The fifth section (31 pages) is an excellent presentation of practically all oral neoplasms. The remaining 20-page section is a bibliography.

Except for the somewhat controversial aforementioned points, the atlas is excellent. It will be particularly helpful to general practitioners of dentistry and medicine, whereby at a glance in most cases, a clinical photograph, a photomicrograph, an x-ray, and a brief description of a lesion may be obtained. It will also prove valuable and is highly recommended to graduate students and residents in oral and general pathology as well as to the practicing general pathologist who may not see many oral pathological lesions.

HAROLD M. FULLMER
National Institute of Dental Research, National Institutes of Health

Proceedings of the International Conference on the Peaceful Uses of Atomic Energy. vol. 8, *Production Technology of the Materials Used for Nuclear Energy*. United Nations, New York. 1956. 627 pp. Illus. $10.

This large volume is the eighth in the series of 16 books that record the great unveiling of classified material that took place at Geneva in 1955. It contains 95 papers in four major sections: treatment of uranium and thorium ores; production of metallic uranium and thorium; analytical methods in raw material production; production technology of special materials. The last section is devoted to heavy water, graphite, zirconium, and beryllium.

Developments in the basic sciences underlying nuclear power production have been published quite freely, but information on technologic processes has been severely restricted. Hence, this book is of great interest for its content of technical material alone. In addition, however, one is naturally curious about the relative contributions of different nations to this massive international declassification. Curiosity centers particularly upon a comparison of the information furnished by the United States and the U.S.S.R. I satisfied my wonder by compiling a few numbers that are offered without intent to draw conclusions. In the category of technology, the United States contributed 18 papers for a total of 195 pages, while the U.S.S.R. delivered four papers totaling 16 pages. Pursuing the counting in all four sections of the book a bit further, one may be somewhat astonished to find 12 papers from Yugoslavia and 15 from Argentina but only three from the United Kingdom and one from Germany. As might be expected, countries that do not yet have a full nuclear energy program have concentrated their efforts on work that can be performed with small quantities of material.

A second intriguing question bears on the value of secrecy as a means of achieving a lead over other nations. Given the same goals under conditions of isolation, will scientific workers reach similar solutions? Judging from the few examples in this book where comparison is possible, the answer seems to be affirmative. Thus, the methods of producing beryllium in this country and in the U.S.S.R. are strikingly similar. The same is true of the manufacture of metallic uranium. In this case, all four nations reporting use a bomb reduction of uranium fluoride with an alkaline earth metal, although three employ calcium, while the United States prefers magnesium. On the other hand, the greatest diversity appears in the field of analytic chemistry where security restrictions have been very mild.

The quality of most of the papers is excellent, and many contain a wealth of detail. This is true of those describing manufacturing methods as well as those on analysis. As a result, this book will repay careful study by all who are concerned with the production technology of the basic constituents of nuclear reactors. It is to be hoped that the 1955 Geneva conference is the first of many similar international meetings.

M. KOLODNEY
City College of New York

Principles of Embryology. C. H. Waddington. Macmillan, New York, 1956. 510 pp. Illus. $7.50.

C. H. Waddington's new book is intended as a textbook for advanced university students (alas, he does not expect them to be able to read German): a review of recent work on the analytic or causal aspects of developmental science. All embryologists will, it is safe to say, derive both pleasure and stimulation from its perusal: pleasure because of the easy mastery with which experimental results from dozens of different laboratories on several continents have been woven into a coherent exposition, and stimulation because, of course, nobody will agree completely with the choice of material or with every interpretation offered. The figures and diagrams are particularly well chosen insofar as they are selected from the literature, and the original ones are very neat and illuminating. One may cite numerous examples of particularly felicitous exposition which confer on sometimes difficult subjects a deceptive air of simplicity and clarity.

The book is subdivided into two major parts. The first, called "The facts of development," has chapters reviewing the experimental analysis of successive stages of life-history and separate chapters on the major animal groups that have been objects of experimentation. The section ends with chapters on growth and regeneration. It is perhaps a reflection of the state of the analysis that the chapters dealing with early phases of development appear much more successful than those on organ development and regeneration. The second part of the book is concerned with "Fundamental mechanisms of development," particularly genetic and biochemical mechanisms. It is very good to see the data of developmental genetics given equal prominence with those of experimental morphology between the two covers of a single book; this proximity, however, seems to demonstrate how far apart these two disciplines—which should by rights be one discipline—are in *Fragestellung* and emphasis, even when they use the same or similar methods. Perhaps in his next book Waddington will be able to remedy this.

In a textbook of this comprehensive scope it can scarcely be expected that every aspect of the material has been treated with equal breadth and felicity or that a strict account of priority in experimentation has been rendered. The author absolves himself from the latter obligation so neatly in his preface that it would be hard for even the most obsessive critic to object. A sense of the history of a discipline is not perhaps essential to analytic attack: Waddington writes as a practical mechanist, physiographer and topologist, and morphogeneticist. It would be ungrateful to ask for more. However, I confess to being somewhat baffled by some of the definitions in the introductory chapter—unconvinced, for example, of the reality of the distinction between "field of competence" and "individuation field." Indeed, the later chapters on the embryonic axis and "individuation" are so reasonable and readable that we strongly suspect the author to have been guilty of writing his first chapter before, rather than after, the last: a warning to all of us.

DOROTHEA RUDNICK
Yale University

World Sea Fisheries. Robert Morgan. Pitman, New York, 1956. 307 pp. Illus. $6.95.

Why do some oceanic islands import a large portion of the fish their inhabitants consume? What is the influence of a coastline on the development of local fishing industries? These are the types of problems that this book tries to analyze.