Ch. Joyeux and Baer, and the trematodes by Baer and Joyeux. The material on the Mesozoa was prepared by P.-P. Grassé; this includes a section on Orthonectida by the late M. Caullery (probably this remarkable zoologist's last contribution). Acanthocephala were prepared by Baer, and the nemerteans by Marie Gontcharoff. The book as a whole is remarkably up to date, with only a short addendum of loose ends.

The classification of Turbellaria is extensively revised, and those accustomed to acoels and rhabdocoels will have trouble finding them in a maze of unfamiliar orders and suborders, to say nothing of the unfamiliar new creatures that have come to notice in the last few years. As for the speculations about the affinities of the Mesozoa, the inimitable P.-P. Grassé remarks that they are not very serious—they are based on "simple jeu de l'esprit. Les véritables affinités des Mesozoaires sont à découvrir."

Among the illustrations are four color plates, one of free-living Turbellaria, the others of nemerteans (one of these resembles a dish of discolored spaghetti and hardly seems worth the considerable cost of printing). Although the section on the cestodes is illustrated with at least 15 drawings of life cycles, with hosts and all, reminiscent of a yearbook of agriculture, there are no diagrams of life cycles for trematodes. The text figures are clear and abundant, except that a fresher diagram of the general anatomy of a nemertean should have been prepared.

In all, this is a well-organized, substantial contribution to this standard and now essential series.

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Immunology

Advances in Immunology. vols. 1 and 2. W. H. Taliaferro and J. H. Humphrey, Eds. Academic Press, New York. vol. 1, 1961, 443 pp., $14; vol. 2, 1962, 400 pp., $12. Illus.

Modern immunobiology represents a group of disciplines in the process of rapid development and expansion. Even the professional immunologist is hard pressed to keep abreast. But this field is also the real concern of the general biologist, the microbiologist, the geneticist, and the clinician. To keep up with advances in this broad field requires summary and analysis. Thus, the initial volume of *Advances in Immunology* seemed a welcome addition to the literature. This reaction was reinforced by the unusually high quality of the reviews in the initial volume. The eight well-chosen critical reviews ranged broadly over the field. For example, immunological tolerance was treated from the viewpoint of the transplantation biologist (by Hasek, Lengerova, and Hraba) and from the viewpoint of the classical immunologist (by Smith) with little overlap.

It was clear from these reviews that, like the positive immunologic response, "specific immunologic negativity" is a phenomenon that must be incorporated into the framework of understanding of the specific adaptation to antigens. The mass of fact in this one area alone reflects the vigor of the current activity in immunology. Osler's review of the complement system holds promise of understanding at both the chemical and the biological level. Perhaps the greatest promise of understanding of immune reactions lies in isolating the responsive system in a test tube. Stavitsky's able consideration of efforts in this direction leaves one convinced that both conceptual and technical progress are needed before adaptive immunity can be produced entirely in vitro. Weigle presents a beautiful succession of experiments that establish the toxicity of soluble antigen-antibody complexes and suggest a pathogenetic mechanism for a variety of experimental and clinical lesions. Gell and Benacerraf most effectively analyze the current knowledge about delayed allergy. Here, it is clear that recent understanding in this area has stemmed from the work of these authors and from that of S. B. Salvin, work in which precisely defined systems were used. The final chapter in the first volume, a masterly consideration of tumor biology, is a posthumously published chapter by P. A. Gorer. Gorer did more than anyone else to keep respectable the use of an immunological approach to the study of cancer, and his review reflects both his vast knowledge and the incisiveness of his theoretical approach to this difficult field.

The second volume of the series has been published, and it is clear that the high standards have been maintained. This volume also contains eight critical reviews of most important areas in immunobiology. Karush's concern with specificity and its basis in molecular structure and molecular forces is balanced by the presentation (by Miller, Marshall, and White) of an analysis of a hot biological problem—the role of the thymus in immunobiology. Nossal's review of the cellular genetics of immune responses emphasizes the key role of proliferation in immune adaptation.

The contributors to the first two volumes of *Advances in Immunology* have set a lofty goal for those that will follow. If, in the ensuing volumes, this yearly series can approach the standards set in the first two volumes, Taliaferro and Humphrey will have been amply rewarded for the difficult task of keeping eight immunologists in line each year.

Advances in Immunology must find itself among the most active volumes in the libraries of our universities and research institutions, immediately available for immunologists, immunochemists, and transplantation biologists and close at hand for cellular geneticists, pathologists, biologists, and clinicians.

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Lanthanides

The Chemistry of the Lanthanides. Therald Moeller. Reinhold, New York; Chapman and Hall, London, 1963. x + 117 pp. Illus. $1.95.

It is an unfortunate fact that, in inorganic chemistry courses at the lower collegiate level, the so-called rare earths are often completely ignored, or, at best, presented in one lecture as a rather uninteresting breed of elements. As a result, a typical chemist, asked simply to name the lanthanide elements, either shakes his head in dismay or immediately resorts to a memory device—Caesar's (Ce) Prudence (Pr) Needs (Nd) Permanent (Pm) Salvation (Sm), Europe's (Eu) Good (Gd) Tables (Tb) Disperse (Dy) Hoboes (Ho), Errant (Er) Tramps (Tm). Why be (Yb) Ludicrous (Lu)?—in order to fulfill his assignment.

A typical chemist also knows that the 3 + oxidation state is exhibited prominently by the lanthanide elements, that the different 3 + ions are hard to separate quantitatively, and that there is something known as the lanthanide contraction. He does not know that the lanthanides are not rare.