

Scientific Meetings

Invertebrate Endocrinology

Preceding the sixth International Anatomical Congress, a symposium on the recent advances in invertebrate endocrinology was held on 23 and 24 July 1955, at the Sorbonne (Laboratoire d'Anatomie et Histologie Comparées), Paris, France. Among the most significant results reported were those dealing with the discovery of two new glands of internal secretion and with the chemical isolation of invertebrate hormones.

The symposium was opened by Karlson (Tübingen, Germany) who isolated one of the developmental hormones of insects (prothoracic gland hormone of *Bombyx mori*). For the crystallized principle whose chemical composition is unlike that of any known vertebrate hormone the name *ecdysone* was proposed (ecdysis, molt). A principle having the same effect in the insect bioassay (*Calliphora* test) can be extracted from the crustacean, *Crangon vulgaris*. Attempts to purify a variety of invertebrate hormones are under way also in other laboratories. L'Hélias (Paris) discussed the role of xanthopterin and isoxanthopterin, which she demonstrated in the brain, corpora cardiaca, and corpora allata of the insect, *Cunicula*. Crustacean chromatophorotropins were extracted by Knowles (Wiltshire, England) and by Östlund and Fänge (Lund, Sweden). The Swedish workers succeeded in isolating a chromatophorotropic principle in highly purified state from the eyestalk of *Pandalus borealis*, and worked out a biological test (Leander unit).

The organs most recently added to the list of invertebrate endocrines are the Y organ and the androgenic gland of crustaceans. The discoverer of the Y organ, Gabe (Paris), presented a detailed morphological and histochemical analysis of this gland. His coworker Echalié (Paris) reported on extirpation and implantation experiments demonstrating that the Y organ controls molting in decapod crustaceans. In addition, the Y organ of *Carcinides* exerts an influence on the gonads (Arvy, Echalié, and Gabe, Paris). The equivalent "molting glands" among insects are the prothoracic (ventral) glands, as was demonstrated once more by the experiments reported by

Joly and coworkers (Strasbourg) and by Wigglesworth (Cambridge, England).

An important contribution to the long-debated question of sex hormones in arthropods was made by Charniaux-Cotton (Paris) who described an androgenic gland in the crustacean, *Orchestia gammarella*. This organ, located at some distance from the gonad, controls primary and secondary male characters in this species.

Extirpation and implantation experiments in gastropods by Laviolette (Lyon) suggest an endocrine control of the genital tract by the gonads. A new possible source of a gonadotropic principle in insects was demonstrated by B. Scharrer (New York): neurosecretory cells (type B) in the subesophageal ganglion of *Leucophaea maderae* show a distinct cytological change after ovariectomy, an observation reminiscent of the occurrence of "castration cells" in the vertebrate pituitary.

Sellier (Paris) suggested that the active principle in the brain of *Gryllus* which inhibits diapause also controls macropterism. Further communications on the cytology of neurosecretory centers in insects and annelids were made by Dupont-Raabe (Paris), Formigoni (Milan), DeLerma (Bari, Italy), and by Herlant-Meewis and Paquet (Brussels).

Clark (Glasgow) discussed a hypothesis concerning the phylogenetic origin of primitive neurosecretory elements in polychetes. In nereids neurosecretory brain cells inhibit gonadal maturation and seem to stimulate regeneration (Durchon, Algiers). Atokous and epitokous forms differ with respect to the amounts of polyosides (unrelated to neurosecretory material) in "cytologically active neurocytes" (Defretin, Lille, France). In mollusks (*Chlamys*, *Mytilus*) the disappearance of neurosecretory material from the brain correlates with the stimulation for the emission of the gametes (Lubet, Arcachon, France).

Various other aspects were dealt with in contributions by Drach (Paris) on molting in crustaceans; Possompès (Paris) on insect development; Stephan-Dubois and Lènder (Strasbourg) on growth processes in planarians; and Démal (Louvain) on insect differentiation in tissue culture.

The variety of topics discussed reflects the present status of research in invertebrate endocrinology, which is no longer restricted to arthropods but encompasses other invertebrates as well. A more detailed report of the papers presented at this symposium will appear in *Ann. des Sciences nat.*, fasc. 2 (1956).

L. ARVY, M. GABE
Sorbonne, Paris, France

B. SCHARRER
Albert Einstein College of Medicine,
New York

Meeting Notes

■ A more rational and productive use of one-third of the earth's surface—the estimated 38 million square kilometers lying in the humid tropical regions—will be studied by an international group of scientists who will meet 19–24 Mar. in Colombo, Ceylon, under the sponsorship of UNESCO.

The meeting will open with a 3-day symposium at the University of Colombo on the study of tropical vegetation. Studies of medicinal plants will be among the subjects discussed by specialists from Belgium, Ceylon, India, Indonesia, Malaya, the Netherlands, Pakistan, the Philippines, the United Kingdom, and the United States.

Following this symposium, 12 scientists will participate from 22 to 24 Mar. in a preparatory meeting on humid tropics research to examine specific activities for the near future. Among projects proposed are the production of maps of humid tropical regions, the classification of vegetation within these regions, the organization of a zoological survey of Ceylon, and the organization of a UNESCO-sponsored advisory committee for humid tropics research.

■ A symposium on Vitamin Metabolism will be held at the Biltmore Hotel in New York on 6 Mar. in conjunction with the 11th annual meeting of the National Vitamin Foundation. The symposium will feature special reports and discussions by a selected group of specialists in the field of nutrition. The sessions will be under the chairmanship of Esmond E. Snell of the University of Texas. Specialists included on the program represent a number of universities and medical centers throughout the country.

■ This year Temple University is sponsoring the tenth annual Eastern Colleges Science Conference 6–7 Apr. More than 500 colleges and universities east of the Mississippi River have been invited to send undergraduate delegates. These students will discuss and deliver research papers in biology, chemistry, geology, mathematics, physics, and psychology.

OPTICAL BARGAINS
See the Stars, Moon, Planets Close Up!
**ASSEMBLE A BIG 100 POWER
3" REFLECTING TELESCOPE**



... with This Complete 87 Piece "Do-It-Yourself" Kit. Everything you need! No machining! Easily assembled! We furnish complete, simple instructions. Kit includes: 3" f/10 aluminized and overcoated Spherical Mirror—60X Eyepiece and 100X Barlow Lens—Cross-line Finder—sturdy 40" Tripod—fork type Equatorial Mount with locks on both axes—ventilated 3" Mirror Mount—heavy wall, black Telescope Tube. All nuts and bolts supplied. Nothing extra to buy. Our 3" Spherical Mirror (30" f.l.) is guaranteed to resolve detail right up to theoretical limit. Your finished scope can also be used terrestrially. Money back guarantee. Shpg. wt., 10 lbs. Stock No. 85,025-W \$29.50 f.o.b. Barrington, N. J.



This is an actual photograph of the moon taken through our Astronomical Telescope by a 17 year-old student.

**50-150-300 Power
MICROSCOPE**
Low Price Yet Suitable for Classroom Use! Only \$14.95
3 Achromatic Objective Lenses on Revolving Turret!



Imported! The color-corrected, cemented achromatic lenses in the objectives give you far superior results to the single lenses found in the microscopes selling for \$9.95! Results are worth the difference! Fine rack and pinion focusing. Stock No. 70,008-W \$14.95 Postpaid

SPITZ JR. PLANETARIUM
LATEST MODEL! One of the Greatest Scientific Toys We Have Ever Offered! Projects nearly 400 stars, more than 70 constellations in their correct relationships. Use it in any darkened room of the house, project it on the ceiling. No batteries, works on ordinary household current. Rheostat control for brightness. 32-page book included free of extra cost. Contains valuable information about the stars, provides easy identification of the constellations. About 14" high on a 7" x 7" base. Projection sphere 7" diameter. Illuminated Pointer included FREE! Weight 3 lbs. Stock No. 70,040-W \$14.95 Postpaid
SKY 200 PROJECTOR fits above planetarium. Projects the outlines of mythological figures. Stock No. 70,059-W \$3.98 Postpaid

**New! 2 in 1 Combination! Pocket-Size
50 Power MICROSCOPE
and
10 Power TELESCOPE
ONLY \$4.50
ppd.**



Useful Telescope and Microscope combined in one amazing, precision instrument. Imported! No larger than a fountain pen. Telescope is 10 Power. Microscope magnifies 50 Times. Sharp focus at any range. Handy for spots, looking at small objects, just plain snooping. Send Check or M.O. Satisfaction Guaranteed
Order Stock No. 30,059-W .. \$4.50

WRITE FOR FREE CATALOG-W
Over 1000 Optical Bargains—64 fascinating pages
Huge selection of lenses, prisms, war surplus optical instruments, parts and accessories. Telescopes, microscopes, binoculars. Hand spectroscopes, reticles, mirrors, Ronchi rulings, dozens of other hard-to-get optical items. America's No. 1 source of supply for Researchers, Lab. Technicians, Photographers, Hobbyists, Telescope Makers, etc. Ask for catalog W



Order by Stock No. — Send Check or M.O. Satisfaction Guaranteed

EDMUND SCIENTIFIC CORP.
BARRINGTON, NEW JERSEY

■ An international mathematical symposium on Algebraic Topology and its Applications is scheduled to take place in Mexico City throughout August. It will consist of brief courses and addresses on recent contributions. It is hoped to bring together the outstanding specialists in the field. For further information, write the secretary, Miss Julieta Silva, Instituto de Matemáticas, Torre de Ciencias, Ciudad Universitaria, México 20, D.F.

■ A Diamond Symposium will be held at the Exposition and Convention of the American Society of Tool Engineers, which is to be held at the International Amphitheatre in Chicago, Ill., 19-23 Mar. Armour Research Foundation is cosponsoring the program. Experts in the field from the Union of South Africa, the Netherlands, Belgium, the United Kingdom, and the United States will participate. J. S. Gillespie, who is in charge of the man-made diamond project at General Electric Company, will open the symposium with a discussion of the current status of man-made diamond, its properties, and possible future uses. The following sessions will be concerned with the production, selection, and industrial utilization of diamond. Among the topics to be discussed are: diamond structure, uses of industrial diamond, suggested standards, selection, and specific applications.

In connection with the symposium, industrial, gem, and man-made diamonds will be displayed, as well as a diamond workshop in which several cutters will be producing diamond tools on machinery shipped from the Union of South Africa and Europe. A working model of the Premier Diamond Mine will also be shown.

■ The European Organization for Nuclear Research (CERN) is making plans to hold a Symposium on High Energy Physics in Geneva, Switzerland, 11-23 June. The main subject for the first week will be "Novel features in the design and techniques of high energy accelerators." This will be followed by papers and discussion on special experimental techniques (for example, bubble chambers) and new contributions to pi meson physics.

Once the program has been established, invitations will be sent to specialists all over the world, and member states will also be invited to send scientists. The total number of participants is not to exceed 300.

■ The Society of American Bacteriologists will hold its 56th annual meeting in Houston, Tex., 29 Apr.-4 May. This will be the first time that the annual meeting of the society has been held in the Southwest. The headquarters for the

meeting will be the Shamrock-Hilton Hotel, where adequate facilities for scientific sessions, visiting, socials, exhibits, and official functions will be available. Persons attending the meeting will be accommodated at the headquarters hotel, the Rice Hotel, and nearby motels.

The first general session of the meeting will be held Sunday evening, 29 Apr. Scientific sessions will start on 30 Apr. and continue through 3 May. Plans are being made for several symposia, including one on "Petroleum microbiology" that will feature a number of professional men from the oil industry. General correspondence concerning arrangements for the meeting may be addressed to the executive vice chairman, Dr. Robert P. Williams, Baylor University College of Medicine, Houston 25, Tex.

Society Elections

■ American Meteorological Society: pres., Robert D. Fletcher, Washington, D.C.; v. pres., Frederic A. Berry, Washington, D.C.; sec., Henry G. Houghton, Massachusetts Institute of Technology; treas., Henry DeC. Ward, Boston, Mass.

■ Electron Microscope Society of America: pres., W. L. Grube, General Motors Research Department; pres.-elect, J. H. L. Watson, Edsel B. Ford Institute for Medical Research; past pres., T. F. Anderson, University of Pennsylvania; sec., Jeanette R. Cooper, Nela Park 130, Cleveland 12, Ohio; treas., Max Swerdlow, National Bureau of Standards.

■ Indiana Academy of Science: pres., Raymond E. Girtan, Purdue University; v. pres., John D. Mizelle, University of Notre Dame; sec., W. A. Daily, Research Laboratories, Eli Lilly and Company, Indianapolis, Ind.; treas., Frank J. Welcher, Indiana University. Representative to the AAAS Council is Ralph W. Lefler.

■ Mississippi Valley Medical Society: pres., Frank R. Peterson, Cedar Rapids, Ia.; pres.-elect, George E. Kirby, Spring Valley, Ill.; past pres., Arthur S. Bristow, Princeton, Mo.; sec.-treas., Harold Swenberg, 510 Maine St., Quincy, Ill. The vice presidents are C. M. Zukerman (Ia.), W. W. Fullerton (Ill.), Waltman Walters (Minn.), George T. Gafney (Mo.), and Arnold S. Jackson (Wis.).

■ Nebraska Academy of Sciences: pres., Paul Stageman, University of Omaha; v. pres., Robert G. Bowman, department of geography, University of Omaha; sec., C. Bertrand Schultz, director of State Museum, University of Nebraska; treas., Carol E. Rosenquist, University of Nebraska. Representative to the AAAS Council is Victor A. Levine, Creighton University, Omaha, Neb.

Forthcoming Events

March

22-25. International Assoc. for Dental Research, St. Louis, Mo. (D. Y. Burrill, 129 E. Broadway, Louisville 2, Ky.)

28-3. Colloquium on Frontiers in Physical Optics, Boston, Mass. (S. S. Ballard, Visibility Laboratory, Scripps Institution of Oceanography, San Diego 52, Calif.)

29-31. Alpha Epsilon Delta, 11th national convention, Jackson, Miss. (M. L. Moore, 7 Brookside Circle, Bronxville 8, N.Y.)

29-31. Pennsylvania Acad. of Science, Indiana. (K. Dearolf, Public Museum and Art Gallery, Reading, Pa.)

29-31. Southern Soc. for Philosophy and Psychology, Asheville, N.C. (J. E. Moore, Georgia Inst. of Technology, Atlanta.)

30-31. Alabama Acad. of Science, annual, Montevallo. (H. A. McCullough, Howard College, Birmingham, Ala.)

30-31. Seismological Soc. of America, annual, Reno, Nev. (P. Byerly, Bacon Hall, Univ. of California, Berkeley 4.)

April

2-5. Assoc. of American Geographers, annual, Montreal, Canada. (B. W. Adkinson, Library of Congress, Washington 25.)

2-7. Symposium on Crystallography, Madrid, Spain. (M. Abbad, Serrano 118, Madrid.)

3. Microcirculatory Conf., 3rd, Milwaukee, Wis. (G. P. Fulton, Dept. of Biology, Boston Univ., 675 Commonwealth Ave., Boston 15, Mass.)

3-4. Tissue Culture Assoc., 7th annual, Milwaukee, Wis. (D. C. Hetherington, Duke Univ. School of Medicine, Durham, N.C.)

3-9. International Symposium on Macromolecular Chemistry, Rehovoth, Jerusalem, and Haifa, Israel. (A. Katchalsky, Weizmann Inst. of Science, Rehovoth.)

4-6. American Assoc. of Anatomists, annual, Milwaukee, Wis. (N. L. Hoerr, 2109 Adelbert Rd., Cleveland 6, Ohio.)

4-6. American Soc. of Lubrication Engineers, 11th annual, Pittsburgh, Pa. (Administrative Secretary, ASLE, 84 E. Randolph St., Chicago 1, Ill.)

4-7. International Cong. of Medical Radiography, 2nd, Paris, France. (Secretariat, 66, Blvd. St. Michel, Paris 6.)

5-6. Conf. on Magnetic Amplifiers, Syracuse, N.Y. (C. A. Priest, 314 Hurlburt Rd., Syracuse 3.)

5-7. Optical Soc. of America, Philadelphia, Pa. (A. C. Hardy, Room 8-203, Massachusetts Inst. of Technology, Cambridge 39.)

6-7. American Assoc. of University Professors, St. Louis, Mo. (R. F. Fuchs, AAUP, 1785 Massachusetts Ave., NW, Washington 6.)

6-7. National Speleological Soc., Nashville, Tenn. (Mrs. L. Cutler, 2829 Buchanan St., Arlington 6, Va.)

6-8. American Assoc. of Physical Anthropologists, Chicago, Ill. (J. L. Angel, Daniel Baugh Institute of Anatomy, Jefferson Medical College, Philadelphia 7, Pa.)

7-8. American Soc. of Hospital Pharmacists, Detroit, Mich. (Miss G. Niemeyer, 2215 Constitution Ave., NW, Washington 7.)

7-10. National Assoc. of Boards of Pharmacy, annual, Detroit, Mich. (P. H. Costello, NABP, 77 W. Washington St., Chicago 2, Ill.)

8. American College of Apothecaries, Detroit, Mich. (R. E. Abrams, Hamilton Court, Philadelphia 4, Pa.)

8-10. American Assoc. of Colleges of Pharmacy, Detroit, Mich. (R. A. Deno, Colleges of Pharmacy, Univ. of Michigan, Ann Arbor.)

8-12. Scientific Apparatus Makers Assoc., 38th annual, Belleair, Fla. (SAMA, 20 North Wacker Dr., Chicago 6, Ill.)

8-13. American Chemical Soc., Dallas, Tex. (A. H. Emery, ACS, 1155 16 St., NW, Washington 6.)

8-13. American Pharmaceutical Assoc., annual, Detroit, Mich. (R. P. Fischelis, APA, 2215 Constitution Ave., NW, Washington 7.)

8-13. Symposium on Problems of Automation, Milan, Italy. (Consiglio Nazionale delle Ricerche, Ufficio Congressi e Mostre, 7 Piazzale delle Scienze, Rome, Italy.)

9-11. American Assoc. of Feed Microscopists, annual, Terre Haute, Ind. (R. C. Wornick, Agricultural Research Dept., Chas. Pfizer & Co., Inc., Terre Haute.)

9-12. International Anesthesia Research Soc., 30th annual cong., Miami Beach, Fla. (R. J. Whiteacre, 13951 Terrace Rd., Cleveland 12, Ohio.)

10-11. Symposium for Management on Applications of Analog Computers, Kansas City, Mo. (O. Fanning, Midwest Research Inst., 425 Volker Blvd., Kansas City 10.)

12. Assoc. of Vitamin Chemists, Chicago, Ill. (M. Freed, Dawes Products, 4800 S. Richmond, Chicago 32.)

(See issue of 17 February for comprehensive list)

4 CENTRIFUGES for '56 by C.S. & E.

Backed by fifty years of experience the Chicago Surgical and Electrical Company presents the "Forward Look," in the field of centrifuges.—Not only does this embody improvement of design, but in every phase of construction and craftsmanship . . . To one end; perfection of equipment for medical, chemical, and research laboratories.

Two new 6-tube 15 ml. safety angle centrifuges, Models 40 and 50 are fully enclosed and have safety cap for loading. There are no exposed revolving parts and danger from flying glass is eliminated. Distinctive C. S. & E. styling with Sand-Tan Finish. Streamlined aluminum housing. Speed of Model 40 is constant 1700 RPM, while Model 50 has Ohmite rheostat giving speed regulation from 0 to 5000 RPM, with built-in timer. Motor of Model 50 is ball-bearing, lubricated for life. Easy loading and unloading.

Embodying many safety features, the Model 10 (Size 1) and Model 20 (Size 2) C. S. & E. Centrifuges are designed for use in medical and industrial laboratories. Cabinets are of most modern furniture type design finished in Sand-Tan with black Formica top; electric brake eliminates brake shoes; built-in Powerstat gives stepless speed control; dial type speed indicator indicates speed up to 6,000 RPM.; automatic electric timer; all controls are interlocked for operator safety. Motor is lubricated for life. Model 10 will accommodate all types of heads suitable for Size 1 Centrifuges; Model 20 takes all Size 2 heads and accessories. Both units offer convenient storage space for accessories. Model 10 comes with 1/4 HP motor; Model 20 has 1/2 HP motor. Both models may be supplied with refrigeration for operation below room temperature.

SEND FOR BULLETIN NO. S-63

The NEW FORWARD LAB-LOOK

CHICAGO SURGICAL & ELECTRICAL CO.
Division of Labline, Inc.
3070-82 West Grand Avenue • Chicago 22, Illinois