ing a better basis for the classification of the family, the author, Ruth D. Turner, undertook a study of the soft anatomy as well as the shells and pallets of the Teredinidae. Anatomical descriptions of representatives of 14 genera, with 26 good drawings of their anatomy, begin the section on teredinid biology in part 1 of this book. The new information is then correlated with what was already known into coherent accounts of the functional anatomy, physiology, reproductive biology, and distribution of the Teredinidae. This survey reveals that when features of soft anatomy, biology, shells, and pallets are considered together, six natural groups of genera emerge; thus, the value of the approach is demonstrated. Trends in evolution and phylogenetic relations made apparent by the survey are discussed. The new information is used in a revision of the classification of the subfamilies and genera, with the new diagnoses based principally on details of the soft anatomy and pallets. Other taxonomists should examine this application of new characters in completely redefining taxonomic groups. Part 1 reveals the Teredinidae as a group that shows remarkable structural adaptations and striking specializations in many aspects of their biology; this part will interest students of evolution, physiology, and reproduction as well as those interested in mollusks, invertebrate zoology, and marine biology.

Part 2 is an illustrated catalog of all published teredinid generic and specific names. Entry annotations include citations, type localities, and the taxonomic status determined for each name. Pallets and shells of the types of virtually all nominal species and those of specimens showing variations found within some species are illustrated by drawings, with descriptive legends, which are arranged on 64 consecutive plates. The large format allowed these excellent drawings to be reproduced on a scale large enough for easy use. The systematic literature appears to have been exhaustively collected and analyzed for the catalog. Almost all type materials extant in museums and large numbers of specimens derived from a worldwide sampling program were studied to determine the synonomies. This enormous amount of research, clearly done with competence and meticulous scholarship, introduces order into the taxonomic chaos of each species with admirable thoroughness. Its organization does not succeed in making the results of this great labor readily available to users of the catalog.

There is a hint (p. 13) that generic monographs will follow, but the author expects (p. 131) this work to be used for determining species. Statements made in the two forewords imply that the book will become a principal tool for the identification of teredinids. Perhaps it will, but not without considerable expenditure of patience and time by the users. There is neither an index nor a list of figures; nor is there a systematic list of species names and their synonyms under each genus. The catalog gives approximately 800 generic and specific names in alphabetical, not systematic, order but a list of synonyms appears in the entry for each valid name. After placing a specimen in one of the 14 genera with the generic key (p. 81), it is necessary to flip pages (page references not given in the key) to find this genus in the section on generic diagnoses (pp. 73 ff.). The valid species are listed here, but the pages where they appear elsewhere are not given. However, armed with a copy of the list under our genus, we can now safely enter the taxonomic jungles of the alphabetical catalog to find therein each species name, and copy onto our list the plate number (page not given) found under it. The plates are arranged so that figures of most of the species of each genus follow one another, but some are out of order, so that much flipping back and forth is necessary as the specimen is compared with the figures given for each species. Because written species diagnoses do not form a part of this work, the descriptive material given with most legends must be read carefully, and these sometimes direct us (no page reference) back into the catalog for more information. If we have a species of *Lyrodus*, the valid species list under that genus leads us to the catalog entry *pedicellatus* where we find the reference: "Plate 1, A, D, E." If we are hasty in checking these figures we miss the last line on the legend page opposite indicating that all other figures on this plate are also of variations of *L. pedicellatus*. Unless we are unduly suspicious, we do not discover until much later the notes on the respective legend pages that all of the figures on plates 2, 3, 4, and 5 (not referred to in the catalog entry) are also of specimens of *L. pedicellatus*, one of which might resemble the specimen in hand. This type of notification appears on the last line of many legend pages. As we become familiar with the book, suspicion grows that the plate references given under the valid species entries in the catalog do not reflect a large number of late decisions by the author to synonymize species, and for identification purposes fail as guides to all the figures of a species. We must go through all the plates and examine each figure that the legends indicate as illustrating one of the variations of a species of the genus in question. Since it appears that the synonym lists under each valid species entry in the catalog *were* emended to include late decisions, a more laborious alternative is to extract the entire list (no page numbers) for each of the species in the genus of the specimen, find the catalog entries for each name, obtain the plate number given, and then turn to the plates and find each figure. Plate references in the catalog are usually preceded by 1¼ inches of blank space where additional plate references could have been inserted without altering the total number of lines or their arrangement in any way. A proper systematic index would have been easier to amend and would have added no more than approximately ten pages to the text. This work includes 66 presently valid species and 229 specific synonyms; without a cross-index to the catalog entries and the figures, an attempt to critically examine Turner's synonomy decisions by trying to find and compare all relevant catalog notations and figures of the types of the reputed synonyms would be more dangerous and less appealing than experimenting with LSD.

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Mathematics

The Geometry of Incidence (Prentice-Hall, Englewood Cliffs, N.J., 1966. 176 pp., $5.95), by Harold L. Dorwart, provides a scholarly expository treatment of some of the most interesting consequences of the assumptions of incidence relations in plane geometries.

A point is incident with a line if the point lies on (is a member of) the line; a line is incident with a point if the line falls on (passes through, contains) the point.

This book is very readable. Illustrations are effectively used. The basic concepts are nicely stated. There is an excellent bibliography. There are many interesting and appropriate quotations throughout the book. The author is careful not only to introduce the concepts thoroughly but also to warn the reader of possible misinterpretations. For example, on pages 70 and 71 he emphasizes that no matter how many figures are drawn, the figures will not provide a proof that the three points under discussion are collinear; rather the figures provide supporting evidence for a conjecture that still remains to be proved.

The author states (p. xvi) that "this book is not a textbook in the usual sense. . . ." I agree since no exercises are provided. However, readers should approach this book with "their pencils in hand" and work along with the author by drawing their own figures and providing their own illustrations for the concepts under discussion.

The book's mathematical structure is excellent. It is based on the recognition of various geometries and systems of coordinates; figures on a real projective plane; the Theorems of Pappus, Desargues, Pascal, and Brianchon; and a brief treatment of finite projective planes. The treatment throughout is mathematically sound and much more complete than an ordinary expository article or book.

Anyone who has at least vague recollections of solving two linear equations in two variables and of graphing lines and conic sections (circles, ellipses, parabolas, and hyperbolas) has sufficient background in mathematical skills to read this book. Even a casual reader may expect to broaden his understanding of geometry. A careful reader will find many opportunities for meditation on what has been said. The author has been very careful not to leave major gaps. The exposition is complete. However, this book is concerned with mathematical principles that deserve meditation. Those who read the book with care will find that this very worthwhile experience adds rich dividends to their understanding of geometric principles.

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Conference and Symposium Reports

Behavior of Materials at Cryogenic Temperatures. A symposium (Lafayette, Ind.), June 1965. American Soc. for Testing and Materials, Philadelphia, 1966. 154 pp. Illus. Paper, $8.50; members, $5.95. Five papers: "Plastic behavior of metals at cryogenic temperatures" by E. B. Kula and T. S. Desisto; "Some basic and engineering considerations regarding the fracture of metals at cryogenic temperatures" by E. T. Wessel; "Low-temperature phase transformations" by R. P. Reed and J. F. Breedis; "Effect of metallurgical variables on the superconducting properties of metals and alloys (abstract only)" by H. W. Schadler and J. D. Livingston; and "Thermophysical properties of metals at cryogenic temperatures" by R. L. Powell.

Chemical Physics of Ionic Solutions. An international symposium of the Electrochemical Society (Toronto, Canada), May 1964. B. E. Conway and R. G. Barradas, Eds. Wiley, New York, 1966. 640 pp. Illus. $25. Twenty-five papers.

Hydrocarbon Fuel Cell Technology. A symposium organized by the Division of of Fuel Chemistry, American Chemical Society (Atlantic City, N.J.). Bernard S. Baker, Ed. Academic Press, New York, 1965. 576 pp. Illus. $21.50. Thirty-six papers on the following topics: Indirect Systems (6 papers); Methanol Fuel Cells (8 papers); Molten Carbonate Fuel Cells (7 papers); Experimental Techniques (8 papers); and Direct Hydrocarbon Fuel Cells (7 papers).

International Symposium on Genes and Chromosomes—Structure and Function (Buenos Aires, Argentina), November–December 1964. Juan I. Valencia and Rhoda F. Grell, Eds. U.S. Department of Health, Education, and Welfare, Washington, D.C., 1965 (order from Superintendent of Documents, Washington, D.C.). 372 pp. Illus. $3.50. Nineteen papers on the following topics: Genes: Structure and Function (6 papers); Chromosome Structure and Replication (4 papers); Chromosome Breakage and Reunion (2 papers); Chromosome Behavior (3 papers); and Chromosome Metabolism (4 papers).

Materials Technology in Steam Reforming Processes. Proceedings of a symposium (Billingham, England), October 1964. C. Edeleanu, Ed. Pergamon, New York, 1966. 395 pp. Illus. $14. Thirty-one papers given at a symposium organized by the Agricultural Division, Imperial Chemical Industries.

Prace i Materiały Naukowe. First Protein Symposium (Warsaw), June 1964. vol. 6, Biochemistry and Clinic of Proteins in Ontogenesis. Organized by National Research Institute of Mother and Child, Warsaw. Państwowy Zakład Wydawnictw Lekarskich, Warsaw, 1965. 347 pp. Illus. Paper. Thirty-seven papers on the following topics: Biochemistry of Proteins in Ontogenesis (19 papers); Physiopathology of Immunoglobulins (5 papers); and Metabolism of Proteins and Amino Acids in Children (13 papers). Papers are in English, summaries in Polish.

Proceedings of the SAC Conference (Nottingham, England), July 1965. P. W. Shallis, Ed. Published for the Society for Analytical Chemistry. Heffer, Cambridge, England, 1966. 623 pp. Illus. £6 6s. Fifty-three papers.

Rarefied Gas Dynamics. Proceedings, fourth international symposium (Toronto, Canada), July 1964. vols. 1 and 2. J. H. de Leeuw, Ed. Academic Press, New York, 1965. vol. 1, 716 pp., $19.50; vol. 2, 624 pp., $18.50. Illus. Seventy-two papers on the following topics: Kinetic Theory (7 papers); Shock Structure (9 papers); Transition Flow—Theory (9 papers); Transition Flow—Experimental (11 papers); Free Molecule and Internal Flow (4 papers); Rarefied Plasma Flows (4 papers); Experimental Methods in Rarefied Gas Dynamics (9 papers); Molecular Beams (6 papers); and Surface Interactions (13 papers).

Reproduction: Molecular, Subcellular, and Cellular. A symposium of the Society for Developmental Biology (Carleton, Minn.), June 1965. Michael Locke, Ed. Academic Press, New York, 1965. 358 pp. Illus. $11.50. Twelve papers: "Reproduction: Molecular, subcellular, and cellular" by Herbert Stern; "Transcription and translation of genes" by K. C. Atwood; "Structural basis of the specificity of antibodies" by Alfred Nisonoff and F. P. Inman; "Interactions between plant viruses and host cells" by K. W. Mundry; "Interaction of viruses with the genetic material of the host cells" by Renato Dulbecco; "Chromosome reproduction in mitosis and meiosis" by C. P. Swanson and William J. Young; "The continuity of the chloroplast in *Euglena*" by Jerome A. Schiff and H. T. Epstein; "Extrachromosomal heredity in fungi" by Adrian M. Srb; "Final remarks: 'Why so much DNA?'" by S. Granick; "Haploidy versus diploidy in the reproduction of cell type" by Walter Tulecke; "Cell and tissue interactions in the reproduction of cell type" by Irwin R. Konigsberg and Stephen D. Hauschka; and "Aging as a consequence of growth cessation" by Robert R. Kohn.

The Thalamus. Proceedings of a symposium sponsored by the Parkinson's Disease Information and Research Center, Columbia University. Dominick P. Purpura and Melvin D. Yahr, Eds. Columbia Univ. Press, New York, 1966. 448 pp. Illus. $15. Twenty-two papers.

Tokyo Summer Lectures in Theoretical Physics, 1965, pt. 1, Many-Body Theory. Ryogo Kubo, Ed. Syokabo, Tokyo; Benjamin, New York, 1966. 166 pp. Illus. $6.75. Ten papers: "The fluctuation-dissipation theorem and Brownian motion" by Ryogo Kubo; "Relaxation phenomena near the critical points" by Hazime Mori; "Elementary excitations in a homogeneous Bose liquid, with application to He II" by David Pines; "Properties of liquid helium-three" by Keith A. Brueckner; "A new formulation of the inhomogeneous electron gas problem" by W. Kohn; "A new mechanism for superconductivity" by J. M. Luttinger; "Breakdown of the quasiparticle approximation in metals" by J. Robert Schrieffer; "The Landau-Ginsburg equations and the properties of type II superconductors" by P. G. de Gennes; "The theory of correlated crystals" by Keith A. Brueckner; and "The present status of the theory of nuclear structure" by Keith A. Brueckner.