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726 SCIENCE, VOL. 133
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**Representatives**

Among the six outstanding career civil servants who have been selected to receive the 1960–1961 Rockefeller Public Service Awards of $3500 each are the following:

Sterling B. Hendricks, chief scientist, Mineral Nutrition Laboratory for Pioneering Research, Agricultural Research Service, U.S. Department of Agriculture (in the area of science and technology).


Conrad L. Wirth, director, National Park Service (also in the area of conservation and resources).

These awards, which will be presented at a luncheon in Washington in April, are made possible by a fund established by John D. Rockefeller III that is administered by the Woodrow Wilson School of Public and International Affairs at Princeton University.

Although the fund has been administered since 1952, this year the character of the awards has changed, for previously they were designed to make additional self-training possible for government employees in mid-career. With the passage of the Training Act of 1958, which gave broad training authority to all executive agencies of the government, a principal objective of the original awards was realized. Therefore the new Rockefeller Public Service Awards Program places primary emphasis on achievement and long and distinguished career service.

The $5000 Rumford Premium of the American Academy of Arts and Sciences was awarded on 8 March to Charles H. Townes, professor of physics at Columbia University, originator of the maser. (The word is an acronym deriving from microwave amplification by stimulated emission of radiation.) The award recipient must be “the author of the most important discovery or useful improvement which shall be in any way made known to the public . . . on Heat or on Light; the preference always being given to such discoveries as shall . . . tend most to promote the good of mankind.”

The maser, which is being further developed by a research team under Townes’s direction, has enabled astronomers to determine such matters as the temperatures of Venus and Jupiter. In other fields it is used to measure time, to improve long-distance communications, to check Einstein's special theory of relativity, and as a tool in molecular and electronic research.

In 1960 Townes and A. L. Schawlow of the Bell Telephone Laboratories announced the development of an optical maser which is expected to have great importance in the field of space communications.

I. I. Rabi, professor of physics at Columbia University, was honored by the Society for International Scientific Relations at a dinner meeting on 28 February at Columbia's Faculty Club. On behalf of the society, Detlev W. Bronk, president of the National Academy of Sciences, presented a medal to Rabi for his outstanding contributions to science and society. Rabi delivered an address on “Science and Public Policy.”

Sydney Chapman of the High Altitude Observatory, Boulder, Colo., will discuss “Sun Storms and the Earth” as a Sigma Xi national lecturer at a number of colleges and universities during April.

Marvin L. Goldberger, professor of physics at Princeton University, has been awarded the Heineman Prize for outstanding achievement in mathematical physics. He will receive the $2500 prize on 26 April at the annual dinner of the American Physical Society, in Washington. The award is endowed by the Heineman Foundation and administered by the American Institute of Physics. A committee appointed by the American Physical Society selects the winner.

Sherwood L. Washburn, professor of anthropology at the University of California, Berkeley, was accorded one of the highest honors in his field on 3 March, when he was awarded the Wenner-Gren Foundation’s 1960 Viking Fund Medal and $1000 prize. Washburn, who is an expert on baboon behavior, was nominated for the award by the American Association of Physical Anthropologists.

Pierre L. Balligand will succeed Hubert de Laboulaye as deputy director general in charge of the department of technical operations at the International Atomic Energy Agency, Vienna. Balligand is the head of the “service des grandes piles experimentales” (the division of large research reactors) of the French Commissariat à l’Energie Atomique. De Laboulaye will leave the IAEA toward the end of March to return to a senior position with the French Commissariat.

Herbert Friedmann, head curator of zoology at the U.S. National Museum, Washington, D.C., has been named director of the Los Angeles County Museum in Exposition Park, Los Angeles, effective 1 April.

Recent Deaths

Floyd E. Bartell, Ann Arbor, Mich.; 77; professor emeritus of chemistry at the University of Michigan and a colloidal chemist; on the faculty for 43 years before retiring in 1953; 5 Mar.

Johannes H. Bauer, Baltimore, Md.; 71; internationally known research physician; a pioneer in developing a vaccine for yellow fever, he did most of his work through the Rockefeller Institute, was in charge of the laboratories of the International Health Division of the Rockefeller Foundation in New York; 4 Mar.

Enzo Beri, Italy; professor and chairman of the department of human physiology, Medical School, University of Ferrara, Italy; director of Group 3-C of the Biology Division of the Italian Nuclear Research Center; former Rockefeller fellow at the Nobel Institute for Medical Research in Stockholm, under H. Theorell, and a former research associate at the Johnson Foundation of the University of Pennsylvania, under Britton Chance; 1930, and 1934 to 1956; was one of the first four persons to be granted life peerage, in 1958; professor of anatomy at Manchester (from 1919 to 1937) and dean of its medical school; wrote Sensation and the Sensory Pathway, in 1930, and many papers on anatomy, education, and neurology; had held many important posts, including the chairmanship of the Universities Bureau of the British Empire; 6 Mar.
people themselves, for they use them as codes of precedent for status, rights, and cultural activities. The oral histories are more than this, however, for they contain sociological explanations of the contemporary society; the nature of these explanations enables anthropologists to find the best approach for examining key institutions and the state of unity within diversity.

The focal group, the Lunda people, is designated and accepted by all Luapula peoples as the rulers; among the Lunda are found not only the paramount chief but also many other persons with official authority and privilege. Although this has been a conquest-state for more than a century and a half, Lunda cultural influence tends to be limited to a number of political centers, and little effort has been made to establish conformity. The Lunda chiefship and political authority is, nevertheless, linked directly and indirectly to the institutions of the various peoples; it provides a coherent structure and a stable continuity to the society. This book provides a useful addition to our knowledge of central African peoples.

PHILLIP GULLIVER
African Studies Program, Boston University


"It may be distressing for some readers to discover that so much in zoology is open to doubt, but this in effect indicates the vast amount of work that remains to be done." Ker-kut made this discovery for himself, and this book is his cry of distress. Evolution has not, he writes, been proved beyond all reasonable doubt. He is not an antievolutionist, since he concedes that "many living animals can be observed over the course of time to undergo changes so that new species are formed." But he argues, correctly of course, that we do not know exactly when and how life arose from nonliving matter (chapter 2), that the phylogenetic relationships of the viruses, rickettsiae, and bacteria are obscure (chapter 3), ditto for the protozoans (chapter 4), ditto for the origin of the Metazoa (chapters 5 and 6), ditto for the invertebrate phyla (chapter 7), ditto for the origins of the vertebrates as suggested by the biochemical studies (chapter 8). All of which means that zoology is not yet a completed story, and, indeed, a vast amount of work remains to be done.

The basic conclusion of the author is, however, something else—since we cannot yet reconstruct in all details the phylogeny of the animal kingdom, therefore, evolution is not "proven"! This is a confusion of two distinct problems; we may be sure that life (or, for that matter, the Cosmos) had a history, but it does not follow that we know all the events of which these histories are composed, with their respective dates. The author has been wise not to suggest any alternatives to the theory of evolution; he has been wise to write chapter 9 ("Vertebrate palaeontology") without which the book would have been better than it is.

THEODOSIUS DOBZHANSKY
Department of Zoology, Columbia University

New Books

Biological Sciences

Biological Clocks. vol. 25 of Cold Spring Harbor Symposia on Quantitative Biology. Biological Laboratory, Cold Spring Harbor, N.Y. 1960. 524 pp. Fifty papers presented at the symposium which was attended by 150 scientists from 31 countries.


Dictionary of the Fungi. G. C. Ainsworth. Commonwealth Mycological Inst., Kew, Surrey, England, ed. 5, 1961. 554 pp. Illus. 30s. More than 5000 corrections or alterations have been made, new material added, and new illustrations prepared; 500 more generic names have been compiled—mostly from vol. 2, pts. 8-20, of the Institute's Index of Fungi.


General


Kliomadiagramm-Weltatlas. vol. 1. Heinrich Walter and Helmut Lieth. Fischer, Jena, East Germany, 1960. The first part (three volumes, with about 30 maps and supplements, are planned) of a collection designed to represent the climate of the world in uniform graphic reproduction, each map showing climate regions and position of meteorological stations. Supplementary charts provide information about stations, altitude, years of observation, mean annual precipitation, and so forth. The authors are staff members of the Institut der Landwirtschaftlichen Hochschule.


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Harry Osborn, past president, will represent the society on the AAAS Council. He is research director of Tocco Division, Ohio Crankshaft Company, and is an internationally known authority on the heat treatment of metals.

HARRY E. CONRAD
American Society of Tool and Manufacturing Engineers, Detroit, Michigan

Forthcoming Events

April
9–13. American Assoc. of Cereal Chemists, annual, Dallas, Tex. (J. W. Pence, Western Utilization Research & Development Division, 800 Buchanan St., Albany, Calif.)
11–13. Institute of Environmental Sciences, annual, Chicago, Ill. (H. Sanders, Box 191, Mt. Prospect, Ill.)
12–13. Information and Decision Processes, 3rd symp., Lafayette, Ind. (R. E. Machol, School of Electrical Engineering, Purdue Univ., Lafayette)
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The 6th Annual Symposium
Publication of the Society of General Physiologists—

MACROMOLECULAR COMPLEXES
Edited by M. V. Eds., Jr., Brown University

New. The studies in this volume represent recent efforts to analyze complex macromolecular aggregates, to investigate the origin, interaction, and spatial disposition of their components, and to assess the respective roles of each constituent in the properties of the whole. 14 Contributors. 1961. 269 pp., 107 illus. $7

Other S.G.P. Symposium—
SUBCELLULAR PARTICLES, Teru Haya-
ashi, Ed., with 20 Contributors. 1959. 213 pp.; 123 illus., tables ............$7 PHYSIOLOGICAL ADAPTATION, C. Ladd Proser, Ed., with 14 Contributors. 1958. 185 pp.; 90 illus., tables ............$7 INFLUENCE OF TEMPERATURE on BIOLOGICAL SYSTEMS, Frank H. Johnson, Ed., with 24 Contributors. 1957. 275 pp.; 133 illus., tables ............$4.50 PHYSIOLOGICAL TRIGGERS and Dis-
continuous Rate Processes. Theodore H. Bullock, Ed., with 16 Contributors. 1957. 179 pp.; 47 illus., tables ............$4 ELECTROLYTES in BIOLOGICAL SYS-
TEMs, Abraham M. Shanes, Ed., with 11 Contributors. 1955. 243 pp.; 123 illus., tables ............$4

The 18th Symposium of the Society for the Study of Development and Growth—

DEVELOPING CELL SYSTEMS and THEIR CONTROL
Edited by Dorothea Rudnick, Albertus Magnus College and Yale University

Recent advances in the knowledge of cell differentiation and its control within the organism, presented from both the biochemical and physiological points of view. 10 contributors discuss a diversity of organisms on the basis of their original studies. 1960. 240 pp., 126 illus. $8

The 16th and 17th Symposia—

DEVELOPMENTAL CYTOLOGY, Doro-
thea Rudnick, Ed., with 10 Contributors. 1959. 215 pp.; 118 illus., tables ............$8 CELL, ORGANISM, and MILIEU, Doro-
thea Rudnick, Ed., with 12 Contributors. 1959. 326 pp.; 136 illus., tables ............$8

PRINCIPLES OF PALEOBOTANY
William C. Darrah, Gettysburg College
This book presents the conceptual scheme of paleobotany through the explanation and use of the assumptions and techniques employed in the interpretation of the fossil record. Book develops a balanced presentation of the geological history of the plant kingdom; includes descriptions of significant forms, geological and geographical occurrences, and outlines of classifications. A Chronica Botanica Publication. 2nd Ed., 1960. 293 pp.; 73 illus., tables. $6.50

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Chicago, Ill. (I. E. Farber, Dept. of Psychology, State Univ. of Iowa, Iowa City)
4–6. American Ethnological Soc., Columbus, Ohio. (Miss N. F. S. Woodbury, Arizona State Museum, Univ. of Arizona, Tucson)
4–6. American Philosophical Assoc., western division, St. Louis, Mo. (L. E. Hahn, Washington Univ., St. Louis 30)
4–6. American Soc. of Human Genetics, Atlantic City, N. J. (W. J. Schull, 1133 E. Catherine St., Ann Arbor, Mich.)
4–6. Society for American Archaeology, Columbus, Ohio. (J. B. Wheat, Univ. of Colorado Museum, Boulder)
5–7. American Soc. of Internal Medicine, Miami Beach, Fla. (G. T. Bates, 350 Post St., San Francisco 8, Calif.)
5–8. American Psychoanalytic Assoc., Chicago, Ill. (Mrs. H. Fischer, 1 E. 57 St., New York 22)
7–10. American Inst. of Chemical Engineers, Cleveland, Ohio. (J. F. Van Antwerpen, AICHE, 25 W. 45 St., New York 36)
7–11. Institute of Food Technologists, New York, N. Y. (C. S. Lawrence, 176 W. Adams St., Chicago 3, Ill.)
7–12. Medical Library Assoc., Inc., Seattle, Wash. (Miss R. J. Mann, Mayo Clinic Library, Rochester, Minn.)
7–12. Society of American Bacteriologists, 62nd annual, Kansas City, Mo. (E. M. Foster, 311 Bacteriology, Univ. of Wisconsin, Madison 6)
7–12. Society of Motion Picture and Television Engineers, Toronto, Canada. (SMPTE, 55 W. 42 St., New York 36)
8–9. Titrimetric Methods of Analysis, symp., Cornwall, Ontario, Canada. (J. R. McCallum, Courtaulds (Canada) Ltd., Cornwall)
8–12. American College of Physicians, 42nd annual, Miami Beach, Fla. (ACP, 4200 Pine St., Philadelphia 4, Pa.)
8–12. American Psychiatric Assoc.,
117th annual, Chicago, Ill. (C. H. H. Branch, 156 Westminster Ave., Salt Lake City, Utah)

9–11. Western Joint Computer Conf., Los Angeles, Calif. (W. F. Bauer, 8433 Fallbrook Ave., Canoga Park, Calif.)


16–18. Western Conf. on Anesthesiology, biennial, Portland, Ore. (J. O. Branford, 2307 NW Overton St., Portland 9)


18–20. Host Tumor Interactions, intern. symp., Detroit, Mich. (M. J. Brennan, Oncology Div., Henry Ford Hospital, Detroit 2)


22–24. Telemetering Conf., natl., Chicago, Ill. (J. Becker, AC Spark Plug Division, General Motors Corp., Milwaukee 1, Wis.)

22–25. American Urological Assoc., Los Angeles, Calif. (W. P. Didusch, 1120 N. Charles St., Baltimore 1, Md.)


New Products

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

- **SPECTROPHOTOMETER ATTACHMENT** for the model DU spectrophotometer prints wavelength and transmittance information directly on printed sheets or strip charts. The chart drive of the printer is attached to the wavelength knob of the spectrophotometer, and the pen drive is attached to the potentiometer. The operator sets each knob as he normally would and presses the print bar to record a dot whose location on the chart provides both wavelength and transmittance information. The attachment does not interfere with the normal use of the instrument, according to the manufacturer. (Connecticut Instrument Corp., Dept. Sci-95, Wilton, Conn.)

- **AUTOMATIC ATTENUATOR** for application in gas chromatography is designed to hold peaks on scale in recording results. The instrument automatically changes attenuation when the recorder pen reaches an upscale position of 95 percent or a downscale position of 35 percent. There are eleven attenuation positions which increase or decrease by a factor of two; these attenuations cover the range 1 to 1024 with an infinity position provided. A switch permits manual operation at any time; an auxiliary circuit prevents jamming or locking of the automatic mechanism when a peak requires several instantaneous changes of attenuation to remain on scale. (F. & M. Scientific Corp., Dept. Sci105, 1202 Arnold Ave., N.C.C. Airbase, New Castle, Del.)

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Joshua Stern
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