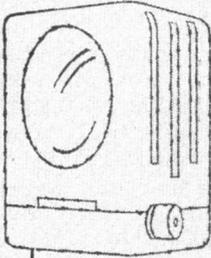


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up a section of their own, are a new feature in flea study and are exquisitely done.

The work is dedicated to Karl Jordan, father and dean of the students of fleas the world over, and friend, companion, and associate of the late N. C. Rothschild. Through the foresight and vision of Rothschild and Jordan the *Catalogue* now becomes possible.

Volume I contains: a foreword related to the history of the Tring Museum and the work of Rothschild and Jordan there; an introduction that covers the scope of this effort, the phylogenetic relationships of the fleas, and a series of other pertinent items; a most extraordinary glossary; a key to the superfamilies and families of fleas; a review of the family Tungidae that covers six species of *Tunga*, 14 of *Hectopsylla*, and two of *Rhynchopsyllus*; a 288-page review of the family Pulicidae that covers 15 species of *Echidnophaga*, one each of *Delopsylla*, *Juxtapulex*, *Moeopsylla*, *Centetipsylla*, *Nesolagobius*, *Spilopsyllus*, *Ornithopsylla*, *Actenopsylla*, *Synopsyllus*, and *Parapulex*, two each of *Archaeopsylla*, *Aphropsylla*, and *Parodontis*, three each of *Pulex* and *Cediopsylla*, five each of *Hoplopsyllus*, and *Synosternus*, six of *Pro-caviopsylla*, eight of *Ctenocephalides*, 54 of *Xenopsylla*. All of these species are keyed, illustrated, and described together with world-wide records. The appendix contains the "deed of gift," dated 27 February 1913, bestowing the Rothschild collection of fleas to the British Museum. There is also a portion of the "last will and testament" of N. C. Rothschild, ending the collection for the Museum. The index is brief but adequate. Figure 466 is a fold-up map of the world, illustrating the zoogeographical areas. The final 100 pages of the volume are the photomicrographs with their tables of explanation.

As one browses through the pages of the *Catalogue*, one is ever conscious of the presence of the ghost-writers, Nathaniel Charles Rothschild and Karl Jordan, the pioneers of siphonaptery, whose works are here commemorated.

C. ANDRESEN HUBBARD

*Tigard, Oregon*

**Quantitative Organic Analysis via Functional Groups**, Sidney Siggia. Wiley, New York and Chapman & Hall, London, ed. 2, 1954. 227 pp. Illus. \$5.

The author has expanded by 75 pages the first edition of this brief book on the quantitative determination of functional groups in organic compounds. The introduction of 14 new procedures now makes available clear and concise directions for about 38 functional groups. Minor changes have been made in the methods presented in the first edition, where experience showed that increased accuracy and precision could be obtained. The literature source of each method is given, and the author has indicated the scope and limitations of the procedures.

A brief discussion of the use of phase diagrams for

analyzing mixtures by titration to a turbidimetric endpoint has been added. Also, a short discussion, with a good specific example, of the value of functional group determination in the identification of compounds is included.

This book is useful, not only to all analytical chemists but also to research chemists.

R. L. SHRINER

*Department of Chemistry, State University of Iowa*

## Books Reviewed in THE SCIENTIFIC MONTHLY

### August

**Arctic Bibliography**, vols. 1-3, Arctic Institute of North America (Supt. of Documents). Reviewed by Trevor Lloyd.

**Jaarboek, 1952-1953**, Koninklijke Nederlandse Akademie van Wetenschappen (Noord-Hollandse Uitgevers). Reviewed by D. ter Haar.

**The Living Brain**, W. Grey Walter (Norton). Reviewed by Robert H. Oster.

**General Virology**, S. E. Luria (Wiley; Chapman & Hall). Reviewed by S. Edward Sulkin.

**Advances in Virus Research**, vol. I, Kenneth M. Smith and Max A. Lauffer, Eds. (Academic Press). Reviewed by G. W. Beadle.

**Mitosis**, Franz Schrader (Columbia Univ. Press). Reviewed by D. G. Catcheside.

**Paying for Medical Care in the United States**, Oscar N. Serbein, Jr. (Columbia Univ. Press). Reviewed by Russell V. Lee.

**Chemical Methods in Industrial Hygiene**, Frederick H. Goldman and Morris B. Jacobs (Interscience). Reviewed by Karl L. Dunn.

**Educational Wastelands**, Arthur E. Bestor (Univ. of Illinois Press). Reviewed by Fletcher G. Watson.

**Energy in the Future**, Palmer C. Putnam (Van Nostrand). Reviewed by Warren Weaver.

**Keeping and Breeding Aquarium Fishes**. C. W. Emmens (Academic Press). Reviewed by Christopher W. Coates.

## New Books

**Insect Fact and Folklore**. Lucy W. Clausen. Macmillan, New York, 1954. xiv + 194 pp. Illus. \$3.50.

**A Treatise on Conic Sections**. George Salmon. Chelsea Publ., New York, ed. 6, 1954. xv + 399 pp. Illus. Paper, \$1.94; cloth, \$3.25.

**The Structure of Metals and Alloys**. William Hume-Rothery and G. V. Raynor. Institute of Metals, London, ed. 3, 1954. viii + 363 pp. Illus. + plates. \$5.50.

**Learning Theory, Personality Theory, and Clinical Research**. The Kentucky Symposium. Donald K. Adams et al. Wiley, New York; Chapman & Hall, London, 1954. ix + 164 pp. Illus. \$3.50.

**Optical Image Evaluation**. Proc. NBS Symposium held 18-20 Oct. 1951. National Bureau of Standards, Washington, 1954 (Order from Supt. of Documents, GPO, Washington 25). x + 289 pp. Illus. \$2.25.

*The Pharmacologic Principles of Medical Practice.* John C. Krantz, Jr., and C. Jelleff Carr. Williams & Wilkins, Baltimore, ed. 3, 1954. xxi + 1183 pp. Illus. + plates. \$12.

*Microbes and You.* Stanley E. Wedberg. Macmillan, New York, 1954. ix + 439 pp. Illus. \$4.50.

*The Permanent Revolution in Science.* Richard L. Schanck. Philosophical Library, New York, 1954. xvi + 112 pp. \$3.

*Wildcat Strike.* Alvin W. Gouldner. Antioch Press, Yellow Springs, Ohio, 1954. 179 pp. Illus. \$3.

*The Moon Puzzle.* A revived classical theory correlating the origin of the moon with many problems in natural science. N. O. Bergquist. Grafisk Forlag, Copenhagen, 1954. xiii + 378 pp.

*Physiology and Biochemistry of the Skin.* Stephen Rothman. Univ. of Chicago Press, Chicago, 1954. xiii + 741 pp. Illus. \$19.50.

*Stratigraphy and History of the Moenkopi Formation of Triassic Age.* Edwin D. McKee. Geological Society of America, New York, 1954. vii + 133 pp. Illus. + plates.

*Pygmies and Dream Giants.* Kilton Stewart. Norton, New York, 1954. 295 pp. \$3.75.

*Teachers Manual for College Chemistry in the Laboratory.* No. 2. Lloyd E. Malm and Harper W. Frantz. Freeman, San Francisco, 1954. 341 pp. Illus. Paper, \$3.30.

*Health and Safety for You.* Harold S. Diehl and Anita D. Laton. McGraw-Hill, New York-London, 1954. xii + 515 pp. Illus. \$3.76.

*Psychoanalysis and the Education of the Child.* Gerald H. J. Pearson. Norton, New York, 1954. x + 357 pp. \$5.

*New and Nonofficial Remedies.* Council on Pharmacy and Chemistry, American Medical Association. Lippincott, Philadelphia, 1954. xlix + 609 pp. \$2.65.

*Fundamentals of Psychoanalytic Technique.* Trygve Braatøy. Wiley, New York; Chapman & Hall, London, 1954. xi + 404 pp. \$6.

*A History of the School of Engineering, Columbia University.* James Kip Finch. Columbia Univ. Press, New York, 1954. vii + 138 pp. + plates. \$2.75.

*Sir Issac Newton.* E. N. da C. Andrade. Collins, London; Macmillan, New York, 1954. 140 pp. Illus. \$1.75.

*Anatomy of Weeds.* Emil Korsmo. Grondahl, Oslo, 1954. 413 pp. Illus. 100 kr.

*The Optical Properties of Organic Compounds.* Alexander N. Winchell. Academic Press, New York, ed. 2, 1954. xviii + 487 pp. Illus. \$12.

*Spot Tests.* vol. I, *Inorganic Applications*, xii + 518 pp. \$6.50. vol. II, *Organic Applications*. xv + 436 pp. Illus. \$6.25. Fritz Feigl. Trans. by Ralph E. Oesper. Elsevier, Houston-Amsterdam, ed. 4, 1954.

*Principles of General Ecology.* Angus M. Woodbury. Blakiston, New York, 1954. viii + 503 pp. Illus. \$6.

*Tomorrow Is Already Here.* Robert Jungk. Simon & Schuster, New York, 1954. x + 241 pp. \$3.50.

*The Psychiatric Interview.* Harry Stack Sullivan. Helen Swick Perry and Mary Ladd Gawel, Eds. Norton, New York, 1954. xxiii + 246 pp. \$4.50.

*Ships, Machinery, and Mossbacks.* The autobiography of a naval engineer. Harold G. Bowen. Princeton Univ. Press, Princeton, N.J., 1954. vii + 397 pp. \$6.

*Laboratory Manual on Fundamental Principles of Bacteriology.* A. J. Salle. McGraw-Hill, New York-London, ed. 4, 1954. x + 176 pp. Illus. + plates. \$3.50.

*Guide for Safety in the Chemical Laboratory.* General Safety Committee of the Manufacturing Chemists' Assoc. Van Nostrand, New York, 1954. xiii + 234 pp. Illus. \$4.25.

## Miscellaneous Publications

*Inquiry into the Purpose of the Production of Wealth.* Roy A. Foulke. Dun & Bradstreet, New York 8, 1954. 71 pp.

*Social Planning in America.* Short Studies in Sociology, No. 3. Joseph S. Himes. Doubleday, Garden City, N.Y., 1954. 59 pp. 95¢.

*Today's Research and Tomorrow's World.* Vannevar Bush. Stanford Research Inst., Stanford, Calif., 1954. 16 pp.

*Forest Statistics for the Eastern Shore of Maryland.* Rpt. No. 3. Northeastern Forest Expt. Sta., Upper Darby, Pa., 1954. 17 pp.

*You and Your Allergic Skin.* Herman Hirschfeld. Nelson House, New York 28, 1954. 24 pp. 25¢.

*Slash Pine (Pinus Elliottii), including South Florida Slash Pine Nomenclature and Description.* Sta. Paper No. 36. Elbert L. Little, Jr., and Keith W. Dorman. 82 pp. Illus. *Lumber Grade Yields in the Loblolly-Shortleaf Pine Type by the Southern Pine Log Grades.* No. 37. T. A. McClay. 12 pp. Illus. *Defects in Hardwood Veneer Logs: Their Frequency and Importance.* No. 39. E. S. Harrar. 45 pp. Illus. Southeastern Forest Expt. Sta., Asheville, N.C., 1954.

*Proceedings Volume of the Geological Society of America for 1953.* The Society, New York, 1954. 228 pp. Illus. + plates.

*On a Collection of Indian Ichneumonidae (Hymenoptera) in the Forest Research Institute, Dehra Dun.* Indian Forest Records: Entomology, vol. 8, No. 8. S. N. Rao. Manager of Publ., Delhi, India, 1953. 65 pp. Illus. 9s.

*Symposium on Microseisms.* Held at Harriman, N.Y., 4-6 Sept. 1952. Natl. Acad. of Sciences-Natl. Research Council, Washington 25, 1953. 125 pp. Illus.

*Production of Natural Gas Substitutes by Pressure Hydrogasification of Oils.* Interim report. H. R. Linden, J. J. Guyer, and E. S. Pettyjohn. Inst. of Gas Technology, Chicago 16, 1954. 35 pp. Illus. \$2.50.

*How to Attract and Hold Engineering Talent.* Executive Research Survey No. 3. Professional Engineers Conference Bd. for Industry, Washington 5, 1954. 60 pp. \$2.

*Welding Alcoa Aluminum.* Aluminum Co. of America, Pittsburgh 19, 1954. 176 pp. Illus. Gratis.

*Nutritional Factors and Liver Diseases.* Annals, vol. 57, art. 6. Klaus Schwartz *et al.* N.Y. Acad. of Sciences, New York 21, 1954. 346 pp. Illus. \$4.50.

*Economic Progress and Economic Change.* 34th annual report. Solomon Fabricant. Natl. Bur. of Economic Research, New York 16, 1954. 97 pp. Gratis.

*A Call for Action To Meet the Impending Increase in College and University Enrollment.* Amer. Council on Education, Washington 6, 1954. 29 pp. Illus.

*List of Publications of the Commonwealth Scientific and Industrial Research Organization, Australia, to December 1953.* 32 pp. *Divisions and Sections as at 1 January 1954.* 15 pp. Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia, 1954.

*Distribution of Californian Mosses.* Leo Francis Koch. Univ. of Notre Dame Press, Notre Dame, Ind., 1954. 23 pp. Illus.

*Where East Is West: European Enclaves in Asia.* Studies in Business and Economics, vol 8, No. 1. Bur. of Business and Economic Research, Univ. of Maryland, College Park, 1954. 16 pp. Illus.

- Compounding Silicone Rubber with Dow Corning Gum.** Dow Corning Corp., Midland, Mich., 1954. 28 pp. Illus.
- Hybrid Inviability between *Rana Pipiens* from Wisconsin and Mexico.** Tulane Stud. Zool., vol. 1, No. 9. E. Peter Volpe. Tulane Univ., New Orleans, 1954. 12 pp. Illus. 35¢.
- A Commutatorless D-C Tachometer.** Reprint Bull. No. 39. A. R. Eckels and Walter R. Peck. 4 pp. Illus. **Recent Developments in the Building Brick Industry of the Southeastern United States.** Reprint Bull. No. 40. William C. Bell. 2 pp. Illus. **Calculation of Impounded-Storage Requirements.** Reprint Bull. No. 41. Charles Smallwood, Jr., Herbert B. Wyndham, and Daniel N. Cote. 6 pp. Illus. **Thermodynamic Properties of Liquid Sodium.** Reprint Bull. No. 42. J. F. Lee. 3 pp. Dept. of Engineering Research, N.C. State College, Raleigh, 1954.
- Annual Report of the Northeastern Forest Experiment Station, 1953.** Northeastern Forest Expt. Sta. Upper Darby, Pa., 1954. 85 pp. Illus.
- Costs, Quality, and Prices of Fluid Milk in Rural and Urban Areas of Utah and Montana.** Bull. 365. Wells M. Allred and Edward H. Ward. Agr. Expt. Sta., Utah State Agr. College, Logan, 1953. 40 pp. Illus.
- French Bibliographical Digest (Biology-Botany-Zoology).** Ser. II, No. 9. Georges Assié, Ed. Cultural Div. of the French Embassy, New York 21, 1953. 96 pp.
- On Two New Bembroid Fishes from the Deep Sea off Mie Prefecture with Special Reference in Relation to Hitherto Known Species and A New Blenoid Fish from the Sea of Japan.** Rpt. of Faculty of Fisheries, vol. 1, No. 2. Yaichiro Okada and Kiyoshi Suzuki. Prefectural Univ. of Mie, Mie Prefecture, Japan, 1952. 10 pp. Illus.
- Scientific Researches of Mellon Institute 1953-1954.** Annual Rpt. Ser., No. 41. Mellon Inst., Pittsburgh 13, 1954. 56 pp. Illus. Gratis.
- J. F. Naumann's Briefwechsel mit H. Lichtenstein 1818-1856.** Acta Historica Scientiarum Naturalium et Medicinalium, vol. 11. Erwin Streseman and Peter Thomsen. Ejnar Munksgaard, Copenhagen, 1954. 74 pp. Kr. 10.
- Expert Committee on Malaria, Fifth Report.** Tech. Rpt. Ser., No. 80. World Health Organization, Geneva, 1954 (Order from Columbia Univ. Press, New York 27). 42 pp. 25¢.
- Standardization of Microchemical Apparatus and Methods.** 9th annual Microchemical Symposium held 19-20 Mar. 1954. Metropolitan Microchemical Soc., New York, 1954. 43 pp.
- Proceedings of the Third Research Conference on Psychosurgery.** Held in New York, 19-20 Oct. 1951. Public Health Service Pub. No. 221. Winfred Overholser, Ed. Natl. Inst. of Mental Health, Washington, 1954 (Order from Supt. of Documents, GPO, Washington 25). 173 pp. Illus. \$1.
- Stories of Lassen's Place Names.** Paul E. Schulz. Loomis Museum Assoc., Mineral, Calif., 1949. 62 pp. Illus. 40¢.
- High School Retention by States.** Circ. No. 398. Walter H. Gaumnitz. U.S. Dept. of Health, Education, and Welfare, Office of Education, Washington 25, 1954. 19 pp.
- The Discovery of Unicellular Life.** Leeuwenhoek keepsake. Excerpts from communications by Antoni van Leeuwenhoek to the Royal Society of London (7 Sept. 1674 and 9 Oct. 1676). Chronica Botanica Co., Waltham 54, Mass., 1954. 14 pp. Gratis.
- Civil Defense and Higher Education.** Amer. Council on Education, Washington 6, 1954. 15 pp. Gratis.
- Survey and Treatment of Marsh Deposits.** Highway Research Bd., Bibliog. 15. Natl. Acad. of Sciences-Natl. Research Council, Washington 25, 1954. 95 pp.
- Marine Polychaete Worms from Point Barrow, Alaska, with Additional Records from the North Atlantic and North Pacific.** Proc. U.S. Natl. Museum, vol. 103, No. 3324. Marian H. Pettibone. Smithsonian Institution, Washington, 1954. 153 pp. Illus.
- Collected Research Papers for Spring 1954.** Symposium ser., vol. 50, No. 10. F. J. Van Antwerpen, Ed. 142 pp. Illus. **Nuclear Engineering—Part I.** vol. 50, No. 11. F. J. Van Antwerpen, Ed. 280 pp. Illus. Amer. Inst. of Chemical Engineers, New York 17, 1954
- Estudio Botánico de las Vezas y Arvejas Españolas.** Emilio Guinea. Instituto Nacional de Investigaciones Agronómicas, Madrid, 1953. 227 pp. Illus. P. 70.
- Preliminary Revision of the Genus *Pselaptrichus*.** Trans., vol. 12, No. 2. Gordon A. Marsh and Robert O. Schuster. San Diego Soc. of Natural History, San Diego, Calif., 1954. 28 pp. Illus. + plates.
- Pesticide Situation for 1952-53.** Production and Marketing Administration, U.S. Dept. of Agriculture, Washington, 1953. 36 pp. Illus.
- Synthesis and Physical-Chemical Properties of New Aromatic Amidines.** Annals, vol. 58, art. 3, Martin Kuna and M. J. Kopac. 31 pp. \$1. **Reserpine (*Serpasil*) and Other Alkaloids of Rauwolfia Serpentina: Chemistry, Pharmacology, and Clinical Applications.** vol. 59, art. 1, Fredrick F. Yonkman *et al.* 140 pp. Illus. \$3. N.Y. Acad. of Sci., New York 21, 1954.
- Normas para la Preparación de Trabajos Científicos.** Sección Tesis de Grado y Ensayos, No. 6. Alfonso Trejos and Rodrigo Zeledon A. Universidad de Costa Rica, San José, 1953. 69 pp. Illus.
- Fósforo Inorgánico del Suero y Metabolismo Glucídico.** F. De Venanzi and M. Roche. Instituto de Investigaciones Médicas, Caracas, Venezuela, 1954. 47 pp.
- Proceedings: Second National Conference on Trichinosis.** 1 Mar. 1954. Public Health Service, Communicable Disease Center, Atlanta, 1954. 76 pp. Illus.
- Selected Bibliography on Building Construction and Maintenance.** Building Materials and Structures Rpt. 140, L. D. C. Nobel. Natl. Bur. of Standards, Washington 25, 1954 (Order from Supt. of Documents, GPO, Washington 25). 35 pp. 30¢.
- Commercial Feeding Stuffs, Report on Inspection, 1953.** Bull. 582. H. J. Fisher. Conn. Agr. Expt. Sta., New Haven, 1954. 116 pp.
- Tabla de Composición de Alimentos Colombianos.** José Gongora y López and Norton Young López. Instituto Nacional de Nutrición, Bogotá, Colombia, 1953. 79 pp. Illus.
- Reproduction of Cockroaches.** Smithsonian Misc. Coll., vol. 122, No. 12. Louis M. Roth and Edwin R. Willis. Smithsonian Institution, Washington 25, 1954. 49 pp. + plates.
- Scientific Institutions and Scientists in Latin-America.** America Central, vol. 1. UNESCO, Montevideo, Uruguay, 1954. 201 pp.
- Rein-Arithmetischer Beweis des Siegelschen Endlichkeitsatzes für Binäre Diophantische Gleichungen im Spezialfall des Geschlechts 1.** Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Mathematik und allgemeine Naturwissenschaften, Jahrgang 1951, No. 2. Helmut Hasse. 18 pp. DM. 2. **Neue Geologische Forschungen im Ural in Ihrer Grundsätzlichen Bedeutung.** No. 3. Serge Von Bubnoff. 18 pp. Illus. DM. 3. Akademie-Verlag, Berlin, 1952.