

Stratton Wilson and Jerry C. Tash (1966); vol. 119, No. 3538, "Review of South American characid fishes of subtribe Nanostomina," Stanley H. Weitzman (1966, 56 pp.); vol. 119, No. 3544, "Range and variations of subspecies of *Cambarus Longulus* (Decapoda: Astacidea)," Hugo A. James (1966, 25 pp.); vol. 120, No. 3555, "Review of South American freshwater angelfishes—genus *Pterophyllum*," Leonard P. Schultz (1967, 10 pp.); vol. 120, No. 3565, "The benthic Polychaeta and Amphipoda of Morro Bay, California," Donald J. Reish and J. Laurens Barnard (1967, 26 pp.); vol. 121, No. 3570, "Revision of the family Pandaridae (Copepoda: Caligoida)," Roger Cressey (1967, 133 pp.); vol. 121, No. 3573, "New cyclopoid copepods associated with the alcyonarian coral *Tubipora Musica* (Linnaeus) in Madagascar," Arthur G. Humes and Ju-Shey Ho (1967, 24 pp.); vol. 121, No. 3576, "New species and records of Pacific Ampeliscidae (Crustacea: Amphipoda)," J. Laurens Barnard (1967, 20 pp.); vol. 122, No. 3584, "The extinct sea mink, with taxonomic notes," Richard H. Manville (1966, 12 pp.); vol. 122, No. 3588, "Variation and distribution of the pelagic amphipod *Cyphocaris Challengeri* in the northeast Pacific (Gammaridea: Lysianassidae)," Thomas E. Bowman and John C. McCain (1967, 14 pp.); vol. 122, No. 3589, "Notes on the genus *Manningia* with description of a new species (Crustacea: Stomatopoda)," Raymond D. Manning (1967, 13 pp.); vol. 122, No. 3592, "The psolid holothurian genus *Lissothuria*," David L. Pawson (1967, 18 pp.); *Publications in Salvage Archeology*, No. 2, "The Black Partizan site," Warren W. Caldwell (1966, 145 pp.); No. 3, "The Hitchell site," Richard B. Johnston (1967, 113 pp.); *Smithsonian Year* (1966, 409 pp., \$1.75). Smithsonian Institution, Washington, D.C. (order from Superintendent of Documents, Washington, D.C.).

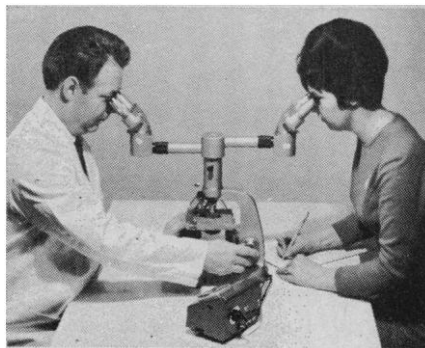
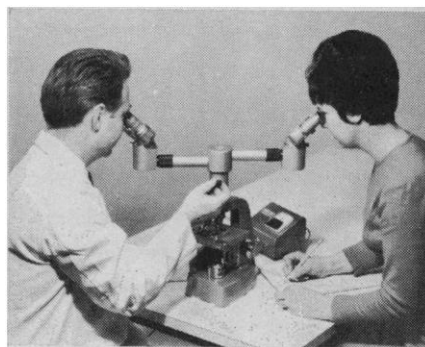
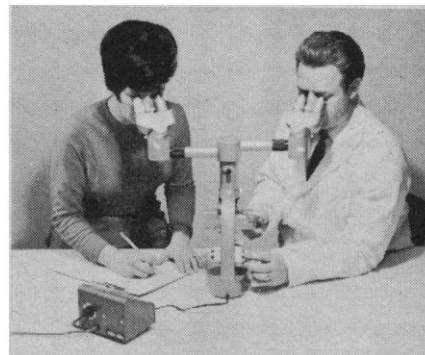
Stalk Rot of Corn. J. J. Christensen and R. D. Wilcoxson. Published for The American Phytopathological Society. Heffernan Press, Worcester, Mass., 1966. 59 pp.

The Transliteration of Modern Russian for English-Language Publications. J. Thomas Shaw. Univ. of Wisconsin Press, Madison, 1967. 23 pp. Paper, \$1.

U.S. Geological Survey. Bulletin, No. 1123-I, "Geology of the Potosi quadrangle, Grant County, Wisconsin, and Dubuque County, Iowa," Jesse W. Whitlow and Walter S. West (39 pp., maps); No. 1199-O, "Bauxite deposits of the Anniston, Fort Payne and Ashville areas, Northeast Alabama," Preston E. Cloud, Jr. (35 pp., map); No. 1199-P, "Some bauxite and clay deposits in Northeastern Alabama," Norman M. Denson and Karl M. Waagé (27 pp., map); No. 1221-F, "Igneous geology of the Dry Mountain quadrangle, Jefferson County, Montana," Harold J. Prostka (21 pp., map); No. 1240, "Sources of fertilizer minerals in South America: A preliminary study," J. F. Harrington, D. E. Ward, and V. E. McKelvey (66 pp., map, 60¢); No. 1241-A, "Geology of the Adam Weiss Peak quadrangle, Hot Springs and Park Counties, Wyoming," Willis L. Rohrer (39 pp., map); No. 1241-D, "Ternary diagrams of the quartz-feldspar content of pegmatites in Colorado," James

J. Norton (16 pp., map, 50¢); No. 1244-A, "Changes in stratigraphic nomenclature by the U.S. Geological Survey, 1965," George V. Cohee and Walter S. West (60 pp., 25¢); No. 1244-B, "Upper Ordovician formations in the Maysville area, Kentucky," John H. Peck (30 pp., 20¢); No. 1244-C, "Cretaceous and Tertiary rocks in the Corozal quadrangle, Northern Puerto Rico," Arthur E. Nelson (20 pp., 15¢); *Professional Paper*, No. 352-H, "Erosion and deposition in the loess-mantled Great Plains, Medicine Creek drainage basin, Nebraska," James C. Brice (339 pp., 85¢); No. 393-A, "The Red Bird section of the Upper Cretaceous Pierre Shale in Wyoming," James R. Gill and William A. Cobban (91 pp., maps); No. 396, "Stratigraphy of some Paleozoic formations in the Independence quadrangle, Inyo County, California," Donald C. Ross (64 pp., maps); No. 403-I, "Smaller foraminifera from Guam," Ruth Todd (81 pp., 75¢); No. 422-J, "Resistance to flow in alluvial channels," D. B. Simons and E. V. Richardson (61 pp., 50¢); No. 476-B, "Origin of elements associated with uranium in the Cave Hills area, Harding County, South Dakota," George N. Pippingos (75 pp., 55¢); No. 495-B, "Paleozoic formations in the Wind River Basin, Wyoming," W. R. Keefer and J. A. Van Lieu (60 pp., maps); No. 500-C, "Probability concepts in geomorphology," A. E. Scheidegger and W. B. Langbein (14 pp., 20¢); No. 503-A, "Paleozoic Gastropoda from the Moose River synclorium, Northern Maine," Arthur J. Boucot and Ellis L. Yochelson (28 pp., 30¢); No. 510, "Geology and igneous petrology of the northern Elkhorn Mountains, Jefferson and Broadwater Counties, Montana," Harry W. Smedes (116 pp., maps); No. 523-A, "Late Pleistocene diatoms from the Trempealeau Valley, Wisconsin," George W. Andrews (35 pp., 40¢); No. 524-F, "A compositionally zoned ash-flow sheet in southern Nevada," P. W. Lipman, Robert L. Christiansen, and J. T. O'Connor (47 pp., map, \$1); No. 543-B, "Geomorphic effects of the earthquake of March 27, 1964 in the Martin-Bering Rivers area, Alaska," Samuel J. Tuthill and Wilson M. Laird (29 pp., 30¢); No. 543-D, "Geologic effects of the March 1964 earthquake and associated seismic sea waves on Kodiak and nearby islands, Alaska," George Plafker and Reuben Kachadoorian (46 pp., 60¢); No. 544-A, "Effects of the March 1964 Alaska earthquake on the hydrology of south-central Alaska," Roger M. Waller (28 pp., 30¢); No. 544-B, "Effects of the March 1964 Alaska earthquake on the Hydrology of the Anchorage area," Roger M. Waller (18 pp., maps, 60¢); No. 550-D, "Geological Survey Research 1966," (267 pp., \$2.25); No. 560-B, "Geology of the Arabian Peninsula, Yemen," F. Geukens. Translated from the French by S. D. Bowers (23 pp., 30¢); No. 560D, "Geology of the Arabian Peninsula: Sedimentary geology of Saudi Arabia," R. W. Powers, L. F. Ramirez, C. D. Redmond, and E. L. Elberg, Jr. (147 pp., maps); No. 560-H, "Geology of the Arabian Peninsula: Eastern Aden Protectorate and part of Dhufar," Z. R. Beydoun (49 pp., map). Superintendent of Documents, Washington, D.C., 1966.

DUAL VIEWING AT *any* ANGLE MICROSCOPE



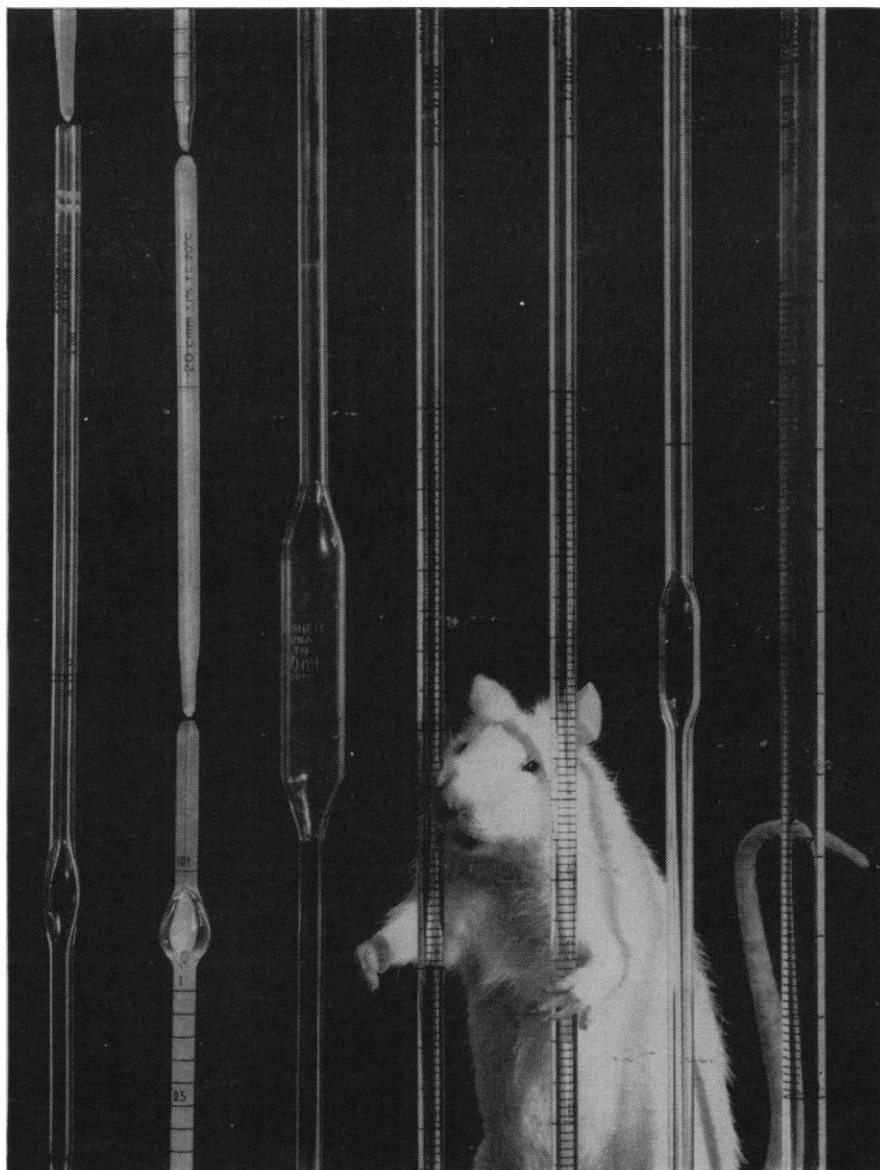
Two persons can simultaneously observe and discuss the same microscopic image at all magnifications. This microscope is equipped with two inclined binocular or monocular heads. Each viewer can focus independently. A built-in pointer can be directed to any area.

Ideally suited for training and teaching purposes, conferences and many other applications in research and routine laboratory work.

Hacker
INSTRUMENTS

WILLIAM J. HACKER & CO., INC.

Box 646, W. Caldwell, N. J. 07007
Telephone 226-8450 (201)



Has Fisher really built a better pipet?

Better mousetraps you've heard about . . . but pipets? Well, we've done it—built a better pipet. We put the emphasis on accuracy and economy. We proudly call our pipets **FISHERbrand**.

Each—and in this most comprehensive line there are some 220 different types and sizes—is individually calibrated and most are marked with the accuracy tolerance. All markings are permanent; large numerals reduce errors, while fine graduation lines increase reproducibility. Tooled or ground and beveled tops assure better delivery control.

Clinical pipets are made from white-back tubing; clear-glass types from tough borosilicate. These latter

also have the new Tuf-Temp™ treatment on top and tip that practically eliminates chipping.

FISHERbrand pipets are singularly low in cost to begin with, but additional discounts you can attain are amazingly liberal. For example, on six packages—12 to a package—you get 20% off, and FISHERbrand pipets are assortable.

If you don't beat a path to our door when we tell you about the neat-stacking, space-saving, top-opening box, our representative will be in touch with you. Or you could get our free FISHERbrand pipets brochure. Write Fisher Scientific Company, 1390 Fisher Bldg., Pittsburgh, Pa. 15219.

J-606



FISHER SCIENTIFIC CO.

Instruments, Apparatus, Furniture and Chemicals for Laboratories

Complete stocks in all these locations: Atlanta • Boston • Chicago • Cleveland • Houston • New York • Philadelphia • Pittsburgh • St. Louis • Union, N. J. • Washington • Edmonton • Montreal • Toronto • Vancouver

1674

INDEX TO ADVERTISERS

23 June 1967

American Instrument Co., Inc. . . .	1670
Bausch & Lomb	1655, 1671
Beckman Instruments, Inc.	1528, 1529
Belco Glass, Inc.	1651
Bendix Corp.	1664
BRS Electronics	1663
Buchler Instruments, Inc.	1536
Cary Instruments	1532
Durst (USA), Inc., Photo Technical Div.	1543
Fisher Scientific Co.	1674
Friden, Inc.	1538
Gilford Instrument Laboratories, Inc.	1540
Gilson Medical Electronics	1554
Hacker, William J., & Co.	1662, 1673
Harford Metal Products, Inc.	1665
Heat Systems Co.	1672
Honeywell	1677
Hyland	1653
Instron Corp.	1533
Instrumentation Specialties Co., Inc.	1658
Klett Manufacturing Co., Inc.	1672
Lab Cages, Inc.	1537
Labconco Corp.	1653
Labindustries	1550
Mallinckrodt Chemical Works	1661, 1663, 1665, 1667
Maryland Plastics, Inc.	1669
Mercer Glassworks, Inc.	1656
Mettler Instrument Corp.	1651
Nalgene Labware Div.	1552
New Brunswick Scientific Co., Inc.	1656
Nuclear-Chicago, Inc.	1542, 1550
Nuclear Data, Inc.	1534
Olympus Corp. of America	1535
Packard Instrument Co., Inc.	1556
Percival Refrigeration & Mfg. Co.	1653
Perkin-Elmer Corp.	1548
Pharmacia Fine Chemicals, Inc.	1552
Phoenix Precision Instrument Co.	1670
Photo Research Corp.	1666
Precision Scientific Co.	1654
Professional Tape Co., Inc.	1662
RCA Scientific Instruments	1551
Sage Instruments, Inc.	1666
Sargent, E. H., Co.	1553
Scientific Glass Apparatus Co., Inc.	1668
Schoeffel Instrument Co.	1672
Shandon Scientific Co., Inc.	1657
Sigmamotor, Inc.	1651
Thomas, Arthur H., Co.	1678
Tracerlab	1544
Unitron Instrument Co.	1547
Vickers Instruments, Inc.	1652
Warner-Chilcott Laboratories	1667
Worthington Biochemical Corp.	1541
Zeiss, Carl, Inc.	1539

SCIENCE, VOL. 156

ALASKA DIVISION (AAAS) MEETING

University of Alaska, College, Alaska

27 August – 1 September 1967

Proceedings of the various Alaskan Science Conferences are available. A complete set, consisting of volumes 2-16 (volume 1 is out of print), costs \$52. Individual volumes may be obtained for \$6. Volume 17, covering the 1967 meeting, may also be ordered (\$6).

For additional information about the meeting or the proceeding volumes, contact: Eleanor G. Viereck, Executive Secretary, Alaska Division, AAAS, University of Alaska, P.O. Box 271, College, Alaska.

LIBRARIANS

Professional Librarians are required in various Government Departments, mainly for Ottawa, but also including some field locations.

A wide scope of positions are available in National, Scientific, Specialized and Education Libraries.

Appendices are available for positions in the following Departments:

Canada Department of Agriculture	(67-412-1) up to \$10,091
Public Archives and National Library	(67-412-2) up to \$ 8,677
Department of Forestry and Rural Development	(67-412-3) up to \$ 8,677
Department of Energy, Mines and Resources	(67-412-4) up to \$10,091
Department of Manpower and Immigration	(67-412-5) up to \$10,091

For information on these, or other positions, address correspondence to:

PUBLIC SERVICE COMMISSION OF CANADA OTTAWA 4, ONTARIO

Please refer to appendix number where applicable.

PERSONNEL PLACEMENT

POSITIONS WANTED

Coordinator of Research. Ph.D. Chemistry (1941). Outstanding record with university, industry, government. Box 480, SCIENCE. 6/23

(a) **VIROLOGY** Ph.D.; preventive medicine postdoctorate; experience R&D biological vaccines; seeks commercial executive appointment. (b) **ZOOLOGY** Ph.D. 1967; tissue transplant pathology research, physiology teaching experience; prefers research or academic position. **WOODWARD PERSONNEL BUREAU**, 185 N. Wabash, Chicago 60601.

POSITIONS OPEN

POSTDOCTORAL POSITION: Research on isolation and identification of lipids. Experience with IR, VPC, thin-layer and column chromatography necessary.

Dr. Adria Casey, New England Institute for Medical Research, Ridgefield, Connecticut.

BIOLOGISTS

HAZLETON LABORATORIES, a leading independent company specializing in the Life Sciences, needs B.S. or M.S. Biologists with 1-3 years' experience to train for responsible technical or supervisory positions in the Toxicology Division. Chemists who have undergraduate minors and strong interests in biology will also be considered. Applicants must have an undergraduate average of B or better, draft exempt, and experience or interest in supervising small groups. Stable employment, chance for advancement, competitive salaries, excellent educational assistance policy, and a profit-sharing plan. Please send resume or write for application. **HALL A. ACUFF, ASSISTANT PERSONNEL MANAGER, HAZLETON LABORATORIES, INC., P. O. BOX 30, FALLS CHURCH, VIRGINIA 22046.** (Metropolitan Washington, D. C.)
An Equal Opportunity Employer M/F

POSITIONS OPEN

GROSS ANATOMIST

Ph.D. to assist in teaching gross anatomy in expanding program in new quarters. Opening exists at assistant professor rank; minimum salary \$10,000 on nine-month contract with seven-month teaching schedule.

Please send experience and qualifications on initial inquiry to **Dr. R. V. Gregg, Chairman, Dept. of Anatomy, School of Dentistry, University of Southern California, Los Angeles, California 90007.**

INVITATION to professional careers

(a) **VICE-PRESIDENT OF RESEARCH:** cell biology, biochemistry, protein biosynthesis; supv projects and assts; opp own research; \$22,000; leading ethical drug mfr E. (b) **HEAD BIO-CHEMISTRY DEPT:** develop new techniques, direct 15 techs; 500-bed univ hosp; \$20,000; SE. (c) **ASST PROF ANATOMY,** teach and research; \$11,000; Univ Dental Sch; NW. (d) **CHAIRMAN MATH-PHYSICS DEPT:** lib arts coll, new science bldg; \$10,000 up; 9 mo; S. (e) **ASST PROF MICROBIOLOGY** research and teach; state tech sch; \$10,000 up; 9 mo; E. (f) **DVM RESEARCH SUPV:** leading biological mfr; \$18,000 FEE PD; MidW. (g) **NEUROSURGERY RESEARCH,** brain tumor scanning agents and own research; \$13,000; large univ hosp; SE. **R.S.V.P. WOODWARD PERS BUREAU**, 185 N. Wabash, Chicago 60601. X

Pathologist, M.D., D.V.M. or Ph.D., to join team investigating aspects of atherogenesis. Must have experience in atherosclerosis research and training in electron microscopy. Salary and time commitment negotiable. Send resume to **Dr. Sanford C. Spraragen, Chief, Radioisotope Service, 800 Poly Place, Brooklyn, New York 11209.** Telephone 212-836-6600, Ext. 271.

POSITIONS OPEN

ABSTRACTER IN ALCOHOL STUDIES

Person with qualifications in Life Sciences needed to make abstracts in good English from alcohol studies; preferably in at least two foreign languages. Documentation experience an advantage. University setting in New Jersey.

Box 491, SCIENCE.

HEALTH PHYSICIST

- Assist Radiation Safety Officer in maintaining and directing the Association's radiation safety program.
- Participate in Association's special training courses related to health physics.
- Perform radiation dosimetry calculations and other assignments in medical research program.

For information and application, write:

Personnel Department

OAK RIDGE ASSOCIATED UNIVERSITIES

P.O. Box 117

Oak Ridge, Tennessee 37830

An Equal Opportunity Employer

RESEARCH TECHNICIAN—Bio-Chemistry Dept. of modern Medical Center, has opportunity for experienced or trainee Chem. or Bio. major, to assist investigator with Countercurrent Distribution, Chromatography, Enzyme Purification, and Bio-Assays. Good future and excellent benefits including free tuition N.Y.U. Write to **Personnel Dept.**, N.Y.U. Medical Center, 568 First Avenue, New York, N.Y. 10016. An Equal Opportunity Employer.

ASSOCIATE DIRECTOR— DRUG METABOLISM

A new position has been established for which we seek a Ph.D. in biochemistry with a working knowledge of organic chemistry. Person will be responsible for the direction and supervision of a research group working in drug metabolism consisting of Ph.D.'s, Master and Bachelor degree scientists. Considerable research experience and competence in metabolite methodology is required. Responsibilities will involve determining the enzymatic pathways by which pharmacological agents are metabolized, establishing chemical procedures to isolate, identify, and quantitate the metabolites of a variety of chemical structures, as well as determining excretion and distribution patterns, etc. of chemotherapeutic agents in both animal and human studies. This person will also be required to evaluate experimental results and make oral and written recommendations to other scientists on the research and development staff.

Company offers a liberal salary and benefit plan. Please send resume and salary requirements to: Cyrus M. Greenberg, Ph.D., Director of Scientific Employment.

Smith Kline & French Labs.

1544 Spring Garden Street
Philadelphia, Pa. 19101

An Equal Opportunity Employer



CHEMISTS & BIOLOGISTS

UNION CARBIDE'S rapidly expanding pharmaceutical program has created immediately available opportunities in several areas of experimental biology and biochemistry. Work in our excellent professional environment, located only 1 hour from New York City.

You must offer a BS or MS in chemistry, biology or pharmacy; research orientation; plus a maximum of 3 years' experience . . . recent graduates also qualify.

Please submit your resume in confidence, including salary requirements to:



MR. D. R. FRONZAGLIA
UNION CARBIDE
CORPORATION

Sterling Forest Research Center

P.O. Box 324

Tuxedo, New York 10987

An equal opportunity employer

POSITIONS OPEN

POSITIONS OPEN

LITERATURE CHEMIST

Ph.D. or equivalent experience, organic or biochemical or food and related sciences. Fluency in reading scientific German and French (or Italian or Spanish) essential. Ability to scan scientific literature rapidly with understanding important. Some EDP exposure desirable but not essential. Experienced or inexperienced.

Major responsibilities will be concerned with scanning a large number of publications providing staff members with information on new developments in the areas of interest of the Company's Research and Development Departments, making retrospective searches, evaluating literature data, abstracting, editing, translating, etc. This person must be alert and capable of using independent judgment. The R. J. R. Research and Development Departments are rapidly growing in response to the highly diversified interests of the Company in such areas as tobacco products, foods, natural products, starch and derivatives, packaging materials, etc.

Salary open. Superior benefit program. The position is full-time only at the R & D facilities in Winston-Salem, a pleasant, progressive community with outstanding schools and cultural facilities. Relocation expenses paid. Please address all inquiries including positions held, salaries received, salary expected, education and personal data in confidence to:

Mr. Watt White, Jr.

Research and Product Development Departments
R. J. Reynolds Tobacco Company

Winston-Salem, North Carolina 27102

R. J. REYNOLDS TOBACCO COMPANY

An Equal Opportunity Employer



Biochemist, Ph.D.—Experienced biochemist to be in charge of research laboratories in developing research center associated with state cancer hospital. Opportunity for individual and cooperative research; university affiliation. Salary commensurate with experience and qualification. Write to **Reginald P. Pugh, M.D.**, Cancer Research Center, Columbia, Missouri 65201.

University of Calgary, Department of Biology invites applications for a position at the level of Assistant or Associate Professor for a Population Geneticist preferably someone concerned with animal populations and prepared to assist with other courses within the Department. Minimum salary is \$9,000 (Assistant level) and \$12,500 (Associate level). Applications with curriculum vitae including names and addresses of three referees should be sent to—**Dr. J. B. Cragg, Department of Biology, The University of Calgary, Calgary, Alberta, Canada.**

COLLEGE TEACHERS WANTED
M.S. OR Ph.D. MANY LOCATIONS
SEPT. POSITIONS

BIOLOGY	MATHEMATICS
CHEMISTRY	PHYSICS
ENGINEERING	PSYCHOLOGY
GEOLOGY	OTHER DISCIPLINES

WRITE NOW FOR FREE APPLICATION
CITY & SUBURBAN TEACHERS AGENCY
500 FIFTH AVENUE, N.Y., N.Y. 10036

NUCLEAR REACTOR POSITIONS. The U.S. Geological Survey is staffing a new nuclear research center in Denver, Colorado. The center will have a TRIGA Reactor and other particle sources, and modern fully equipped radiochemical laboratories. Immediate vacancies exist for Reactor Facility Supervisor and Chief Reactor Operator. Reactor Facility Supervisor, GS-11 to GS-13, salary from \$9,536 to \$13,321 a year, requires a Master's degree or equivalent experience, preferably in nuclear science engineering or physics and must be AEC licensed as Senior Reactor Operator for TRIGA Mark I. Chief Reactor Operator, GS-11 or GS-12, salary from \$9,536 to \$11,306 a year, requires prior experience and AEC license as Senior Operator. A Bachelor of Science degree is desirable. These positions are in the career civil service. Grade and salary will be determined by amounts of pertinent education and experience. Consideration will be given to all applicants without regard to sex, politics, race, creed, color, national origin or age. Applications for Federal Employment (SF-57) or resume should be sent to **Mr. Walton H. Durum, U.S. Geological Survey, Washington, D.C. 20242.**

The Market Place

BOOKS • SERVICES • SUPPLIES • EQUIPMENT

BOOKS AND MAGAZINES

WRITERS

N. Y. publisher wants books on all subjects, fiction, nonfiction. No fee for professional opinion. FREE: Brochures that show how your book can be published, publicized, sold; contracts. Write Dept. 75C

EXPOSITION PRESS INC.

386 Park Ave. So., New York, N. Y. 10018

EXPOSITION PRESS INC.

9172 Sunset Blvd., Los Angeles, Cal. 90069

AUTHORS WANTED BY NEW YORK PUBLISHER

Your book can be published, promoted, distributed by a reliable company on a subsidized basis. Fiction, non-fiction, poetry, scholarly, scientific and even controversial manuscripts welcomed. For Free Booklet write Vantage Press, Dept. SC, 120 W. 31 St., New York 10001.

SUPPLIES AND EQUIPMENT

SPRAGUE-DAWLEY, INC.

Pioneers in the development of the
STANDARD LABORATORY RAT.

P.O. Box 4220

Madison, Wisconsin

CE 3-5318

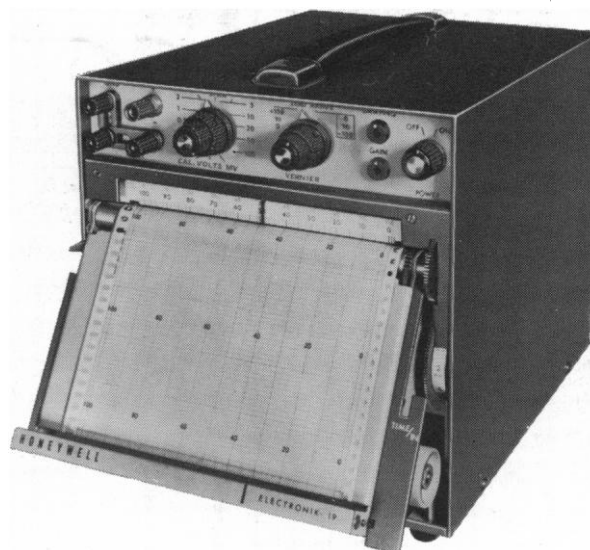
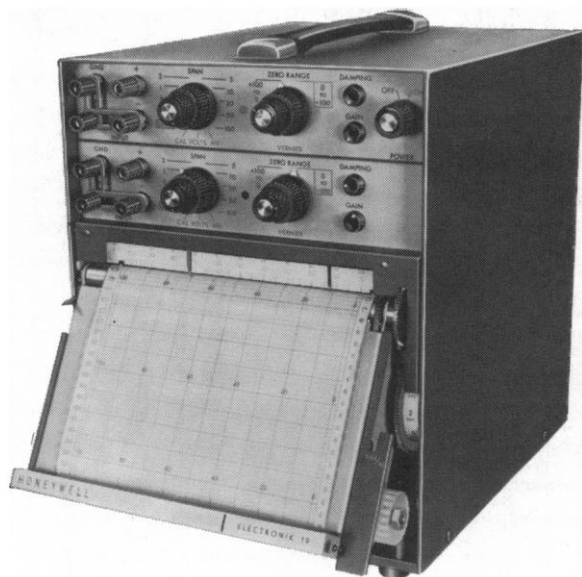
COMPONENTS and INSTRUMENTS
for OPTICAL RESEARCH

X₂ H₂ SOURCES • LASER OPTICS • QUARTZ LENSES

OPTICAL FILTERS • PHOTOMETERS

MONOCHROMATORS
please write for catalog 23

ORIEL OPTICS CORPORATION
1 MARKET ST., STAMFORD, CONNECTICUT 06902
Tel.: 203-348-4247



More capability per dollar!

The ElectroniK 19 instrument gives you more for your money than any other portable recorder. Here's why:

- *19 Spans* from 100 microvolts to 100 volts full scale (i.e., from 1 microvolt per division to 1 volt per division).
- *Your Choice of $\pm 100\%$ or $+ 100\%$ to -1000% of Span Zero Positioning.*
- *10-Speed Chart Drive System* gives speeds from 1 sec./in. to 10 min./in. with a 1, 2, 5 relationship and "standby" position. Chart transport permits chart reroll or positive drive out across table top, and chart platen tilts to 30° and 45° from vertical.
- *Fast Servo Response:* Less than 0.5 second full scale; follows 5 cps. 10 percent full scale sine wave.
- *High Accuracy:* Span = $\pm 0.25\%$ of span or 1 microvolt, whichever is greater. Zero Position: $\pm (0.25 + 0.1 \times \text{suppression ratio}) \%$ of span or 1 microvolt.
- *Simplified Ink System:* Disposable ink cartridge, easily replaced and primed without "splash." Manual pen lifter included.
- *Compact Size:* Single channel recording $8\frac{3}{4}$ -inch wide x $8\frac{3}{4}$ -inch high x 11-inch deep case; two-channel recording in $8\frac{3}{4}$ -inch wide x $10\frac{1}{2}$ -inch high x 11-inch deep case.
- *Lightweight:* Single-pen recorder weighs less than 20 pounds; two-pen recorder, less than 29 pounds.

Equipped with comfortable carrying handle and 6-foot power cord.

- *Easy Connections:* Front terminals for input.

And it is *Rugged*.

Use the *ElectroniK 19* Portable Recorder for differential thermal analysis and spectrophotometry, with other chemical analyzers, temperature or other millivolt sensors, or to check out apparatus and equipment (current and voltage levels). Use it on the bench, in airplanes, boats, or cars—wherever 120 volt, 60 cycle power can be made available.

Now Available

Order from your local Honeywell office or write HONEYWELL, Industrial Division, 1100 Virginia Drive, Fort Washington, Pa. 19034. In Canada, Honeywell Controls Limited, Toronto 17, Ontario.

For detailed specifications,

Circle this page No. on Reader's Service Card.

For Chromatographic Work

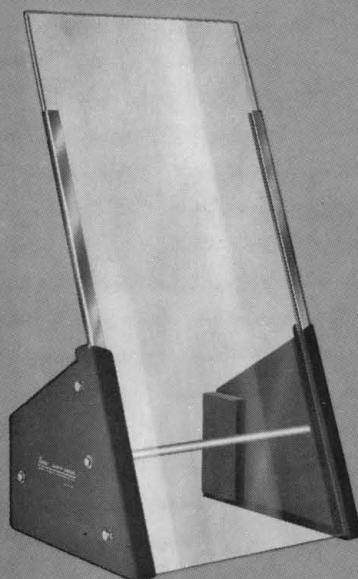
The Honeywell *ElectroniK 19* Recorder can be factory modified for chromatographic use by installing a Disc Integrator and using a chart specially designed for this application. Send for Honeywell Laboratory Products Sheet LP-6. **Circle this page No. on Reader's Service Card.**

Honeywell

Your Instrumentation Contractor
from Planning Through Performance

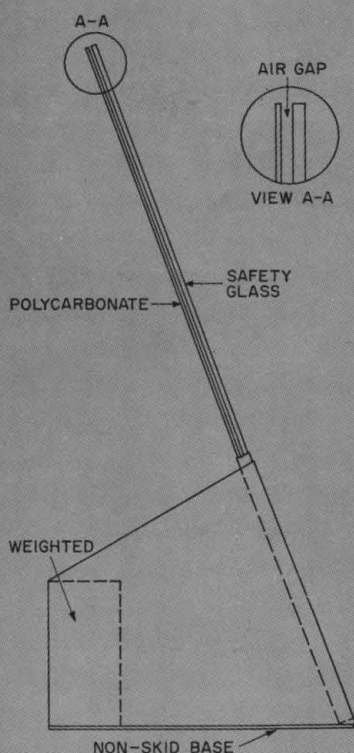
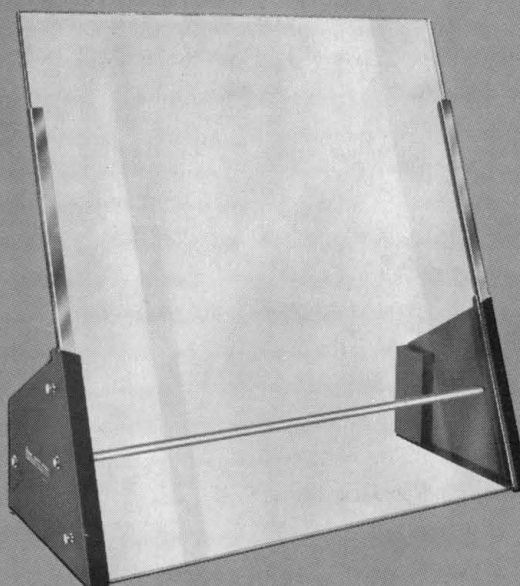
A new standard of protection for laboratory personnel . . .

Thomas-Quam SAFETY SHIELDS



**with inner panes
of 300X impact-resistant
polycarbonate**

**and non-skid bases
weighted for resistance
to toppling**



SHIELDS, Double-Safe, Thomas-Quam. Two separate protective panes with an intervening air gap are provided in these unique, free-standing shields. The inner pane is of polycarbonate, which has an impact resistance 300 times that of safety glass. Outer pane is of safety glass to contribute weight and rigidity. The air gap between the panes prevents direct transmission of initial shock to the glass. Impenetrability of the shield far surpasses that of a similar plastic-glass combination without the gap.

In addition to increased impenetrability, the shields have a high weight-to-size ratio, with a low center of gravity well within the area included by the shield. Non-skid strips on bases prevent shields from sliding.

Design of the shields carries out recommendations of Dr. G. N. Quam of Villanova University. Explosion tests, performed by Dr. Quam in his studies of laboratory safety practice, demonstrated the efficiency of the free-standing construction, and its superiority, due to recoil ability, over rigidly secured barriers made from similar materials.

Shields are offered in two widths, 14 and 28 inches; panes of both sizes are 30 inches high, and slope backward at 30° from vertical. Support brackets at sides are 11 inches high at front, and extend 12 inches to the rear. Tie-rod connects brackets.

The polycarbonate pane should not be subjected to temperatures above 135° C.

8934-A10. SHIELD, Thomas-Quam, 14 X 30-inch.. 59.00

8934-A20. Ditto, 28 X 30-inch..... 85.00



ARTHUR H. THOMAS COMPANY

Scientific Apparatus and Reagents

VINE STREET AT 3RD • P. O. BOX 779 • PHILADELPHIA 5, PA., U. S. A.