

PHOTOPERIODISM AND RELATED PHENOMENA IN PLANTS AND ANIMALS

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Proceedings of the Gatlinburg Conference on Photoperiodism, 29 October–2 November 1957, sponsored by the Committee on Photobiology of the National Academy of Sciences–National Research Council and supported by the National Science Foundation. Preface by Alice P. Withrow.

57 papers by 75 authors. 6 x 9 inches, 921 pages, 256 illus., genera and species index, subject index, cloth, 1959. Price \$14.75. AAAS members' cash orders \$12.50.

The volume surveys the plant and animal facets of photoperiodism and portrays a diversity of approaches in the study of photoperiodic phenomena in a wide range of organisms. The various papers are presented from the perspectives of the photochemist, biochemist, plant physiologist, and zoologist and are by well-recognized members of the various disciplines. This is a unique and stimulating contribution toward the understanding of photoperiodic function in the biological kingdom, and it provides a fundamental basis for the analysis of various parameters of the phenomenon.

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Meetings

Plant Growth Regulation

The fourth International Conference on Plant Growth Regulation was held at the Boyce Thompson Institute for Plant Research, Yonkers, N.Y., 10–14 August. The conference was sponsored jointly by the Institute, the New York Botanical Garden, and the Brooklyn Botanic Garden. Previous international conferences on growth regulators have been held at Wye College in 1955, at the University of Wisconsin in 1949, and in Paris in 1937 under the auspices of the League of Nations. The conference was attended by 126 invited participants from 17 countries. The program was coordinated with the ninth International Botanical Congress, held at Montreal, Canada, 19–29 August. Financial assistance was obtained from the Rockefeller Foundation, the National Science Foundation, and 15 industrial concerns interested in agricultural chemicals.

The first day was devoted to naturally-occurring plant growth substances; the second, to the gibberellins; and the third and fourth to the synthetic auxins and other plant growth substances. In addition to the scheduled papers, there was ample time for discussion at each session. The papers presented and the remarks made during the discussion periods will be published in book form by the Iowa State College Press. Copies will be sent to each participant and will be available to others at a nominal cost.

Among the outstanding new discoveries revealed at the conference was the isolation of a new class of auxins from Maryland Mammoth tobacco by D. G. Crosby and A. J. Vlitos. A ton of tobacco leaves and growing tips yielded about 10 mg of active chemicals. One was identified as 1-docosan-ol, the other is a long-chain fatty acid not fully characterized as yet. Bruce Stowe also presented data showing the growth-promoting action of long-chain aliphatic compounds.

This was the first international growth conference at which the gibberellins were discussed. The Japanese scientists who did much of the early work on the gibberellins, T. Hayashi, J. Kato, and Y. Sumiki, took part in the conference. P. W. Brian, of the Akers Research Laboratories in England, who was instrumental in drawing the attention of the Western world to the Japanese work on gibberellins, reported on new developments from his laboratory. Evidence indicating the probable widespread occurrence of gibberellin-like substances in plants was presented by C. A. West.

New concepts on the relation be-

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.

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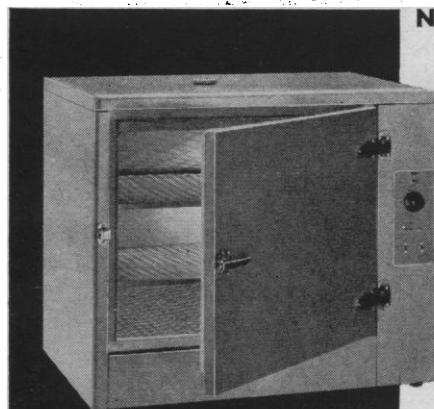
Forthcoming Events

February

1-4. American Soc. of Heating, Refrigerating and Air Conditioning Engineers, semi-annual, Dallas, Tex. (Miss J. I. Szabo, ASHRAE, 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-



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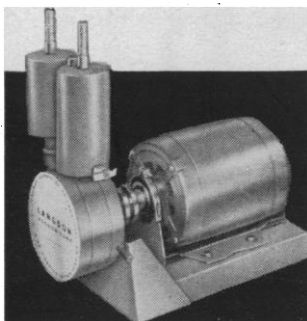
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