

CULTURE METHODS FOR INVERTEBRATES

Culture Methods for Invertebrate Animals, a Compendium prepared Cooperatively by American Zoologists under the Direction of a Committee from Section F of the American Association for the Advancement of Science. PAUL S. GALTISOFF, FRANK E. LUTZ, PAUL S. WELCH and JAMES G. NEEDHAM, chairman. Ithaca, xxxi + 590. 1937. Comstock Pub. Co., \$2.00.

"THIS book has been prepared as an aid to studies that require living animals in continuous supply." It was compiled by Miss Mary E. Davis, under the direction of the four members of the committee. One hundred and eighty-six collaborators have contributed one or more articles, and information from other sources has been reprinted. The book begins with three general introductory chapters in which certain common methods of collecting and caring for terrestrial and aquatic animals are discussed. The remainder is taken up with articles which are primarily concerned with cultural methods, but often digress into other fields. For example, the brief but excellent section by R. K.

Nabours gives stimulating suggestions as to favorable lines of research on grouse locusts; Dr. Libbie H. Hyman not only tells how to keep planarians under laboratory conditions, but also points out how different types may be utilized for various purposes; and J. Speed Rogers gives detailed directions for rearing various types of crane-flies from diverse habitats. Articles are arranged systematically under their respective phyla, beginning with Protozoa and ending with Ascidacea. As would be expected, considerable space is given to protozoans and arthropods.

This work will be useful for those who maintain animals for experimental work or teaching. It covers a wide range and is well organized, with cross references and a complete index. The committee which prepared it is to be congratulated on its good work. Many of the advances in scientific discovery have been made possible by the availability of dependable material for observation and experiment. The publication of culture methods by which animals may be maintained for such procedures is a valuable service.

A. S. PEARSE

SOCIETIES AND MEETINGS**THE TORONTO MEETING OF THE AMERICAN ASSOCIATION OF ANATOMISTS**

A VERY successful session of the American Association of Anatomists was held in the brisk atmosphere of Toronto from March 25 to 27. The registered attendance was 303, of whom 281 were from out of town.

The meeting opened with three papers on the lung, treating respectively the factors initiating respiration in the embryo, the mechanical expansion of alveoli by the inhalation of amniotic fluid, and the nature of the ultimate alveolar lining. Nine other papers were read that morning, chosen from the several fields into which anatomy is now subdivided. Thereafter it was generally necessary to hold from three to six simultaneous meetings to cover the lengthy program of 150 papers and 58 demonstrations. At the evening smoker, Dr. G. L. Streeter described, with lantern slides, the International Congress of Anatomists at Milan last September. Eight Americans had attended, and all presented papers. President Livini was pictured in Fascist attire, addressing the congress on the glories of Italian anatomy. Everywhere one heard the Giovanezza and saw the marching squadrons. The congress included a memorable visit to the Carthusian monastery and the ancient university of Pavia.

On the second day in Toronto, multiple sessions continued. By invitation of the president, six members of the association undertook the organization of round-table conferences, dealing with special subjects as fol-

lows: "Factors in Sperm Production," P. E. Smith, Columbia University; "Structure of the Teeth," T. Wingate Todd, Western Reserve University; "Embryonic Heart," Bradley M. Patten, University of Michigan; "Present-day Trends of Investigation in the Field of Gross Anatomy," R. J. Terry, Washington University; "The Structure of Neurons and Its Functional Significance," D. M. Rioch, Harvard Medical School; "Blood Capillaries," E. V. Cowdry, Washington University. Attendance at these round-table conferences numbered from 50 to 150. All of them gave rise to a general discussion.

Three of the round tables, and three general sessions besides, occupied the second morning. The afternoon was devoted to motion-picture and other demonstrations. Then came the annual dinner of the association, in the Ball Room of the Royal York Hotel, attended by 199 persons. Led to their places by two bagpipers in Highland dress, who continued to play at intervals, the anatomists dined heartily on roast beef and Yorkshire pudding. A message from His Excellency, the Governor-General of Canada, was read as follows:

It is with great pleasure that I welcome to Canada the American Association of Anatomists. Your coming is a further example of the fact that science knows no political frontiers. You have my best wishes for the success of your deliberations.

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