

tends the idea of a surface of critical stability to certain nonplanar many-body problems and uses this to find empirical stability criteria for several important three-body systems. And F. Nahon discusses orbits in the vicinity of the small mass in the restricted problem. Some of these orbits are collision orbits, and these seem to be a fruitful subject for further research in instability theory.

In related work, J. Waldvogel extends the pioneering work of R. McGehee on triple collision in the collinear three-body problem to the planar case and C. Simó shows why triple collisions introduce a nonregularizable singularity into the equations of motion.

Global questions of instability are addressed by several authors. R. Broucke describes the well-known Henon-Heiles problem, as well as three other non-integrable problems of mechanics. Numerical studies of these and similar problems often provide pictures of islands of stability surrounded by "ergodic seas." That is, the phase space of the system breaks into regions where motion is more or less regular and regions where orbits wander around randomly, and perhaps even densely.

No adequate theoretical description of ergodic seas exists in the literature, though questions about their structure seem to be among the most important questions in instability theory. Are they really ergodic? Is there a dense orbit? As Szebehely remarks, the age-old tools of dynamical systems—power series methods, integrability, and numerical techniques—are not sufficient to answer these questions. Only the qualitative theory has a chance of succeeding.

This approach is admirably described in two papers in the volume, one by R. W. Easton and the other by G. Contopoulos. Easton offers his explanation of the numerically found ergodic seas: they are there and are caused by homoclinic behavior. He backs his contention with a simple model, the highly perturbed twist mappings. Contopoulos discusses a related phenomenon, Arnold diffusion, which occurs only in higher-dimensional problems but which possibly destroys any hope of stability in non-integrable problems.

This collection presents several different and useful viewpoints of unstable phenomena in mechanics. Not only dynamical astronomers, but other scientists interested in nonlinear phenomena will find it useful.

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Books Received

Addiction Research and Treatment. Converging Trends. Proceedings of a conference, Coatesville, Pa., Oct. 1977. Edward L. Gottheil, A. Thomas McLellan, Keith A. Druley, and Arthur I. Alterman, Eds. Pergamon, New York, 1979. xiv, 146 pp., \$15.

Advances in Cryogenic Engineering. Vol. 24. Proceedings of a conference, Boulder, Colo., Aug. 1977. K. D. Timmerhaus, R. P. Reed, and A. F. Clark, Eds. Plenum, New York, 1978. xii, 586 pp., illus. \$49.50. A Cryogenic Engineering Conference Publication.

Advances in Enzymology and Related Areas of Molecular Biology. Vol. 48. Alton Meister, Ed. Interscience (Wiley), New York, 1979. x, 452 pp., illus. \$27.50.

Advances in Heterocyclic Chemistry. Vol. 23. A. R. Katritzky and A. J. Boulton, Eds. Academic Press, New York, 1978. x, 488 pp., illus. \$49.50.

Advances in Information Systems Science. Vol. 7. Julius T. Tou, Ed. Plenum, New York, 1978. xiv, 314 pp., illus. \$27.50.

Advances in Virus Research. Vol. 23. Max A. Lauffer, Frederik B. Bang, Karl Maramorosch, and Kenneth M. Smith, Eds. Academic Press, New York, 1978. x, 416 pp., illus. \$36.

Aeronca C-2. The Story of the Flying Bath-tub. Jay P. Spenser. Published for the National Air and Space Museum by Smithsonian Institution Press, Washington, D.C., 1978. viii, 72 pp., illus. Paper, \$4.95. Famous Aircraft of the National Air and Space Museum, 2.

The Ambidextrous Universe. Mirror Asymmetry and Time-Reversed Worlds. Martin Gardner. Illustrated by John Mackey. Scribner, New York, ed. 2, 1979. x, 294 pp. \$9.95.

American Spiders. Willis J. Gertsch. Van Nostrand Reinhold, New York, ed. 2, 1979. xiv, 274 pp., illus. + plates. \$24.95.

Analysis of Ecological Systems. Papers from a colloquium, Columbus, Ohio, Apr. 1977. David J. Horn, Gordon R. Stairs, and Rodger D. Mitchell, Eds. Ohio State University Press, Columbus, 1979. x, 312 pp., illus. \$27.50. Ohio State University Biosciences Colloquia.

Analysis of Physiological Systems. The White-Noise Approach. Panos Z. Marmarelis and Vasilis Z. Marmarelis. Plenum, New York, 1978. xvi, 488 pp., illus. \$39.50. Computers in Biology and Medicine.

Analysis II. Aufbau der Infinitesimalrechnung. Erich Martensen. Bibliographisches Institut, Mannheim, ed. 2, 1978. viii, 176 pp., illus. Paper, 9.90 DM. B.I.-Hochschultaschenbücher, Band 833.

Annual Reports on NMR Spectroscopy. Vol. 8. G. A. Webb, Ed. Academic Press, New York, 1978. x, 380 pp., illus. \$58.

Annual Review of Psychology. Vol. 30. Mark R. Rosenzweig and Lyman W. Porter, Eds. Annual Reviews, Palo Alto, Calif., 1979. x, 694 pp. \$17.

Antibiotics and Other Secondary Metabolites. Biosynthesis and Production. Papers from a symposium, Basel, Sept. 1977. R. Hütter, T. Leisinger, J. Nüesch, and W. Wehrli, Eds. Published for the Swiss Academy of Sciences and the Swiss Society of Microbiology by Academic Press, New York, 1978. xii, 256 pp., illus. \$29.75. FEMS Symposium No. 5.

The Armadillo as an Experimental Model in Biomedical Research. Proceedings of a workshop, Caracas, Venezuela, May 1977. Pan American Health Organization, Washington,

D.C., 1978. iv, 140 pp., illus. Paper, \$10. Scientific Publication No. 366.

Coherence in Spectroscopy and Modern Physics. Proceedings of a NATO Advanced Study Institute, Versilia, Italy, July 1977. F. T. Arecchi, R. Bonifacio, and M. O. Scully, Eds. Plenum, New York, 1978. xiii, 402 pp., illus. \$39.50. NATO Advanced Study Institutes Series B, vol. 37.

Common Texas Grasses. An Illustrated Guide. Frank W. Gould. Texas A & M University Press, College Station, 1979. x, 268 pp. Cloth, \$10.95; paper, \$6.95.

Composition of Scientific Words. A Manual of Methods and a Lexicon of Materials for the Practice of Logotechnics. Roland Wilbur Brown. Smithsonian Institution Press, Washington, D.C., 1978. 882 pp. \$12.50. Reprint of the 1956 edition.

The Continuing Quest. Large-Scale Ocean Science for the Future. National Academy of Sciences, Washington, D.C., 1979. xviii, 92 pp. Paper, \$7.25.

Convexity in the Theory of Lattice Gases. Robert B. Israel. Princeton University Press, Princeton, N.J., 1979. lxxxvi, 168 pp., illus. Cloth, \$16.50; paper, \$6.95. Princeton Series in Physics.

Corrosion Chemistry. Papers from a lecture series, 1976. George R. Brubaker and P. Beverley P. Phipps, Eds. American Chemical Society, Washington, D.C., 1979. viii, 424 pp., illus. \$26. ACS Symposium Series, 89.

Critical Care Medicine Manual. Max Harry Weil and Protasio L. Daluz. Springer-Verlag, New York, 1978. xxiv, 370 pp., illus. \$26.50.

Death. The Final Frontier. Dale V. Hardt. Prentice-Hall, Englewood Cliffs, N.J., 1979. xiv, 194 pp. Cloth, \$10.95; paper, \$5.95.

Development of the Rodent as a Model System of Aging. Book 2. Don C. Gibson, Richard C. Adelman, and Caleb Finch, Eds. National Institutes of Health, Bethesda, Md., 1979. viii, 314 pp., illus. Paper. DHEW Publication No. (NIH)79-161.

Developments in PVC Production and Processing—I. A. Whelan and J. L. Craft, Eds. Applied Science Publishers, London, 1977 (U.S. distributor, International Ideas, Philadelphia). x, 232 pp., illus. \$26. Developments Series.

Evaluating New Telecommunications Services. Proceedings of a symposium, Bergamo, Italy, Sept. 1977. Martin C. J. Elton, William A. Lucas, and David W. Conrath, Eds. Plenum, New York, 1978. xiv, 784 pp., illus. \$59.50. NATO Conference Series II, vol. 6.

Experimente der Kernphysik und ihre Deutung II. Erwin Bodenstedt. Bibliographisches Institut, Mannheim, ed. 2, 1978. xiv + pp. 291-584, illus. Paper, DM 32.

Extremal Graph Theory. Béla Bollobás, Academic Press, New York, 1978. xx, 488 pp., illus. \$40.35. L.M.S. Monographs, No. 11.

Fermentation and Enzyme Technology. Daniel I. C. Wang and five others. Wiley-Interscience, New York, 1979. x, 374 pp., illus. \$25. Techniques in Pure and Applied Microbiology.

Folk Name and Trade Diseases. E. R. Plunkett. Illustrated by Lynn Sabol. Barrett Book Company, Stamford, Conn., 1978. viii, 352 pp. \$14.95.

The Forests of the Sea. Life and Death on the Continental Shelf. John L. Culliney. Anchor/Doubleday, Garden City, N.Y., 1979. xiv, 434 pp., illus. Paper, \$5.95. Reprint of the 1976 edition.

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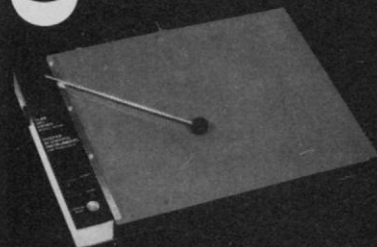
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BOOKS RECEIVED

(Continued from page 213)

Fracture Mechanics in Engineering Practice. Papers from a conference, Sheffield, England, 1976. P. Stanley, Ed. Applied Science Publishers, London, 1977 (U.S. distributor, International Ideas, Philadelphia). xiv, 420 pp., illus. \$59.

French Weights and Measures before the Revolution. A Dictionary of Provincial and Local Units. Ronald Edward Zupko. Indiana University Press, Bloomington, 1979. xlviii, 208 pp. \$22.50.

Fundamentals of Electronics. Charles M. Thomson. Prentice-Hall, Englewood Cliffs, N.J., 1979. xviii, 600 pp., illus. \$17.95.

Geomathematics. Past, Present, and Prospects. A Volume to Commemorate the 10th Anniversary of the Founding of the International Association for Mathematical Geology. D. F. Merriam, Ed. Syracuse University Department of Geology, Syracuse, N.Y., 1978. 74 pp., illus. Paper, \$3. Syracuse University Geology Contributions, 5.

Hydrodynamik. Reimar Lüst. Tassilo F. Kienle, Ed. Bibliographisches Institut, Mannheim, 1978. 234 pp., illus. Paper, 28 DM.

Information Technology in Health Science Education. Edward C. DeLand, Ed. Plenum, New York, 1978. xvi, 608 pp., illus. \$42.50. Computers in Biology and Medicine.

Integral Representations of Functions and Imbedding Theorems. Vol. 1. Oleg V. Besov, Valentin P. Il'in, and Sergey M. Nikol'skii. Translated from the Russian edition. Mitchell H. Taibleson, Ed. Winston, Washington, D.C., and Halsted (Wiley), New York, 1979. viii, 346 pp. \$19.95. Scripta Series in Mathematics.

International Conference on Atherosclerosis. Milan, 1977. Lars A. Carlson, Rodolfo Paoletti, Cesare R. Sirtori, and Giorgio Weber, Eds. Raven, New York, 1978. xxxiv, 762 pp., illus. \$58.

International Encyclopedia of Statistics. William K. Kruskal and Judith M. Tanur, Eds. Free Press (Macmillan), New York, and Collier Macmillan, London, 1978. Two volumes. xxvi, 1350 pp., illus. \$100.

Introduction to Geochemistry. Konrad B. Krauskopf. McGraw-Hill, New York, ed. 2, 1979. xvi, 618 pp., illus. \$24. McGraw-Hill International Series in the Earth and Planetary Sciences.

An Introduction to Organic Chemistry. John Carnduff. Wiley, New York, 1979. xiv, 194 pp., illus. \$21.50.

Ion-Sensitive Intracellular Microelectrodes. How to Make and Use Them. R. C. Thomas. Academic Press, New York, 1978. xiv, 110 pp., illus. \$14.50. Biological Techniques Series, 1.

Jahrbuch Überblicke Mathematik 1978. Benno Fuchssteiner, Ulrich Kulisch, Detlef Laugwitz, and Roman Liedl, Eds. Bibliographisches Institut, Mannheim, 1978. 224 pp., illus. Paper, DM 28.

Laboratory Animal Housing. Proceedings of a symposium, Hunt Valley, Md., Sept. 1976. National Academy of Sciences, Washington, D.C., 1978. viii, 220 pp., illus. \$12.

Measuring Hospital Performance. John R. Griffith. Blue Cross Association, Chicago, 1978. xiv, 88 pp. Paper, \$10. An Inquiry Book.

Membrane Mechanisms of Drugs of Abuse. Proceedings of a conference, Silver Spring, Md., Mar. 1978. Charles W. Sharp and Leo G. Abood, Eds. Liss, New York, 1979. viii,

272 pp., illus. \$22. Progress in Clinical and Biological Research, vol. 27.

Météorologie, Calendriers et Croyances Populaires. Les Origines Magico-Religieuses, les Dictons. L. Dufour. Librairie d'Amérique et d'Orient (Maisonneuve), Paris, 1978. 240 pp. Paper, 54 F.

Methods in Prostaglandin Research. J. C. Fröhlich, Ed. Raven, New York, 1978. x, 246 pp., illus. \$24. Advances in Prostaglandin and Thromboxane Research, vol. 5.

Methods of Biochemical Analysis. Vol. 25. David Glick, Ed. Interscience (Wiley), New York, 1979. x, 382 pp., illus. \$29.50.

The Microtron. S. P. Kapitza and V. N. Melekhin. Translated from the Russian edition (Moscow, 1969) by I. N. Sviatoslavsky. Ednor M. Rowe, Transl. Ed. Harwood Academic Publishers, London, 1978. xviii, 204 pp., illus. \$22. Accelerators and Storage Rings, vol. 1.

Modern Spectrum Analysis. Donald G. Childers, Ed. IEEE Press, New York, 1978 (distributor, Wiley, New York). vi, 334 pp., illus. Cloth, \$29.95; paper, \$14.95. IEEE Press Selected Reprint Series.

Molecular Neurobiology of the Mammalian Brain. Patrick L. McGeer, John C. Eccles, and Edith G. McGeer. Plenum, New York, 1978. xxiv, 644 pp., illus. \$37.50.

Natural Resources in European History. A Conference Report. Antoni Maczak and William N. Parker, Eds. Resources for the Future, Washington, D.C., 1979 (distributor, Johns Hopkins University Press, Baltimore). xii, 226 pp. Cloth, \$15.95; paper, \$4.95. RFF Research Paper R-13.

The Nature of the Physical Universe. 1976 Nobel Conference. Douglas Huff and Omer Prewett, Eds. Wiley-Interscience, New York, 1979. xviii, 140 pp., illus. \$17.95.

The Neural Basis of Oral and Facial Function. Ronald Dubner, Barry J. Sessle, and Arthur T. Storey. Plenum, New York, 1978. xii, 484 pp., illus. \$37.50.

Neurotransmitter Systems and Their Clinical Disorders. Papers from a meeting, London, 1977. N. J. Legg, Ed. Academic Press, New York, 1978. x, 240 pp., illus. \$15.75.

The Operon. Papers from a meeting, Cold Spring Harbor, N.Y., July 1976. Jeffrey H. Miller and William S. Reznikoff, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1978. x, 450 pp., illus. \$42. Cold Spring Harbor Monograph Series.

Organic Experiments. Louis F. Fieser and Kenneth L. Williamson. Heath, Lexington, Mass., ed. 4, 1979. x, 420 pp., illus. \$12.95.

Organic Liquids. Structure, Dynamics, and Chemical Properties. A. D. Buckingham, E. Lippert, and S. Bratos, Eds. Wiley-Interscience, New York, 1979. x, 352 pp., illus. \$45.

Organic Syntheses. An Annual Publication of Satisfactory Methods for the Preparation of Organic Chemicals. Vol. 58. William A. Sheppard, Ed. Wiley, New York, 1979. xxx, 216 pp., illus. \$14.

Patterns in Crystals. Noel F. Kennon. Wiley, New York, 1979. x, 198 pp., illus. Cloth, \$25; paper, \$12.50.

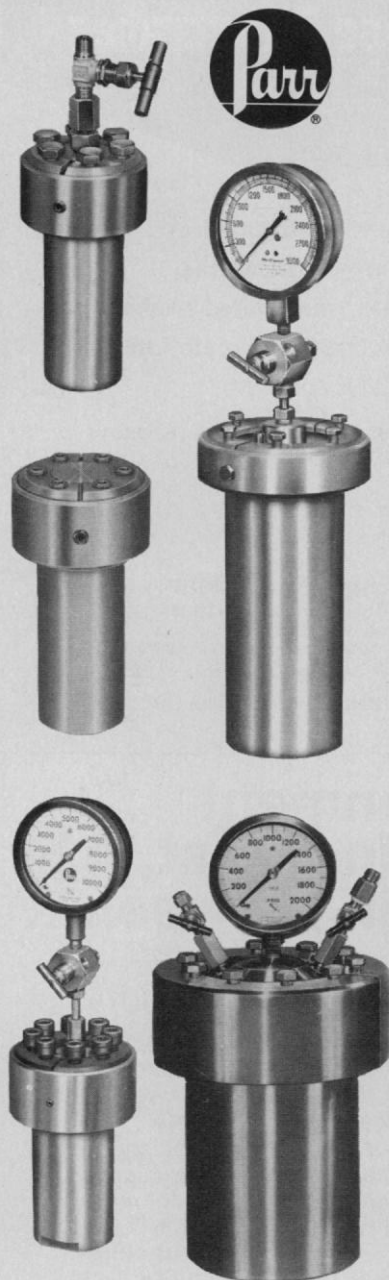
Percy Alexander MacMahon: Collected Papers. Vol. 1, Combinatorics. George E. Andrews, Ed. MIT Press, Cambridge, Mass., 1978. xxx, 1438 pp., illus. \$75.

A Perspective of Physics. Vol. 2. Selections from 1977 Comments on Modern Physics. Rudolf Peierls, Ed. Gordon and Breach, New York, 1978. xxxiv, 260 pp., illus. \$30.

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John C. Flanagan, Ed. Praeger, New York, 1978. x, 134 pp. \$18.95. Praeger Special Studies.

Pesticide and Venom Neurotoxicity. Papers from a congress, Washington, D.C., Aug. 1976. D. L. Shankland, R. M. Hollingworth, and T. Smyth, Jr., Eds. Plenum, New York, 1978. x, 284 pp., illus. \$29.50.

The Pharmacology of Immunoregulation. Present Concepts as a Basis for the Development of Immunopharmacological Agents. Proceedings of a conference, Paris, Nov. 1977. G. H. Werner and F. Floc'h, Eds. Academic Press, New York, 1978. xviii, 460 pp., illus. \$34.25.

Physik für Naturwissenschaftler III. Atomphysik, Kernphysik. Hugo Neuert. Bibliographisches Institut, Mannheim, 1978. iv + pp. 373-696, illus. Paper, DM 14.80. B.I.-Hochschultaschenbücher, Band 729.

Plasma Transport, Heating and MHD Theory. Proceedings of a workshop, Varenna, Italy, Sept. 1977. T. Stringer, R. Pozzoli, E. Sindoni, J. P. Carnihan, and G. G. Leotta, Eds. Published for the Commission of the European Communities by Pergamon, New York, 1978. vii, 432 pp., illus. Paper, \$44.

The Politics of Benevolence. Revival Religion and American Voting Behavior. John L. Hammond. Ablex Publishing Corporation, Norwood, N.J., 1979. xii, 244 pp. \$16.50. Modern Sociology.

Polymer Fracture. H. H. Kausch. Springer-Verlag, New York, 1978. x, 332 pp., illus. \$59. Polymers, 2.

Polymer Stress Reactions. Vol. 2, Experiments. Antonio Casale and Roger S. Porter. Academic Press, New York, 1979. xxii + pp. 253-594, illus. \$32.

Practical Approaches to Alcoholism Psychotherapy. Sheldon Zimberg, John Wallace, and Sheila B. Blume, Eds. Plenum, New York, 1978. xx, 288 pp. \$20.

Principles of Advanced Mathematical Physics. Vol. 1. Robert D. Richtmyer. Springer-Verlag, New York, 1978. xvi, 424 pp., illus. \$19.80. Texts and Monographs in Physics.

Principles of Ecotoxicology. G. C. Butler, Ed. Published for the Scientific Committee on Problems of the Environment of the ICSU by Wiley, New York, 1978. xxii, 350 pp., illus. Paper, \$30. SCOPE 12.

Principles of Photochemistry. J. A. Barltrop and J. D. Coyle. Wiley, New York, 1979. x, 214 pp., illus. Paper, \$12.50.

Problemggeschichte der neueren Mathematik (1800-1950). Herbert Meschkowski. Bibliographisches Institut, Mannheim, 1978. 314 pp., illus. + plates. Cloth, DM 48.

Proceedings of the Atoms for Peace Awards, 1957-1969. A Memorial to Henry Ford and Edsel Ford. MIT Press, Cambridge, Mass., 1978. xxii, 328 pp., illus. \$15.

Program Style, Design, Efficiency, Debugging, and Testing. Dennie Van Tassel. Prentice-Hall, Englewood Cliffs, N.J., 1978. x, 324 pp. \$14.95.

Programming the 6502. Rodnay Zaks. Sybex, Berkeley, Calif., 1978. 310 pp., illus. Paper, \$10.

Psychology. From Research to Practice. Herbert L. Pick, Jr., Herschel W. Leibowitz, Jerome E. Singer, Alfred Steinschneider, and Harold W. Stevenson, Eds. Plenum, New York, 1978. xii, 390 pp., illus. \$18.95.

A Public Trust. The Report of the Carnegie Commission on the Future of Public Broadcasting. Bantam Books, New York, 1979. vi, 402 pp., illus. Paper, \$2.95.

Quantenphysik. Eine Einführung in die Atom- und Molekülphysik. Klaus Bethge.

Bibliographisches Institut, Mannheim, 1978. viii, 264 pp., illus. Paper, DM 24.

Reelle Analysis. Friedhelm Erwe. Bibliographisches Institut, Mannheim, 1978. 360 pp. Paper, DM 28. Mathematik für Physiker/5.

Regulation of Developmental Processes in Plants. Proceedings of a conference, Halle, East Germany, July 1977. Horst Robert Schutte and Dieter Gross, Eds. Gustav Fischer Verlag, Jena, East Germany, 1978. 408 pp., illus. + plates. 38 M.

Relativistische Quantenfeldtheorie. James D. Bjorken and Sidney D. Drell. Translated from the English edition (New York, 1965). Bibliographisches Institut, Mannheim, 1978. 410 pp. Paper, DM 18.90. B.I.-Hochschultaschenbücher, Band 101.

Remarks on the Foundations of Mathematics. Ludwig Wittgenstein. Translated by G. E. M. Anscombe. G. H. von Wright, R. Rhees, and G. E. M. Anscombe, Eds. MIT Press, Cambridge, Mass., ed. 2, 1978. 444 pp. \$27.50.

A Review of Biostatistics. A Program for Self-Instruction. Paul E. Leaverton. Little, Brown, Boston, ed. 2, 1978. xviii, 92 pp., illus. Spiral bound, \$6.50.

Revised Token Text. Malcolm Ray McNeil and Thomas E. Prescott. University Park Press, Baltimore, 1978. xvi, 104 pp., illus. Paper, \$14.95.

Richtigkeit und Wahrheit in der Mathematik. Herbert Meschkowski. Bibliographisches Institut, Mannheim, ed. 2, 1978. 220 pp., illus. Paper, DM 28.

The Rise of Surgery. From Empiric Craft to Scientific Discipline. Owen H. Wangenstein and Sarah D. Wangenstein. University of Minnesota Press, Minneapolis, 1979. xviii, 786 pp., illus. \$39.50.

Rotating Fluids in Geophysics. Papers from a summer school, July 1977. P. H. Roberts and A. M. Soward, Eds. Academic Press, New York, 1978. xviii, 552 pp., illus. \$36.25.

Schizophrenia. Symptoms, Causes, Treatments. Kayla F. Bernheim and Richard R. J. Lewine. Norton, New York, 1979. xiv, 256 pp. Cloth, \$14.95; paper, \$5.95.

Scientific Illustration. A Guide to Biological, Zoological, and Medical Rendering Techniques, Design, Printing, and Display. Phyllis Wood. Van Nostrand Reinhold, New York, 1979. 148 pp. \$16.95.

The Scientist as Editor. Guidelines for Editors of Books and Journals. Maeve O'Connor. Wiley, New York, 1979. vi, 218 pp. \$12.50.

Scientists at Work. The Creative Process of Scientific Research. John Nobel Wilford, Ed. Dodd, Mead, New York, 1979. xvi, 268 pp., illus. \$9.95. Reprinted from the *New York Times*.

Sexual Consequences of Disability. Alex Comfort, Ed. Stickley, Philadelphia, 1978 (distributor, Van Nostrand Reinhold, New York). viii, 296 pp., illus. Cloth, \$24.50; paper, \$17.

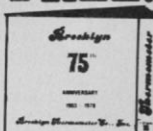
Silcrete in Australia. Trevor Langford-Smith, Ed. University of New England Department of Geography, Armidale, N.S.W., Australia, 1978. x, 304 pp., illus. Paper, A\$14.

Solar Sweden. An Outline to a Renewable Energy System. Thomas B. Johansson and Peter Steen. Secretariat for Future Studies, Stockholm, 1977. iv, 110 pp., illus. + appendix. Paper.

Solitons and Condensed Matter Physics. Proceedings of a symposium, Oxford, June 1978. A. R. Bishop and T. Schneider, Eds. Springer-Verlag, New York, 1978. xii, 342 pp., illus. \$29.50. Springer Series in Solid-State Sciences, vol. 8.

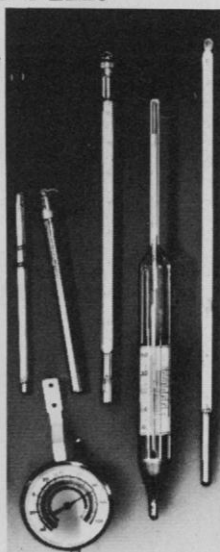
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Solved and Unsolved Problems in Number Theory. Daniel Shanks. Chelsea, New York, ed. 2, 1978. xiv, 258 pp., illus. \$11.95.

Somatostatin. Vol. 1, 1977. Mary T. McQuillan. Eden Press, St. Albans, Vt., 1979. viii, 228 pp., illus. \$20. Annual Research Reviews.

Special Functions, Probability Semigroups, and Hamiltonian Flows. Philip J. Feinsilver. Springer-Verlag, New York, 1978. vi, 112 pp. Paper, \$9. Lecture Notes in Mathematics, vol. 696.

The Spectrum of Ritual. A Biogenetic Structural Analysis. Eugene G. d'Aquili, Charles D. Laughlin, Jr., and John McManus with Tom Burns, Barbara Lex, G. Ronald Murphy, and W. John Smith. Columbia University Press, New York, 1979. xiv, 376 pp. \$22.50.

Spores—Ferns. Microscopic Illusions Analyzed. Vol. 2, Representative Species with Spore Cases That Differ from "True Fern" Sporangia. Clara S. Hires. Mistaire Laboratories, Millburn, N.J., 1978. xviii, 370 pp., illus. \$50.

Sports, Games, and Play. Social and Psychological Viewpoints. Jeffrey H. Goldstein, Ed. Erlbaum, Hillsdale, N.J., 1979 (distributor, Halsted [Wiley], New York). xviii, 456 pp. \$24.95.

Stabilité Structurelle et Morphogénèse. Essai d'une Théorie Générale des Modèles. René Thom. InterEditions, Paris, ed. 2, 1977 (U.S. distributor, Addison-Wesley Advanced Book Program, Reading, Mass.). xx, 352 pp., illus. Cloth, \$42; paper, \$24.50.

Stress. Tom Cox. University Park Press, Baltimore, 1978. viii, 200 pp., illus. Paper, \$12.95.

Structure and Function of the Gonadotropins. Papers from a meeting, Sept. 1977. Kenneth W. McKerns, Ed. Plenum, New York, 1978. xviii, 628 pp., illus. \$49.50. Biochemical Endocrinology.

Studies in Algebraic Topology. Gian-Carlo Rota, Ed. Academic Press, New York, 1979. xiv, 264 pp. \$28. Advances in Mathematics Supplementary Studies, vol. 5.

Sun. Mankind's Future Source of Energy. Proceedings of a congress, New Delhi, Jan. 1978. Francis de Winter and Michael Cox, Eds. Pergamon, New York, 1978. Three volumes. xxxviii, 2184 pp., illus. \$250.

Superheavy Elements. Proceedings of a symposium, Lubbock, Tex., Mar. 1978. M. A. K. Lodhi, Ed. Pergamon, New York, 1978. xx, 584 pp., illus. \$55.

Surface and Colloid Science. Vol. 10. Egon Matijević, Ed. Plenum, New York, 1978. xii, 308 pp., illus. \$29.50.

Surgical Management of Juvenile Chronic Polyarthrititis. G. P. Arden and B. M. Ansell, Eds. Academic Press, London, and Grune and Stratton, New York, 1978. xvi, 282 pp., illus. \$32.25.

Symbolic Classification. Rodney Needham. Goodyear Publishing Company, Santa Monica, Calif., 1979. xii, 78 pp. Cloth, \$6.95; paper \$4.95. The Goodyear Perspectives in Anthropology Series.

Taxis and Behavior. Elementary Sensory Systems in Biology. G. L. Hazelbauer, Ed. Chapman and Hall, London, and Halsted (Wiley), New York, 1979. x, 342 pp., illus. \$45. Receptors and Recognition, Series B, vol. 5.

Technological Innovation. Government/Industry Cooperation. Papers from a conference, Geneva, June 1977. Arthur Gerstenfeld and Robert Brainard, Eds. Wiley-Interscience, New York, 1979. xiv, 278 pp. \$19.95.

Thermal Conductivity 15. Proceedings of a

conference, Ottawa, Canada, Aug. 1977. Vladimir V. Mirkovich, Ed. Plenum, New York, 1978. xviii, 494 pp., illus. \$45.

Thermal Expansion 6. Proceedings of a symposium, Hecla Island, Manitoba, Canada, Aug. 1977. Ian D. Peggs, Ed. Plenum, New York, 1978. x, 292 pp., illus. \$45.

Der tiergeographische Beitrag zur ökologischen Landschaftsforschung. Malakozoologische Beispiele zur naturräumlichen Gliederung. Jürgen H. Jungbluth. Junk, The Hague, 1978 (U.S. distributor, Kluwer Boston, Hingham, Mass.). viii, 346 pp., illus. \$51. Biogeographica, vol. 13.

Time and Regional Dynamics. Tommy Carlstein, Don Parkes, and Nigel Thrift, Eds. Halsted (Wiley), New York, 1979. viii, 120 pp., illus. \$22.50. Timing Space and Spacing Time, vol. 3.

To Defend Ourselves. Ecology and Ritual in an Andean Village. Billie Jean Isbell. University of Texas Institute of Latin American Studies, Austin, 1979 (distributor, Texas Press Services, Austin). xviii, 290 pp., illus. Cloth, \$17.95; paper, \$6.95. Latin American Monographs, No. 47.

Topologie. Eine Grundvorlesung. Johann Cigler and Hans-Christian Reichel. Bibliographisches Institut, Mannheim, 1978. xiv, 244 pp. Paper, DM 16.80. B.I.-Hochschul-taschenbücher, Band 121.

Toxicology Annual. Vol. 3. Charles L. Wink and Sydney P. Shanor, Eds. Dekker, New York, 1979. xiv, 340 pp., illus. \$39.50.

Transplantation and Clinical Immunology. Vol. 10. Proceedings of a course, Lyon, May 1978. J. L. Touraine and six others, Eds. Excerpta Medica, Amsterdam, 1979 (U.S. distributor, Elsevier, New York). viii, 342 pp., illus. \$55.50.

Ultratrace Metal Analysis in Biological Sciences and Environment. Papers from a symposium, Chicago, Aug. 1977. Terence H. Risby, Ed. American Chemical Society, Washington, D.C., 1979. viii, 264 pp., illus. \$36.50. Advances in Chemistry Series, 172.

Unification of Elementary Forces and Gauge Theories. Papers from a conference, Batavia, Ill., Oct. 1977. David B. Cline and Frederick E. Mills, Eds. Harwood Academic Publishers, London, 1978. xxii, 770 pp., illus. \$39.50.

Voice Identification. Theory and Legal Applications. Oscar Tosi. University Park Press, Baltimore, 1979. x, 182 pp., illus. \$19.50.

Volcanoes. M. B. Lambert. University of Washington Press, Seattle, 1978. vi, 64 pp., illus. \$10.95.

Waste Treatment in Agriculture. P. N. Hobson and A. M. Robertson. Applied Science Publishers, London, 1977 (U.S. distributor, International Ideas, Philadelphia). x, 258 pp., illus. \$30.

Weather Watch. How to Make the Most of America's Changing Weather. Harold W. Bernard, Jr. Walker, New York, 1979. xii, 196 pp., illus. \$9.95.

Weathering. How the Atmosphere Conditions Your Body, Your Mind, Your Moods—and Your Health. Stephen Rosen. Evans, New York, 1979. xiv, 368 pp., illus. \$12.95.

World Minorities. A Second Volume. Georgina Ashworth. Quartermaine House, Sunbury, Middlesex, England, 1978 (U.S. distributor, Transatlantic Arts, Levittown, N.Y.). xvi, 160 pp. Paper, \$8.95.

The Wright Brothers. Heirs of Prometheus. Richard P. Hallion, Ed. National Air and Space Museum, Washington, D.C., 1978 (distributor, Smithsonian Institution Press, Washington, D.C.). xiv, 146 pp., illus. Cloth, \$15; paper, \$5.95.