignant Melanoma in the Syrian Hamster with Cell-Free Extracts." Honorable Mention plaques were awarded to Henry H. Caddell, 18, Decatur H. S., Decatur, Ala.; Dorothy A. White, 18, Anaconda Catholic Central H. S., Anaconda, Mont., and Cecilia V. Huala, 17, St. Vincent Ferrer H. S., New York, N. Y.

The Entomological Society of America

awarded a \$100 Savings Bond and the current issue of the Annual Review of Entomology to Dorothy E. Sanders, 16, Many H. S., Many, La., for "Qualitative Chemical Fractionation of Insects." A Second Award went to John R. Burger, 17, Emporia Sr. H. S., Emporia, Kans., for "Effects of Removal of the Antennae on the Responses of *Periplaneta Americana* to Olfactory Stimuli."

The National Aeronautics and Space Administration awarded Certificates of Merit and two-day visits to NASA facilities to winners in six categories: in Aerodynamics, awards went to Waldean A. Schulz, 17, Roy J. Wasson H. S., Colorado Springs, Colo., for "Dynamics of the Boomerang" and Donald B. Bliss, 16, Murphy H. S., Mobile, Ala., for "Radio Controlled Peripheral Nozzle Air Cushion Vehicle"; in Space Vehicles, to Simon M. Moltz, 18, Highlands H. S., San Antonio, Texas, for "Centrifuge for Man or Mouse" and Brian J. Delano, 16, Tullahoma Sr. H. S., Tullahoma, Tenn., for "Attitude Control of Space Vehicles"; in Space Flight and Propulsion, to Kenneth D. Davis, 18, Tulsa Central H. S., Tulsa, Okla., for "Plasma Jet Generator" and Frank D. Kucera Jr., 18, John Adams H. S., Cleveland, Ohio, for "The Production of Plasma by a High Frequency Magnetic Field"; in

Space Life Sciences, to Patricia N. Schultz, 16, Faribault Sr. H. S., Faribault, Minn., for "Bacterial Evolution" and Judith L. Herr, 17, Northeast H. S., St. Petersburg, Fla., for "Martian Phenomena: Chemical or Biological?"; in Space Physical Sciences, to Jose A. Olivarez, 18, Mission H. S., Mission, Texas, for "The Mystery of the Great Red Spot on Jupiter" and James R. Spear, 16, William Penn H. S., New Castle, Del., for "Photoelectric Photometry of Omicron Hercules and Photographic Photometry of WR110"; and in Space Electronics and Communications, to Henry G. Rylander III, 15, Cross Keys H. S., Atlanta, Ga., for "Circuit Applications of the Tunnel Diode" and Roger B. Rensvold, 17, Duncan H. S., Duncan, Okla., for "Laser Action in Fluid Media." Each of the 12 winners will name a teacher to accompany him on the trip.

The National Committee for Careers in
(Continued on p. 332)

SCIENCE FAIR WINNERS—The 13 top winners with their exhibits at the 14th National Science Fair-International are shown on the following two pages.

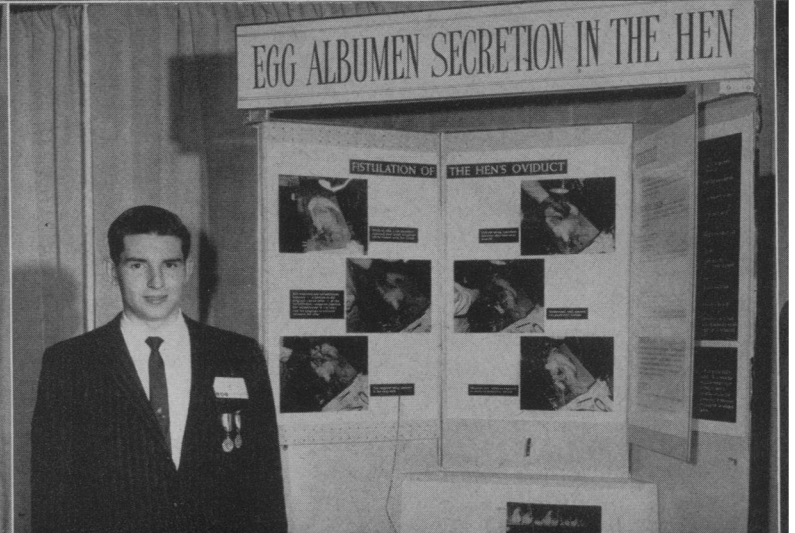
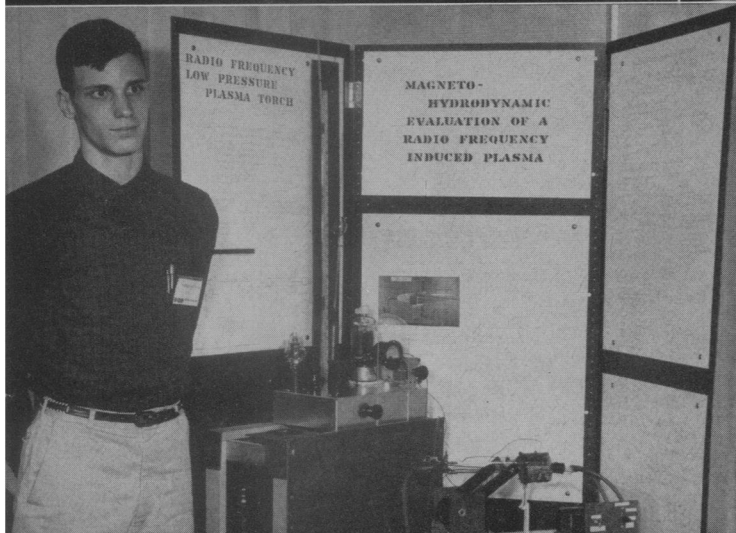
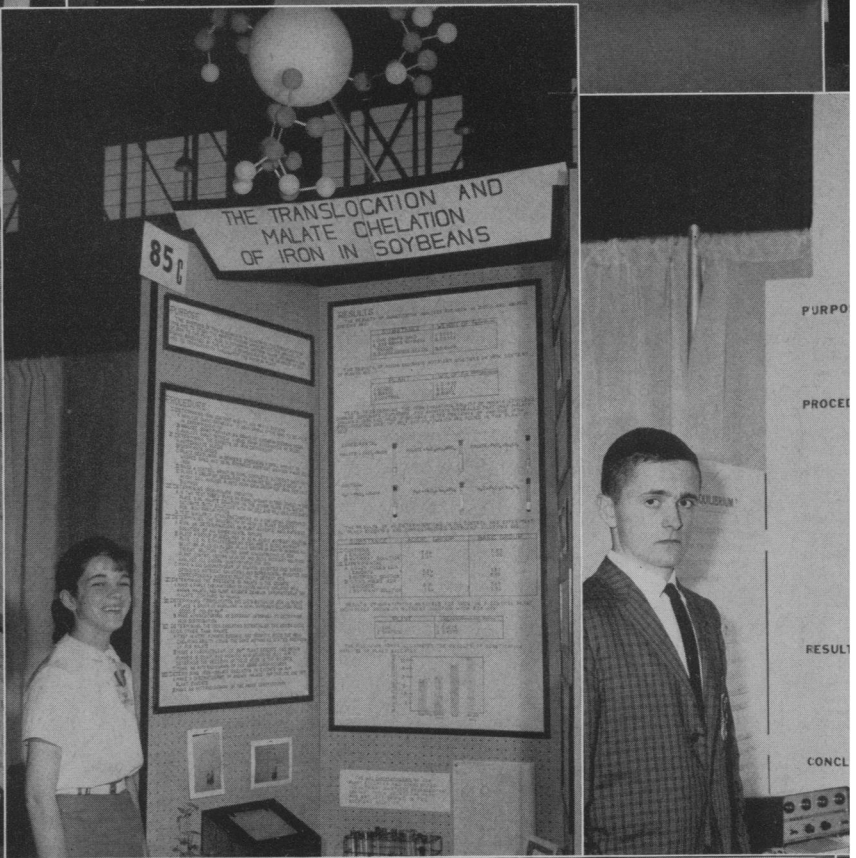
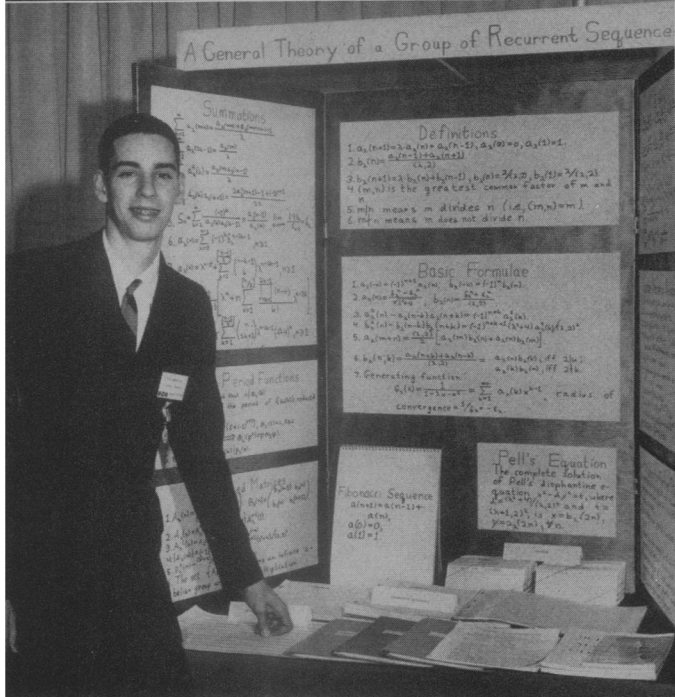
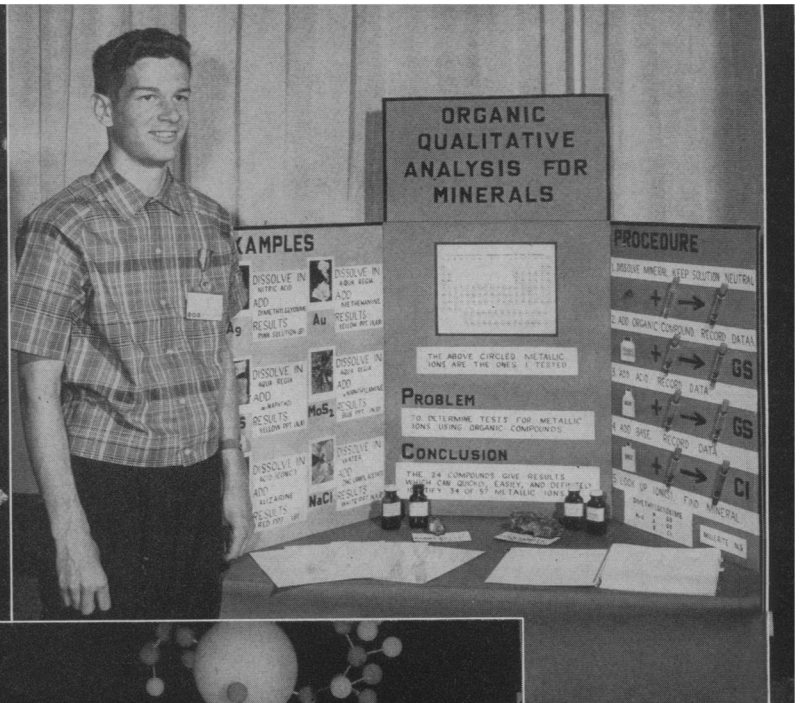
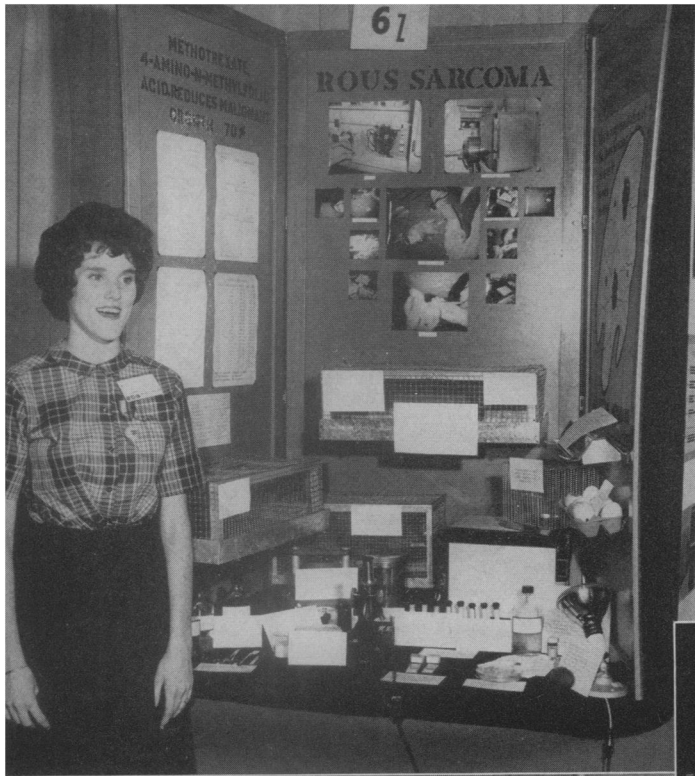
Reading from left to right, top row: Gail M. Houston, Paul V. Rolling, Simon M. Moltz, Vernice M. Murray.

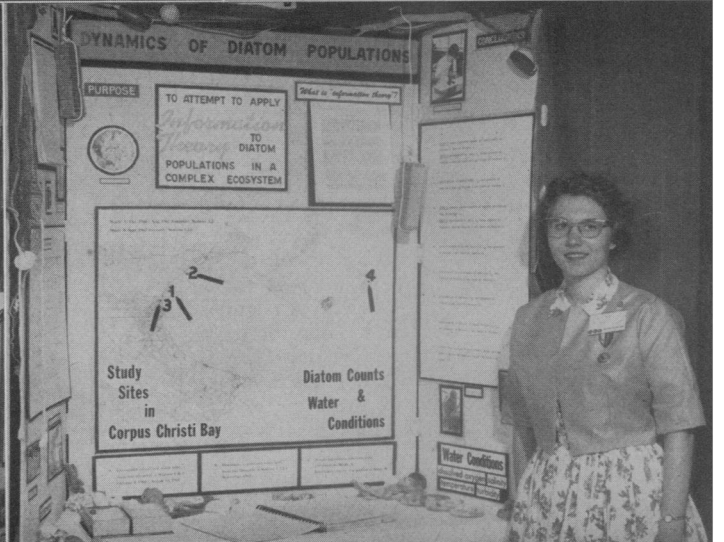
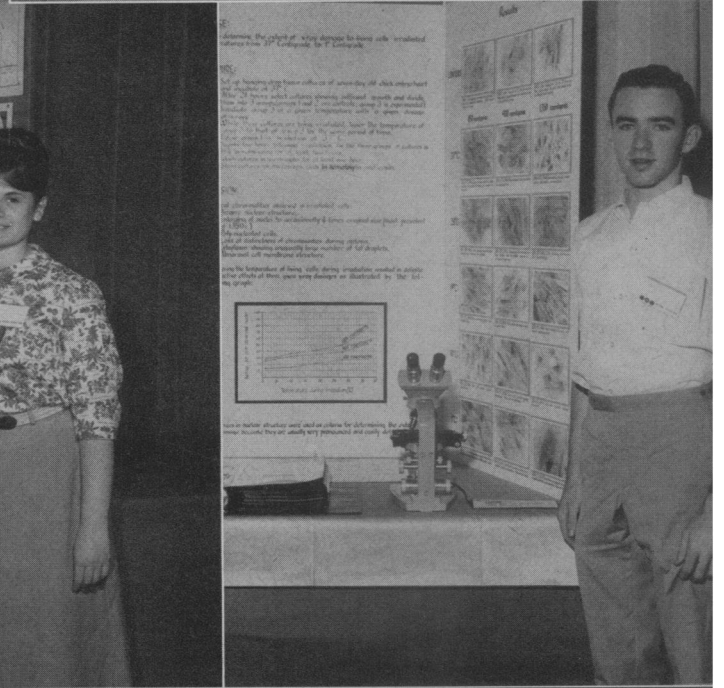
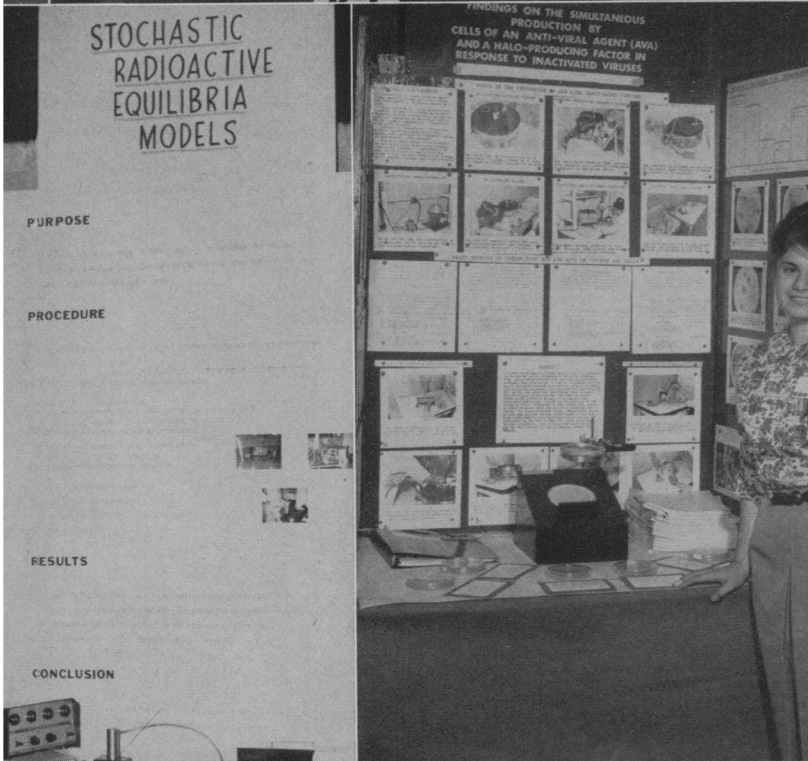
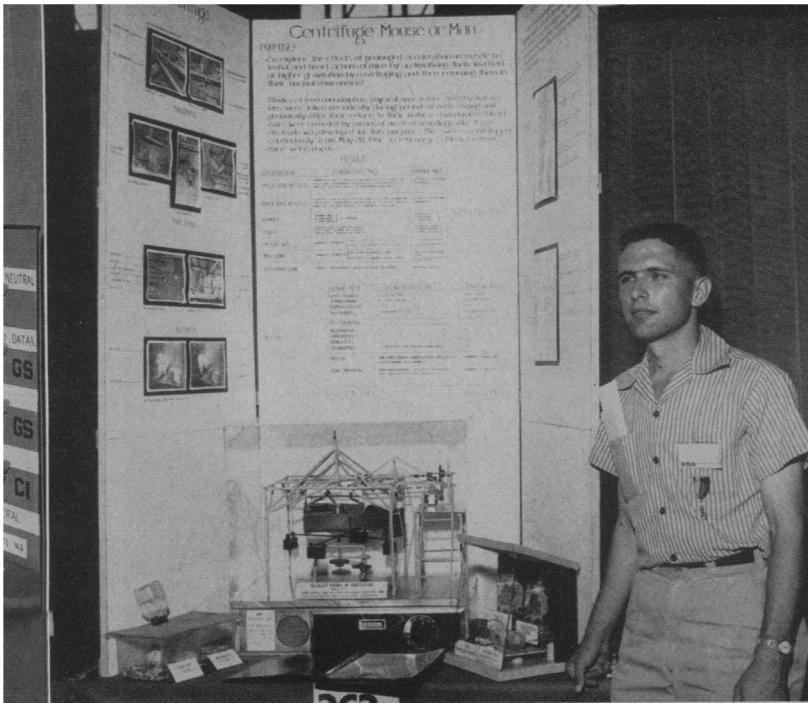
Middle row: Steven S. Muchnick, Roberta L. Spicer, William E. Murray Jr., Deborah Chase, James L. Ash.

Bottom row: Charles P. DeNeef, Benjamin Frank Hatfield Jr., Jonathan S. Fruchter, Jean Carolyn May.



SCIENCE FAIR COUNCIL—Members of the 14th National Science Fair-International Science Council are shown together at Albuquerque, N. Mex. Front row, left to right: Mrs. Elaine Ledbetter, Miss Eleanor Ney, Dr. Phoebe Knipling, Mrs. Ruth B. Painter, Miss Ruth Martin, Mrs. Dorothy Schriver (Secretary). Back row: Rev. George Twellmeyer, S.J., Dr. G. B. Pennebaker, Charles L. Bragaw, Vincent W. Taylor, Dean C. Stroud, Dr. H. H. Hartzler, Dr. R. A. Diettert, Gordon B. Fister (Chairman), Leo J. Roedl, Frank Arganbright, Howard Weisbrod, Dr. Watson Davis (ex-officio member), Norman R. D. Jones, H. M. Louderback, Joseph H. Kraus (ex-officio member). Also on the Council, but not in the photograph are: Clifford Shaw, Dr. Wayne Taylor and Dr. L. A. Willig (Vice-chairman).





Books of the Week

For the editorial information of our readers, books received for review are listed. For convenient purchase of any U. S. book in print, send a remittance to cover retail price (postage will be paid) to Book Department, Science Service, 1719 N Street, N.W., Washington 6, D. C.

THE ARCHAEOLOGY OF ANCIENT CHINA—Kwang-chih Chang—Yale Univ. Press, 346 p., illus., maps, \$7.50. Anthropologist's scholarly reconstruction of the cultural growth of early China and surrounding regions, from earliest times.

THE ATOMIC ENERGY DESKBOOK—John F. Hogerton with others, foreword by Glenn T. Seaborg—Reinhold, 673 p., illus., \$11. A combination dictionary-encyclopedia of atomic energy principles and applications, more than 1,000 entries range from brief definitions to full length articles, oriented toward subjects of industrial importance.

BIOCHEMISTRY: An Introduction—P. H. Jellinek—Holt, 308 p., illus., \$6. Elementary textbook, understandable to students with only limited background in organic chemistry and biology.

C. P. SNOW: The Politics of Conscience—Fredrick R. Karl, preface by Harry T. Moore—Southern Ill. Univ. Press, 162 p., \$4.50. A critical evaluation of C. P. Snow's novels.

THE CALCULUS: A Genetic Approach—Otto Toepflitz, transl. from German by Louise Lange—Univ. of Chicago Press, 192 p., diagrams, paper, \$1.95. Presents the study of infinitesimal calculus by going back to the origins of concepts.

CELL GROWTH AND CELL DIVISION: Symposia of the International Society for Cell Biology, Vol. 2—R. J. C. Harris, Ed.—Academic Press, 341 p., illus., \$13. Report of symposium covering both the biochemical and cytological aspects of cell growth and division in bacterial, plant and animal systems.

GOLD CATHODE DISCHARGE TUBES—J. R. Acton and J. D. Swift—Academic Press, 351 p., \$12. Treats the theory of fundamental processes of electrical discharges in gases and deals with the practice and design of actual tubes.

EDUCATIONAL PSYCHOLOGY IN THE U.S.S.R.—D. N. Bogoiavlenski and others, transl. by Joan Simon, introd. by Brian and Joan Simon, Eds.—Stanford Univ. Press, 283 p., \$6.75. Provides survey of recent Soviet work on the psychology of human learning.

EUCLID AND GEOMETRY—Estelle A. DeLacy—Watts, F., 120 p., \$2.95. Juvenile biography, stressing scientific contribution.

THE EVOLUTION OF THE HUMAN BRAIN—Gerhard von Bonin—Univ. of Chicago Press, 92 p., illus., \$5. Neuroanatomist's critical investigation of theories concerning the brain of early man, discussing the fossil forms, the endocasts and the structure and function of the cortex.

THE FIRST BOOK OF BOLIVIA—William E. Carter—Watts, F., 82 p., photographs, \$2.50. Introduces young people to the land and its customs.

HAM ANTENNA CONSTRUCTION PROJECTS—J. A. Stanley—Sams, 160 p., illus., paper, \$2.95.

Handbook of construction methods, transmission line feeders, antenna tuners and tuning techniques.

HANDBOOK OF HAM RADIO CIRCUITS—David E. Hicks—Sams, 128 p., illus., paper, \$2.95. Discusses the design and operation of some of the most popular amateur equipment in use.

THE HIGHWAY AND THE CITY—Lewis Mumford—Harcourt, 246 p., paper, \$1.65. Critical essays on architecture and some of the problems of contemporary great cities.

• Science News Letter, 83:332 May 25, 1963

Science Fair Awards

(Continued from p. 331)

Brookings H. S., Brookings, S. Dak.; Jon Lindstrom, 17, Rock Island Sr. H. S., Rock Island, Ill.; Lucy Lynch, 17, McLean H. S., McLean, Va.; Alice Martin, 16, Lourdes Academy, Cleveland, Ohio; Joe Maskasky, 17, DuVal Sr. H. S., Lanham, Md.; Malcolm May Jr., 18, Greenwood H. S., Greenwood, Miss.; Vivian McDonald, 15, Xavier University Preparatory School, New Orleans, La.; Cinda McKeeth, 17, Caldwell H. S., Caldwell, Idaho; Paul Minter, 18, Manzano H. S., Albuquerque, N. Mex.; Gilberto Molero, 18, Catholic Academy, San Juan, Puerto Rico; James Moorer, 17, Leon H. S., Tallahassee, Fla.; Eileen O'Brien, 16, New Dorp H. S., New York, N. Y.; Jose Olivarez, 18, Mission H. S., Mission, Texas; Walter Paluchowski, 18, Conglin H. S., Wilkes-Barre, Pa.; David Pariser, 16, Norfolk Academy, Norfolk, Va.; Walter Peidl, 16, Southington H. S., Southington, Conn.; Donald Peterson, 16, Oak Ridge H. S., Oak Ridge, Tenn.; Roger Pommerenke, 17, Great Bend H. S., Great Bend, Kans.; Leslie Poppe, 16, Pocatello H. S., Pocatello, Idaho; Alice Reichardt, 15, Oliver P. Morton H. S., Hammond, Ind.; Doris Reitingner, 17, Cheltenham H. S., Wyncote, Pa.; Roger Rensvold, 17, Duncan H. S., Duncan, Okla.; Terry Richardson, 16, The Porter Academy, Charleston, S. C.; Arthur Riegert, 17, J. K. Mullen H. S., Fort Logan, Colo.; Roger Roth, 17, Alamogordo H. S., Alamogordo, N. Mex.; Dorothy Sanders, 16, Many H. S., Many, La.; Val Schnabl, 18, Brookfield Central H. S., Brookfield, Wis.; Mary Schoettlin, 18, Reitz Me-

morial H. S., Evansville, Ind.; Patricia Schultz, 16, Faribault Sr. H. S., Faribault, Minn.; Arthur Shapiro, 17, Central H. S., Philadelphia, Pa.; Francis Smith, 17, Wakefield H. S., Wakefield, Mass.; Douglas Spence, 16, York H. S., Yorktown, Va.; Mary Strahl, 16, Clairmont H. S., San Diego, Calif.; Kennon Strauss, 16, C. E. Byrd H. S., Shreveport, La.; Eric Sundberg, 18, Watsonville H. S., Watsonville, Calif.; Gordon Telford, 18, West H. S., Waterloo, Iowa; Anne Tolar, 16, Latta H. S., Latta, S. C.; Joyce Van de Vyver, 17, Felician Academy, Detroit, Mich.; Robert Waber, 18, Otsego H. S., Otsego, Mich.; Andrea Whitaker, 17, Parkersburg H. S., Parkersburg, W. Va.; Dorothy White, 18, Anaconda Catholic Central H. S., Anaconda, Mont.; Elizabeth Winstead, 17, Terry Parker H. S., Jacksonville, Fla.; Robert Wray, 16, Fremont H. S., Oakland, Calif.; Erik Wright, 16, Lawrence H. S., Lawrence, Kans.; Randall Zisler, 16, Wakefield Sr. H. S., Arlington, Va.

• Science News Letter, 83:325 May 25, 1963

Special Honors at Fair

(Continued from p. 327)

Medical Technology gave a First Award of a certificate and a summer job with the American Registry of Pathology at the Armed Forces Institute of Pathology in Washington, D. C., plus up to \$100 for travel expense, to James L. Ash Jr., 18, Bryan Adams H. S., Dallas, Texas, for "Effects of Cooling on Radiation Damage to Living Cells." A Second Award citation went to Nancy L. Williamson, 16, Bryan H. S., Bryan, Ohio, for "Blood Typing Serum by Hemagglutination in Seed Extracts." Also citations to Bruce C. Byrne, Hammond, Ind.; Robin DeVore, Albuquerque, N. Mex.; Renee Welling, Apopka, Fla.; and Rhea Keller, New Haven, Ind. The National Pest Control Association gave a certificate and \$100 for science materials and experimentation in biology to Benjamin F. Hatfield Jr., 17, W. F. Dykes H. S., Atlanta, Ga., for "Egg Albumen Secretion in the Hen."

The National Telemetering Conference awarded a certificate and a trip for himself and his sponsor, to exhibit at the annual conference, to Daniel R. Jacobsmeyer, 18, Hazelwood H. S., St. Louis, Mo., for "Bio-Medical Engineering." Simon M. Moltz, 18, Highlands H. S., San Antonio, Texas, "Centrifuge for Man or Mouse," was named as alternate.

The Optical Society of America presented a First Award of \$100 for materials, equipment, or books to Roger B. Rensvold, 17, Duncan H. S., Duncan, Okla., for "Laser Action in Fluid Media." The Second Award of \$75 went to Robert C. Waber, 18, Otsego H. S., Otsego, Mich., for "Design and

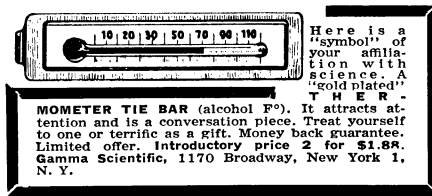
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Operation of an Experimental Spectrograph." Honorable Mentions were given to Thomas R. Norris, 18, Encina H. S., Sacramento, Calif.; Terry D. Beard, 17, Arvin H. S., Arvin, Calif., and Philip Y. Paden, 17, Lawrence H. S., Lawrence, Kans.


The Pilot Club of Albuquerque presented \$100 to further her career in science to Dorothy A. White, 18, Anaconda Catholic Central H. S., Anaconda, Mont., for her project, "Soil Bacteria—Source of Antibiotics."

The Society of Women Engineers presented a \$100 Savings Bond to Mary K. Schoettlin, 18, Reitz Memorial H. S., Evansville, Ind., for her project, "Seismology and the Seismograph."

The U.S. Air Force honored finalists in nine special categories with plaques of achievement and invitations to spend two to five days at an Air Force Research and Development facility. Each of the nine winners will be offered a summer job in an Air Force Research Laboratory. Alternates to these salaried positions also were selected.

In Aerospace Power, the winner was William J. Robinson III, 17, J. P. McCaskey H. S., Lancaster, Pa., for "Exploring Space—Through Rocketry," and the alternate was Simon M. Moltz, 18, Highlands H. S., San Antonio, Texas; in Aerospace Dynamics, Waldean A. Schulz, 17, Roy J. Wasson H. S., Colorado Springs, Colo., for "Dynamics of the Boomerang," the alternate was Donald B. Bliss, 16, Murphy H. S., Mobile, Ala., and the second alternate was Joel B. Kameron, 17, New Bedford H. S., New Bedford, Mass.; in Aerospace Propulsion, Eric E. Sundberg, 18, Watsonville H. S., Watsonville, Calif., for "Characteristics of an Unconventional Rocket Engine—Plug Nozzle," and the alternate Richard L. Olson, 18, Mason City H. S., Mason City, Iowa; in Electronics, Bruce Edward Bowman, 18, Pennsbury H. S., Yardley, Pa., for "Design, Construction and Use of a .5 Mev Linear Particle Accelerator in a Study of Short de Broglie Wavelengths by Electron Crystal Diffraction Method," and the alternate Val J. Schnabl, 18, Brookfield Central H. S., Brookfield, Wis.; in Electronic Computers and Mathematics, Amory B. Lovins, 15, Amherst Regional H. S., Amherst, Mass., "Research in Differential Geometry and Topology," and the alternate Steven S. Muchnick, 17, Henry Grady H. S., Atlanta, Ga.; in Atmosphere Physics, Bobby Forrest, 18, McKinley Sr. H. S., Baton Rouge, La., "Geomagnetically Trapped Solar Stream Forms With a Laboratory Model" and alternate was Michael Kaku, 16, Cubberley H.S., Palo Alto, Calif.; in Aerospace Bioscience, the winner was Deborah Chase, 17, Bronx High School of Science, New York, N.Y., for "Findings on the Simultaneous Production by Cells of an Anti-Viral Agent and a Halo-Producing Factor in Response to Inactivated Viruses" and alternates were Anita Ware, 17, Eisenhower H. S., Rialto, Calif., and Simon M. Moltz, 18, Highlands H. S., San Antonio, Texas; in Photography and Optics, Terry D. Beard, 17, Arvin H. S., Calif., "The ADP Grid Pattern," and alternate Michael R. Gorman, 18, San Angelo Central H. S., San Angelo, Texas; in Materials Research, Stanley Dayan, 17, White Plains H. S., White Plains, N. Y., for "Magnetic Retention Properties of Ferromagnetic Materials" and alternate Arthur

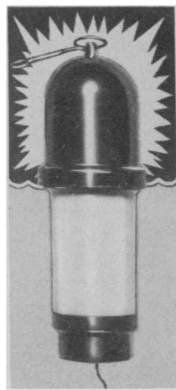
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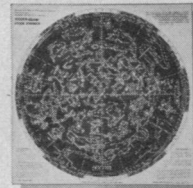
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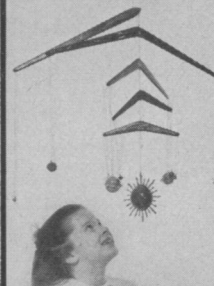
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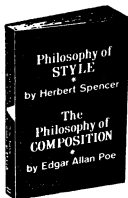
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Special Honors at Fair

(Continued from p. 333)

V. Riegert, 17, J. K. Mullen H. S., Fort Logan, Colo.

The Aerospace Education Foundation of the Air Force Association presented slide rules to the nine First Award winners.

The U.S. Atomic Energy Commission gave certificates and trips to Argonne National Laboratory to James L. Ash, Jr., 18, Bryan Adams H. S., Dallas, Texas, for "Effects of Cooling on Radiation Damage to Living Cells"; Eddie Hilbert Myers, 16, West Rowan H. S., Mt. Ulla, N. C., for "Radiation, Hematology, and Biochemical Study of Molt-Control Hormones of Crayfish and Possible Importance to Man"; Michael Kaku, 16, Cubberley H. S., Palo Alto, Calif., for "The Creation of Antimatter"; William E. Murray Jr., 17, Walter Johnson H. S., Bethesda, Md., for "Stochastic Radioactive Equilibria Models"; Michael A. Haralson, 17, Abilene H. S., Abilene, Texas, for "Mutations in Tomato Plants Produced by Gamma Ray Radiation"; Stuart L. Corwin, 16, Classical H. S., Providence, R. I., for "Transistor Flip-Flop Computer"; Linda M. Bush, 16, Missoula County H. S., Missoula, Mont., for "Chemical Protection from Radiation in Planaria"; Elizabeth D. Winstead, 17, Terry Parker H. S., Jacksonville, Fla., for "Irradiation Effects on Gene Mutations in Drosophila"; Eileen M. O'Brien, 16, New Dorp H. S., New York, N. Y., for "Radiation—Protective Effects of RNA," and Barry B. Prestridge, 18, Olton H. S., Olton, Texas, "Rate of Regeneration of Eyespots in Planaria." Each winner will designate a teacher who also will be honored with an expenses-paid trip.

Alternates were Kathleen L. Darwin, 16, Grants Sr. H. S., Grants, N. Mex.; Arlene J. Barber, 16, Loretto Academy, Santa Fe, N. Mex.; Kennon R. Strauss, 16, C. E. Byrd H. S., Shreveport, La.; Richard L. Olson, 18, Mason City H. S., Mason City, Iowa; Stephen D. Tuttle, 17, Temple H. S., Temple, Texas; Joyce E. Solomon, 17, C. A. Johnson H. S., Columbia, S. C.; David G. Yost, 16, Tamaqua Area Sr. H. S., Tamaqua, Pa.; Anders S. Brahme, 18, Bromma Gymnasium, Bromma, Sweden; Linda K. Robinson, 17, Dimmitt H. S., Dimmitt, Texas; Bruce E. Bowman, 18, Pennsbury H. S., Yardley, Pa.

The U. S. Navy designated ten Navy Science Cruisers and awarded them Principal Award Certificates and official Navy binoculars in addition to five day science-oriented trips on naval vessels and at USN research facilities. The Cruisers are: William K. Borsum, 16, San Dieguito Union H. S., Encinitas, Calif., "Plant Electrification"; Benjamin F. Hatfield Jr., 17, W. F. Dykes H. S., Atlanta, Ga., "Egg Albumen Secretion in the Hen"; Joel F. Liebman, 15, James Madison H. S., Brooklyn, N. Y., "Systematic Generic Nomenclature of Polynuclear Hydrocarbons"; Paul V. Roling, 17, Wahlert H. S., Dubuque, Iowa, "Organic Qualitative Analysis for Minerals"; David P. Clark, 18, Harlingen H. S., Harlingen, Texas, "An Equilibrium Space Capsule"; Simon M. Moltz, 18, Highlands H. S., San Antonio, Texas, "Centrifuge for Man or Mouse"; Amory B. Lovins,

15, Amherst Regional H. S., Amherst, Mass., "Research in Differential Geometry and Topology"; Roger R. Roth, 17, Alamogordo H. S., Alamogordo, N. Mex., "Electromagnetic Storage and Reproduction of Photographic Negatives"; Donald B. Bliss, 16, Murphy H. S., Mobile, Ala., "Radio Controlled Peripheral Nozzle Air Cushion Vehicle"; and Edward J. Duffy, 18, Stranahan Sr. H. S., Fort Lauderdale, Fla., "Gaseous Cause of the Phenomenon Termed 'Nitrogen Narcosis' and the Effects of Traumatic Aero Embolism."

The U. S. Army awarded certificates and trips to Army research facilities to: Walter B. Paluchowski Jr., 18, Coughlin H. S., Wilkes-Barre, Pa., for "Mapping the Invisible Universe"; Richard I. Gomberg, 17, Immaculate Conception Academy, Mayaguez, Puerto Rico, for "Interpretation of Simultaneous Sound"; William E. Murray, 17, Walter Johnson H. S., Bethesda, Md., for "Stochastic Radioactive Equilibria Models"; Donald E. Peterson, 16, Oak Ridge H. S., Oak Ridge, Tenn., "Probability of Cube-Octahedron Dice"; Vance G. Marshall III, Flint Central H. S., Flint, Mich., for "Atom Smasher—An Electrostatic Particle Accelerator"; Rhea L. Keller, 17, New Haven H. S., New Haven, Ind., "Subcutaneous Induction of Malignant Melanoma in the Syrian Hamster with Cell-Free Extracts"; David E. Katz, 15, Baltimore City College H. S., Baltimore, Md., for "Energy Loss of Beta Particles in Lead and Aluminum"; Daniel R. Jacobsmeier, 18, Hazelwood H. S., St. Louis, Mo., "Bio-Medical Engineering"; Barbara M. Descoteaux, 17, Mt. St. Michael H. S., Hyde Park, Reading, Pa., "Biochemistry of Farnesol"; Waldean A. Schulz, 17, Roy J. Wasson H. S., Colorado Springs, Colo., "Dynamics of the Boomerang"; and Harry W. Power III, 18, Great Falls Central H. S., Great Falls, Mont., "Life History of the Mountain Bluebird."

Summer jobs in Army research facilities will be given to Bruce E. Bowman, 18, Pennsbury H. S., Yardley, Pa., "Design Construction and Use of a 5 MEV Linear Particle Accelerator in a Study of Short DeBroglie Wavelengths by Electron Crystal Diffraction Method"; Malcolm D. May Jr., 18, Greenwood H. S., Greenwood, Miss., "The Effects of Traumatic Shock Conditioning on the Phagocytic Activity of the Reticuloendothelial System"; Randall C. Zisler, 16, Wakefield Sr. H. S., Arlington, Va., "From the Drafting Board to the Finished Product"; Robin K. DeVore, 17, Highland H. S., Albuquerque, N. Mex., "An Investigation of Erythrocyte Phosphatases"; Robert J. Staniewicz, 17, Southington H. S., Southington, Conn., "Electrochemical Analysis by Polarography"; William E. Murray Jr., 17, Walter Johnson H. S., Bethesda, Md., "Stochastic Radioactive Equilibria Models"; James A. Moorer, 17, Leon H. S., Tallahassee, Fla., "Memory and the Planaria"; Donald J. Crownover, 18, Rock Island Sr. H. S., Rock Island, Ill., "Basic Studies in Boron-Organic Polymer Chemistry"; and Sheila McMorris, 18, West Phoenix H. S., Phoenix, Ariz., "Infrared Content of a Selected Area in the North Sky and Its Relationship to Cloud Formations."

Alternate certificates went to Terry Richardson, 16, The Porter Academy, Charleston, S. C.; Doris Reiting, 17, Cheltenham H. S., Wyncote, Pa.; Amory Lovins, 15, Amherst Regional H. S., Amherst, Mass.; James Baker, 18, Yorktown H. S., Arlington, Va.; Steven Muchnick, 17, Henry Grady H. S., Atlanta, Ga.; Henry Caddell, 18, Decatur H. S., Decatur, Ala.; Deborah Chase, 17, Bronx High School of Science, New York, N. Y.; Michael Kaku, 16, Cubberley H. S., Palo Alto, Calif.; Frank Kucera Jr., 18, John Adams H. S., Cleveland, Ohio; Eddy Cordes, 16, St. Mary's H. S., Lawton, Okla.; James L. Ash Jr., 18, Bryan Adams H. S., Dallas, Texas; Paul V. Roling, 17, Wahlert H. S., Dubuque, Iowa; John Holian Jr., 17, Archbold-German Twp. H. S., Archbold, Ohio; and Laura L. Norman, 18, Terry Parker H. S., Jacksonville, Fla.

The Armed Forces Chemical Association presented plaques and \$50 travel expenses to the following winners of Army summer jobs in Chemical-Biological-Radiological Agency research facilities: Robin K. DeVore, Robert J. Staniewicz, William E. Murray Jr., James A. Moorer, Donald J. Crownover, and Sheila McMorris. Plaques were presented to the following alternates to the CBR Agency summer jobs: James L. Ash Jr., Paul V. Roling, John Holian Jr., and Laura L. Norman.

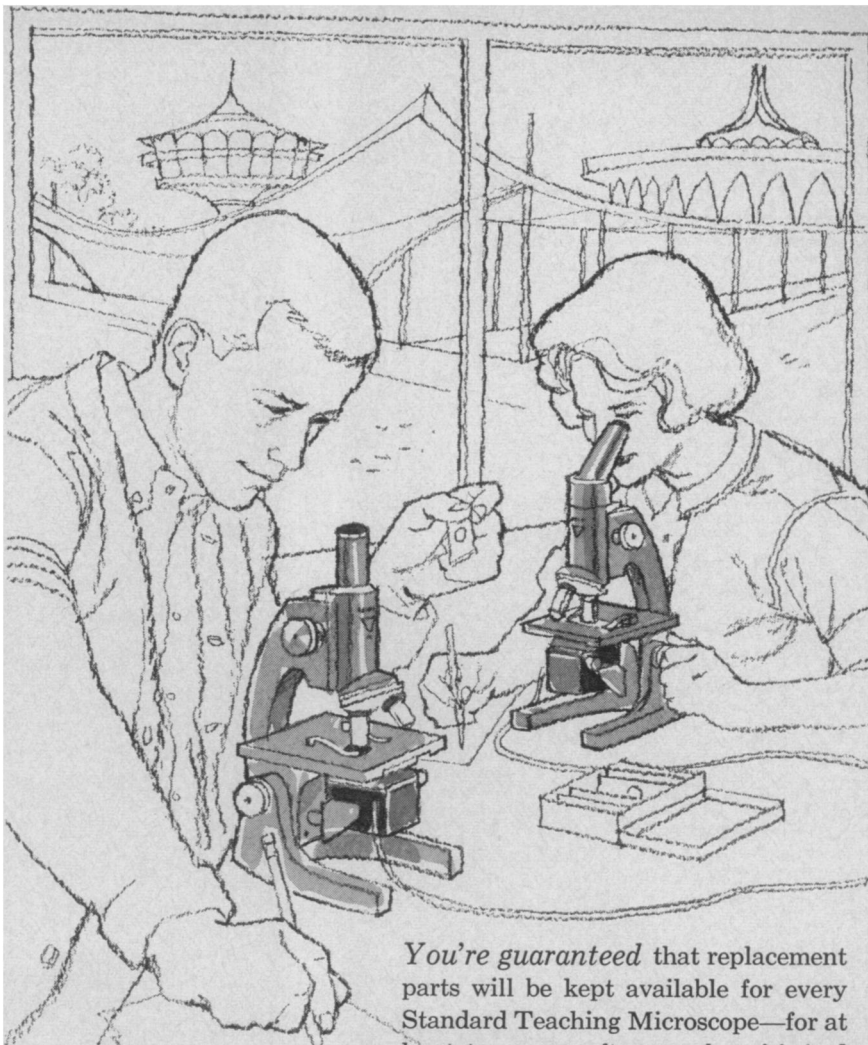
The Army Aviation Association of America presented a plaque and \$100 to further his scientific education to Donald B. Bliss, 16, Murphy H. S., Mobile, Ala., for his project, "Radio Controlled Peripheral Nozzle Air Cushion Vehicle."

• Science News Letter, 83:327 May 25, 1963

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THE 14th NSF-I was sponsored locally by the Albuquerque Journal, of which C. T. Lang is publisher, and the New Mexico Institute of Mining and Technology, of which Dr. E. J. Workman is president, and who was chairman of the Albuquerque committee. Dr. John D. Hopperton, also of the New Mexico Institute of Mining and Technology, was the local director. Other committees and chairmen were: Catering: Tom Corr, Southern Union Gas Company; Communications: Lloyd Dodds, Mountain States Telephone and Telegraph Company; Exhibits: Jim Galbreath, Sandia Corporation; Hospitality: Horace Ellis, Albuquerque National Bank; Housing: H. B. Wood, Albuquerque Chamber of Commerce; Judging: Dr. Charles Holmes, New Mexico Institute of Mining and Technology, Socorro; Publicity: A. Holmes and L. File, both of New Mexico Institute of Mining and Technology, Socorro; Public Relations: Robert Rountree, Public Service Company of New Mexico; Seminars: Dr. Irving Auerbach, Sandia Corporation; Tours: Dr. Clay T. Smith, New Mexico Institute of Mining and Technology, Socorro; Transportation: Travis Clyne, Whitfield Transportation Company, Las Cruces and Albuquerque; Live Animal Care: Bernalillo County Veterinary Medical Society; First Aid Care: New Mexico Nurses Association; Medical Care: Bernalillo County Medical Association.

• Science News Letter, 83:335 May 25, 1963



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