tween structure and auxin activity, with special reference to requirements for reaction with the necessary binding sites, were discussed in separate papers by K. V. Thimann and J. van Overbeek.

A feature of the conference was a memorial dinner in honor of the late P. W. Zimmerman. It was in his laboratory at the Boyce Thompson Institute, in cooperation with his associate, A. E. Hitchcock, that 2,4-D was first found to have marked effects on plant growth and development. Indolebutyric acid and 1-naphthaleneacetic acid were also first investigated as growth regulants by Zimmerman and Hitchcock. Extensive investigations by these authors were also carried out with derivatives of benzoic acid and a variety of substituted aryloxyacetic acids, in addition to 2,4-D.

Major addresses at the conference were given by William J. Robbins, director emeritus of the New York Botanical Garden, who spoke at the memorial dinner for P. W. Zimmerman on expanding concepts of plant growth regulation, and by James Bonner of California Institute of Technology, who delivered an address on the probable future of auxinology.

The day after the scientific sessions of the conference ended, the participants were taken on a chartered boat around Manhattan Island, where they had an opportunity to meet members of the botany departments of Columbia and Rutgers universities and staff members of the three sponsoring institutions who were not directly interested in plant growth substances and, therefore, were not participants in the scientific sessions.

George L. McNew, managing director of the Boyce Thompson Institute, was chairman of the organizing committee for the conference, and A. J. Vlitos, who originally suggested that such a conference be held, served as secretary. Vlitos, formerly at the Institute, is now with Caroni Ltd., in Trinidad.

LAWRENCE P. MILLER Boyce Thompson Institute for Plant Research, Inc., Yonkers, New York

Forthcoming Events

February

1-4. American Soc. of Heating, Refrigerating and Air Conditioning Engineers, semi-annual, Dallas, Tex. (Miss J. I. Szabo, ASHRACE, 234 Fifth Ave., New York 1.)

1-4. Instrument-Automation Conf., Houston, Tex. (Director, Technical and Educational Services, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)

1-5. American Inst. of Electrical Engi-8 JANUARY 1960 NATIONAL APPLIANCE

UNIVECT GRAVITY CONVECTION OVEN

An ideal educational or industrial oven for use in drying, sterilizing, moisture determination, wherever exacting processes demand the ultimate in refined temperature control.

Two shelves with heat transfer diffuser plate at floor. Variable damper allows air to be exhausted through a diffuser plate at top of oven. Cabinet has adjustable feet for leveling. Stainless steel interior and nickel-plated shelves resist high temperature and corrosive vapors.

Temperatures from 30 to 260° C. within $\pm 5.0^{\circ}$ C. Controls include main switch, booster switch, hydraulic thermostat and pilot light. Complete with thermometer, range 35° to 300° C. Three inch fiberglass insulation. Internal pressure safety lock. Exterior is grey hammertone. Extras available: au tomatic timer, dial thermometer, glass window.

Write for bulletin or catalog of complete N. A. line.

NATIONAL APPLIANCE



Model 5715

Outside 35 ½ "w. 26"d. 30"h. Inside 25"w. 20"d. 20"h. 1800 watts 115 / 220 v. A.C. Floor stand . . . 35 ½ "w. 26"d. 31"h.

National Appliance Co.

7634 S.W. Capitol Hy. • Portland 19, Ore.

Eastern Sales:

H. Reeve Angel & Co., Inc. 9 Bridewell Pl. • Clifton, N. J. neers, winter general, New York, N.Y. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

1-5. Clinical Cong. of Abdominal Surgeons, Miami Beach, Fla. (CCAS, 633 Main St., Melrose 76, Mass.)

2-4. Haemopoiesis-Cell Production and Its Regulation, Ciba Foundation symp. (by invitation only), London, England. (G. E. W. Wolstenholme, Ciba Foundation, 41 Portland Pl., London, W.1, England.)

2-4. Society of the Plastics Industry (Reinforced Plastics Div.), Chicago, Ill. (W. C. Bird, SPI, 250 Park Ave., New York 17.)

3-5. Military Electronics, IRE winter

conv., Los Angeles, Calif. (G. B. Knoob, Motorola, Inc., Military Electronics Div., 1741 Ivar Ave., Hollywood 28, Calif.)

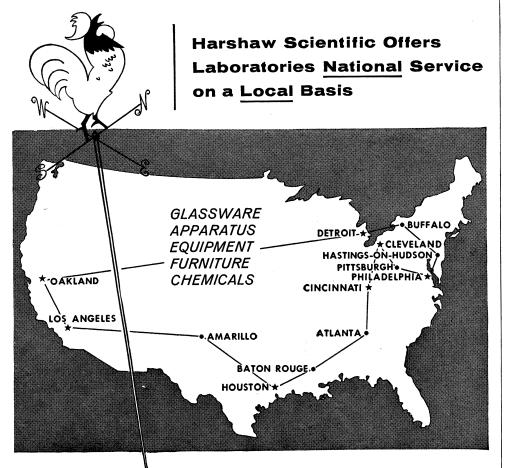
3-6. American College of Radiology, New Orleans, La. (W. C. Stronach, 20 N. Wacker Dr., Chicago 6.)

3-6. Parathyroid Research, symp., Houston, Tex. (R. V. Talmage, Dept. of Biology, Rice Inst., Houston.)

4-6. American Soc. for Metals, San Francisco, Calif. (R. Huggins, ASM, Stanford Univ., Stanford, Calif.)

4-6. Congress on Administration, 3rd annual, Chicago, Ill. (R. E. Brown, American College of Hospital Administrators, 840 N. Lake Shore Drive, Chicago 11.)

5. Parenteral Drug Assoc., New York,



BRANCHES * CLEVELAND 6, OHIO 1945 East 97th Street Tel. VUIcan 3-2424

CINCINNATI 13, OHIO 6265 Wiehe Rd. Tel. REdwood 1-9100

DETROIT 28, MICHIGAN 9240 Hubbell Avenue Tel. VErmont 6-6300 HOUSTON 11, TEXAS 6622 Supply Row Tel. WAlnut 3-1627

LOS ANGELES 22, CALIFORNIA 3237 So. Garfield Ave Tel. RAymond 3-3161

ARSHA

OAKLAND 1, CALIFORNIA 5321 E. 8th Street Tel. KEllogg 3-9169

Tel. NEILOUS PHILADELPHIA 48, PA. ° Swanson Sts. Jackson & Swanson S Tel, HOward 2-4700

SALES OFFICES

Our Branch Warehouses and Sales Offices are strategically located to serve you. Select the one nearest you and contact them today. Our combined stock, which is probably the largest in the country, is at your disposal regardless of where it is located. Tell us what you need. We'll get it to you, when you need it.

Harshaw Scientific, Division of The Harshaw Chemical Company is unique among laboratory supply houses. We know what laboratories require since our company employs several hundred chemists, scientists, engineers and technicians in its many research, development and control laboratories and we stock accordingly...Glassware - Apparatus - Equipment -Furniture - Chemicals

HARSHAW SCIENTIFIC Division of the Harshaw Chemical Company **Cieveland 6, Ohio**

AMARILLO, TEXAS, 3409 S. Jackson Street, Tel. DRake 4-9948 • ATLANTA 5, GEORGIA, 3130 Maple Drive, N.E., Tel. CEdar 7-1626 • BATON ROUGE 6, LOUISIANA, 3160 Florida Street, Doherty Building, Room 103, Tel. Dickens 3-1933 BUFFALO 2, NEW YORK, 260 Delaware Avenue, Tel. GArfield 9200 • HASTINGS-ON-HUDSON 6 NEW YORK, Tel. LOrraine 2-6250 • PITTSBURGH 22, PENNSYLVANIA, 505 Bessemer Building, Tel. ATlantic 1-6668

N.Y. (H. E. Boyden, PDA, 4865 Stenton Ave., Philadelphia 44, Pa.) 7-9. Congress on Medical Education

and Licensure, Chicago, Ill. (CMEH, AMA, 535 N. Dearborn St., Chicago 10.)

7-10. Radioactive Isotopes in Clinical Medicine and Research, 4th intern. symp., Bad Gastein, Austria. (R. Höfer, 2nd Medical Univ. Clinic, 13 Garnisongasse, Vienna 1X, Austria.)

10-11. Gas Cooled Reactor, symp., Philadelphia, Pa. (F. L. Jackson, Franklin Inst., Philadelphia, Pa.)

10-12. American Acad. of Occupational Medicine, Williamsburg, Va. (L. B. Shone, Bureau of Medicine and Surgery, Navy Dept., Washington 25.)

10-12. Solid States Circuit Conf., Phil-adelphia, Pa. (T. R. Finch, Bell Telephone Laboratories, Murray Hill, N.J.)

10-13. National Assoc. for Research in Science Teaching, 33rd annual, Chicago, Ill. (C. M. Pruitt, Univ. of Tampa, Tampa, Fla.)

10-13. National Soc. of College Teachers of Education, Chicago, III. (E. J. Clark, Indiana State Teachers College, Terre Haute.)

11. Protein and Amino Acid Requirements of Swine, Chicago, Ill. (J. T. Sime, Assoc. of Vitamin Chemists, Evaporated Milk Assoc., 228 N. La Salle St., Chicago 1.)

11-13. Society of Univ. Surgeons, Minneapolis, Minn. (B. Eiseman, 4200 E. Ninth Ave., Denver 20, Colo.)

14-18. American Inst. of Mining, Metallurgical and Petroleum Engineers, annual, New York, N.Y. (E. O. Kirkendall, AIME, 29 W. 39th St., New York 18.)

16. Astronomical Soc. of the Pacific annual, San Francisco, Calif. (S. Einarsson, Leuschner Observatory, Univ. of California, Berkelev 4.)

18-19. Chemical Inst. of Canada (Protective Coatings Div.), Toronto, Ont., and Montreal, Que., Canada. (Scientific Liaison Office, National Research Council, Sussex Drive, Ottawa, Canada.)

18–20. National Soc. of Professional Engineers, winter, Wichita, Kan. (P. H. Robbins, NSPE, 309 Bancroft Bldg., Univ. of Nebraska, Lincoln.)

21-24. American Inst. of Chemical Engineers, Atlanta, Ga. (F. J. Van Antwerpen, AICE, 25 W. 45 St., New York 36.)

22-25. Technical Assoc. of the Pulp and Paper Industry, annual, New York, N.Y. (J. Winchester, TAPPI, 155 E. 44 St., New York 17.)

22-4. Scientific Management, 12th intern. cong., Sydney and Melbourne, Australia. (C. M. Gray, Federal Council of the Australian Inst. of Management, Western House, 83 William St., Melbourne, C.1, Victoria, Australia.)

24-26. Biophysical Soc., 4th annual, Philadelphia, Pa. (O. H. Schmitt, Biophysical Soc., Chairman, Program Committee, Univ. of Minnesota, Minneapolis.) 25-27. American Orthopsychiatric Assoc., Chicago, Ill. (Miss M. F. Langer,

1790 Broadway, New York 19.)

25-27. Cell Physiology of Neoplasia (14th annual symp. on fundamental cancer research), Houston, Tex. (Editorial Office, Univ. of Texas M. D. Anderson Hospital, Texas Medical Center, Houston 25.) 26. Highway Geology, 11th annual

GRASSLANDS

Editor: Howard B. Sprague 1959

6" x 9", 424 pp., 37 illus., index, cloth. Price \$9.00, AAAS members' cash or-ders \$8.00. AAAS Symposium Volume No. 53.

This volume is intended as a review of knowledge on many aspects of grass-lands resources. The 44 authors were selected by their own professional colleagues as being particularly competent to present the respective subjects. Thirty-seven papers are arranged under these chapter headings:

- 1. Sciences in Support of Grassland Research
- 2. Forage Production in Temperate Humid Regions
- 3. Engineering Aspects of Grassland Agriculture
- 4. Forage Utilization and Related Animal Nutrition Problems
- 5. Evaluation of the Nutritive Significance of Forages
- 6. Grassland Climatology
- 7. Ecology of Grasslands
- 8. Range Management
- British Agents: Bailey Bros. & Swinfen, Ltd., Hyde House, W. Central Street, London, W.C.1

AAAS, 1515 Mass. Ave., NW, Washington 5, D.C.

Get UNITRON's FREE

Observer's Guide and Catalog on

ASTRONOMICAL TELESCOPES

This valuable 38-page book is yours for the asking!

With artificial satellites already launched and space travel almost a reality, astronomy has become today's fastest growing hobby. Exploring the skies with a telescope is a relaxing diversion for father and son alike. UNITRON's handbook contains full-page illustrated articles on astronomy, observing, telescopes and accessories. It is of interest to both beginners and advanced amateurs.



28-5. American College of Allergists, Miami Beach, Fla. (E. Bauers, 2160 Rand Tower, Minneapolis 2, Minn.)

29-3. American College of Surgeons, Boston, Mass. (H. P. Saunders, 40 E. Erie St., Chicago, Ill.)

29-4. Pittsburgh Conf. on Analytical Chemistry and Applied Spectroscopy, Pittsburgh, Pa. (L. P. Melnich, U.S. Steel Corp., Monroeville, Pa.)

March

3-5. American Acad. of Forensic Sciences, Chicago, Ill. (W. J. R. Camp, AAFS, 1853 W. Polk St., Chicago 12.)

4-6. National Wildlife Federation, Dallas, Tex. (C. H. Callison, 232 Carroll St., NW, Washington 12.)

6-13. American Otorhinologic Soc. for Plastic Surgery, Miami Beach, Fla. (J. G. Gilbert, 75 Barberry Lane, Roslyn Heights, N.Y.)

7-9. Wildlife Management Inst., Dallas, Tex. (C. R. Gutermuth, 709 Wire Bldg., Washington 5.)

7-11. American Soc. of Civil Engineers, New Orleans, La. (E. S. Kirkpatrick, ASCE, 33 W. 39 St., New York 18.)

10. Recent Developments in Poultry Nutrition (Assoc. of Vitamin Chemists), Chicago, Ill. (J. T. Sime, Director of Research, Evaporated Milk Assoc., 228 N. La Salle St., Chicago 1.)

13-14. American Otological Soc., Miami Beach, Fla. (L. R. Boies, University Hospital, Minneapolis 14.)

14-16. American Railway Engineering Assoc., annual conv., Chicago, Ill. (N. D. Howard, AREA, 59 E. Van Buren St., Chicago 5.)

14-17. Positive Health of Older People, forum, Miami Beach, Fla. (A. Mallach, National Health Council, 1790 Broadway, New York 19.)

15-16. American Broncho-Esophangological Assoc., Miami Beach, Fla. (F. J. Putney, 1712 Locust St., Philadelphia 3.)

15-21. Nondestructive Testing, 3rd intern. conf., Tokyo and Osaka, Japan. (S. Ishizaka, Scientific Attaché, Embassy of Japan, 2514 Massachusetts Ave., NW, Washington 8.)

17. Congress for Pharmacists, 2nd annual, Jamaica, N.Y. (Congress for Pharmacists, Public Relations Office, St. John's Univ., Jamaica 32.)

17-19. American Radium Soc., conf., San Juan, Puerto Rico. (ARS, 635 East Union, Pasadena, Calif.)

17-19. Blood Platelets, intern. symp. (by invitation only), Detroit, Mich. (Miss S. A. Johnson, Henry Ford Hospital, Detroit 2.)

17-20. International Assoc. for Dental Research, Chicago, Ill. (D. Y. Burrill, Northwestern Univ. Dental School, 311 E. Chicago Ave., Chicago 11.)

18-19. American Laryngological Assoc., Miami Beach, Fla. (L. Richards, Massachusetts Inst. of Technology, Cambridge 39.)

20-23. American Assoc. of Dental Schools, Chicago, Ill. (R. Sullen, 840 N. Lake Shore Drive, Chicago 11.)

(See issue of 18 December for comprehensive list)

New Products

The information reported here is obtained from manufacturers and from other sources considered to be reliable. Neither Science nor the writer assources responsibility for the accuracy of the in-formation. All inquiries concerning items listed should be addressed to the manufacturer. In-clude the department number in your inquiry.

■ PULSE GENERATOR, completely transistorized, supplies 15-volt positive and negative pulses with separately controlled amplitudes. Pulse width is variable from 0.5 to 100 μ sec with rise time less than 0.1 µsec. Repetition rate is continuously variable between 20 and 5000 pulses/sec. Output pulse delays up to 100 μ sec and anticipation up to 10 μ sec relative to sync output are included. (Solidyne, Dept. Sci272, 7460 Girard Ave., La Jolla, Calif.)

■ CURRENT-REGULATED POWER SUPPLY furnishes 0 to 2.5 amp in four overlapping ranges. Voltage range is 0 to 300 volts. Regulation for 10 percent change in load impedance or line voltage is 0.2 percent in the current range 0.2 and 2.5 amp. Ripple is 0.2 percent (max.) peak to peak. Input power requirement is 208 volts, three phase, 60 cy/sec, and 1.5 kva, with additional 0.5 kva in one phase. (Applied Radiation Corp., Dept. Sci273, 2404 N. Main St., Walnut Creek, Calif.)

CHROMATOGRAM SCANNER draws a curve of color density as a function of distance scanned along a paper strip. Simultaneously, the curve is integrated and a second pen draws saw-tooth marks whose number is proportional to the concentration of each component separated on the strip. A balancing cam is used to make results linear with concentration. Other cams are available to present output linear in percent transmission or in optical density. (Beckman Instruments Co., Spinco Div., Dept. Sci282, Stanford Industrial Park, Palo Alto, Calif.)

■ A-C VOLTMETER, model 403A, is a transistorized, battery-operated instrument with a frequency range 1 cy to 1 Mcy/sec. Voltage is measured in 12 ranges from 1 mv full scale to 300 volts full scale. Accuracy is ± 3 percent from 5 cy to 500 kcy/sec, and ± 5 percent over the remainder of the range. Noise is less than $50\mu v$. Battery life is 400 hr. (Hewlett Packard Co., Dept. Sci283, 275 Page Mill Rd., Palo Alto, Calif.)

■ VACUUM FURNACE, model 59-TA, for tensile and creep testing, provides temperatures to 4000°F. The tubular furnace consists of a tantalum heating element surrounded by tantalum and molybdenum radiation shields, watercooled tank and bellows assemblies,