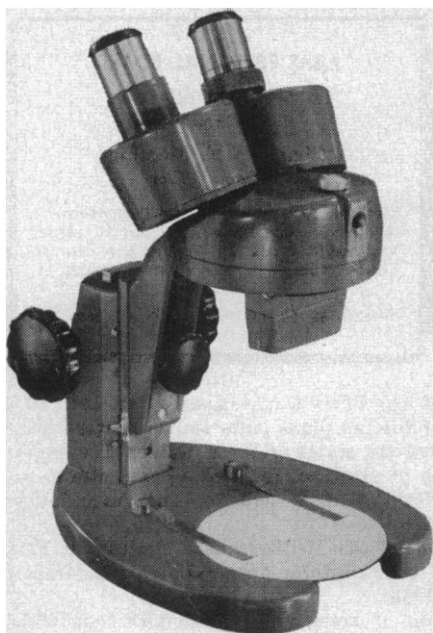


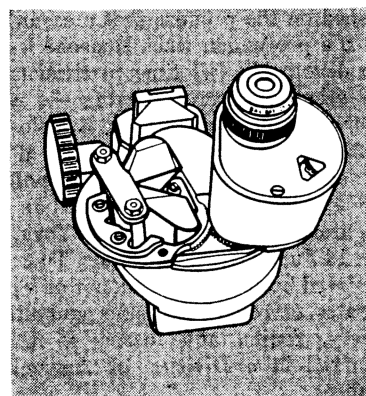


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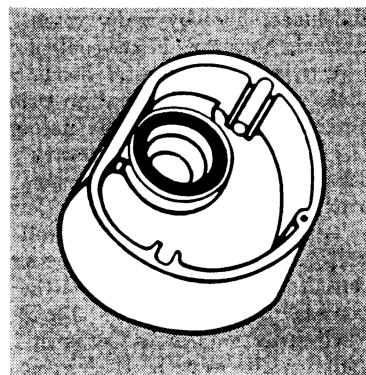
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STEREOMICROSCOPES

Books and Recordings Reviewed in THE SCIENTIFIC MONTHLY

September

- The Challenge of Man's Future**, Harrison Brown (Viking Press). Reviewed by Harry C. Kelly.
- A History of the Theories of Aether and Electricity**, Sir Edmund Whittaker (Philosophical Library). Reviewed by Gerald Holton.
- Two Roads to Truth**, Edmund W. Sinnott (Viking Press). Reviewed by Bentley Glass.
- Europe and America since 1492**, Geoffrey Brunn and Henry Steele Commager (Houghton Mifflin). Reviewed by Mark M. Heald.
- Symbolic Logic**, Irving M. Copi (Macmillan). Reviewed by Albert A. Bennett.
- Dynamic and Abnormal Psychology**, W. S. Taylor (American Book). Reviewed by John F. Dashiell.
- An American in Europe**, Egon Larsen (Philosophical Library). Reviewed by Mina Rees.
- Curious Creatures**, Erna Pinner (Philosophical Library). Reviewed by Karl P. Schmidt.
- Sounds of the American Southwest**, (Folkways Records and Service Corp.). Reviewed by Karl P. Schmidt.
- The Mockingbird Sings** (Cornell Univ. Records). Reviewed by Karl P. Schmidt.
- Florida Bird Songs** (Comstock Publ. Associates).
- The Macmillan Wild Flower Book**, Clarence J. Hylander; illus. by Edith F. Johnston (Macmillan). Reviewed by Paul B. Sears.
- Die Botanische Buchillustration**, Claus Nissen (Hierse-mann). Reviewed by A. C. Smith.
- Galatheas Jordomsejling 1950-1952**, A. F. Bruun *et al.*, Eds. (Schultz Forlag). Reviewed by Gustaf Arrhenius.
- Fundamentals of Reservoir Engineering**, John C. Calhoun, Jr. (Univ. of Oklahoma Press). Reviewed by George G. Lamb.
- High Altitude Rocket Research**, Homer E. Newell, Jr. (Academic Press). Reviewed by Kenichi Watanabe.
- The Sun**, Gerard P. Kuiper, Ed. (Univ. of Chicago Press). Reviewed by Bart J. Bok.

New Books

- Biochemistry**, Abraham Cantarow and Bernard Schepartz. Saunders, Philadelphia-London, 1954. xxv + 848 pp. Illus. \$11.
- The Art and Antique Restorers' Handbook**, George Savage. Philosophical Library, New York, 1954. vi + 140 pp. \$4.75.
- W. H. Hudson**, Ruth Tomalin. Philosophical Library, New York, 1954. 143 pp. \$3.50.
- Linear Equations in Applied Mechanics**, H. F. P. Purday. Oliver & Boyd, Edinburgh-London; Interscience, New York, 1954. xiv + 240 pp. Illus. \$3.50.
- Climatological Atlas of Canada**, Morley K. Thomas. National Research Council, Ottawa, Canada, 1953. 256 pp. Maps. Paper, \$2.
- The Exploration of Space**, Arthur C. Clarke. Pocket Books, New York, 1954. xii + 210 pp. Illus. + plates. Paper, \$0.35.
- The Physics of Viruses**, Ernest C. Pollard. Academic Press, New York, 1953. xi + 230 pp. Illus. \$5.50.

- Biographical Memoirs**, vol. XXVIII. National Academy of Sciences, Washington, D.C., 1954 (Order from Columbia Univ. Press, New York). 311 pp. Plates. Paper, \$4.
- The Wealth of India: Raw Materials**, vol. III, D-E. A dictionary of Indian raw materials and industrial products. B. N. Sastri, Ed. Council of Scientific and Industrial Research, New Delhi, 1952. xx + 236 pp. Index to vols. I-III, xxx pp. Illus. + plates. R. 18.
- Alternating-Current Machines**, A. F. Puchstein, T. C. Lloyd, and A. G. Conrad. Wiley, New York and Chapman & Hall, London, ed. 3, 1954. xii + 721 pp. Illus. \$8.50.
- Methods of Surveying and Measuring Vegetation**, Dorothy Brown. Commonwealth Agricultural Bureaux, Bucks, England, 1954. xv + 223 pp. Illus. + plates. 35s.
- Thoreau**, William Condry. Philosophical Library, New York, 1954. 114 pp. \$3.50.
- Associação Portuguesa para O Progresso das Ciências**, vol. V, sec. 4, *Ciências Naturais*. Imprensa Portuguesa, Porto, 1951. 726 pp. Illus. + plates.
- The Human Animal**, Weston La Barre. Univ. of Chicago Press, Chicago, 1954. xv + 372 pp. Illus. \$6.
- Endokrinologische Psychiatrie**, M. Bleuler. Georg Thieme, Stuttgart, Germany; Intercontinental Medical Book, New York, 1954. xi + 498 pp. DM. 46.50.
- Master's Theses in Science, 1952**, Barton Bledsoe, Ed. Biblio Press, Washington, D.C., 1954. 252 pp. \$7.
- Air Pollution and Community Health**, Clarence A. Mills. Christopher Publ. House, Boston, 1954. 180 pp. \$2.75.
- Residual Stresses in Metals and Metal Construction**, William R. Osgood, Ed. Reinhold, New York, 1954. xii + 363 pp. Illus. \$10.
- Entomology (Medical and Veterinary)**, Including insecticides and insect and rat control. D. N. Roy and A. W. A. Brown. Excelsior Press, Calcutta, ed. 2, 1954. ix + 413 pp. Illus. \$8.
- Ion Transport Across Membranes**, Paper presented at a symposium at the College of Physicians and Surgeons, Columbia University, Oct. 1953. Hans T. Clarke and David Nachmansohn Eds. Academic Press, New York, 1954. xi + 298 pp. Illus. \$7.50.
- Aesthetics and Language**, William Elton, Ed. Philosophical Library, New York, 1954. vi + 186 pp. \$4.75.
- Los Trigos de la Ceres Hispánica de Lagasca y Clemente**, Ricardo Tellez Molina and Manuel Alonso Peña. Instituto Nacional de Investigaciones Agronomicas, Madrid, 1952. xii + 516 pp. Illus. + plates.
- The Physician and His Practice**, Joseph Garland, Ed. Little, Brown, Boston, 1954. xii + 270 pp. \$5.
- Die Evolution der Organismen**, Ergebnisse und Probleme der Abstammungslehre. No. 2, *Die Geschichte der Organismen*, Gerhard Heberer, Ed. Gustav Fischer, Stuttgart, Germany, ed. 2, 1954. 247 pp. Illus. Paper, DM. 17.70.
- 1951 Impairment Study**, Society of Actuaries. Metropolitan Life Insurance Co., New York, 1954. 300 pp. \$7.50.
- New Research Techniques in Physics**, Symposium (UNESCO) sponsored by the International Union of Pure and Applied Physics (Chapters in English, Spanish, and Portuguese). Academia Brasileira de Ciencias, Rio de Janeiro, 1954. 447 pp. Illus.
- Fundamentals of College Mathematics**, John C. Brixey and Richard V. Andree. Holt, New York, 1954. xiv + 609 pp. Illus. \$5.90.
- Physical Properties of Solid Materials**, C. Zwikker. Interscience, New York; Pergamon Press, London, 1954. viii + 300 pp. Illus. + plates. \$8.75.

- The Theory of Metals.* A. H. Wilson. Cambridge Univ. Press, New York, ed. 2, 1953. 346 pp. Illus. \$8.50.
- An Annotated Bibliography of Submarine Technical Literature: 1557 to 1953.* Committee on Undersea Warfare. National Research Council, Washington, D.C., 1954. xiii + 261 pp. Paper, \$1.50.
- Tobacco Dictionary.* Raymond Jahn, Ed. Philosophical Library, New York, 1954. 199 pp. \$5.
- How to Understand Propaganda.* Alfred McClung Lee. Rinehart, New York, 1952. xii + 281 pp. \$3.
- Proceedings of the Seventh International Botanical Congress.* Held in Stockholm, 12-20 July 1950. Hugo Osvald and Ewert Åberg, Eds. Almqvist & Wiksell, Stockholm; *Chronica Botanica*, Waltham, Mass., 1953. 899 pp. Plates. \$17.35.
- X-Ray Diffraction Procedures.* For polycrystalline and amorphous materials. Harold P. Klug and Leroy E. Alexander. Wiley, New York; Chapman & Hall, London, 1954. xiii + 716 pp. Illus. \$15.
- The Science Book of Space Travel.* Harold Leland Goodwin. Franklin Watts, New York, 1954. vi + 213 pp. Illus. \$2.95.
- The Technical Report.* Its preparation, processing, and use in industry and government. B. H. Weil, Ed. Reinhold, New York, 1954. xii + 485 pp. Illus. \$12.
- The Painted Men.* T. C. Lethbridge. Philosophical Library, New York, 1954. 208 pp. Illus. + plates. \$6.
- Gas Dynamics of Thin Bodies.* F. I. Frankl and E. A. Karpovich. Trans. by M. D. Friedman. Interscience, New York-London, 1954. viii + 175 pp. Illus. \$5.75.
- Atomic and Free Radical Reactions.* vols. I and II. ACS Monograph Ser. E. W. R. Steacie. Reinhold, New York, ed. 2, 1954. x + 901 pp. Illus. Set, \$28.
- Human Engineering Guide for Equipment Designers.* Wesley E. Woodson. Univ. of California Press, Berkeley, 1954. 5 chaps. Illus. Paper, \$3.50.
- Atlas of Men.* A guide for somatotyping the adult male at all ages. William H. Sheldon. Harper, New York, 1954. xvi + 357 pp. Illus. \$10.
- Abhandlungen aus der Sowjetischen Physik.* Folge III. Gesellschaft für Deutsch-Sowjetische Freundschaft. Robert Rompe, Ed. Verlag Kultur und Fortschritt, Berlin, 1953. 347 pp. Illus. + plates.
- List of Land Mammals of New Guinea, Celebes, and Adjacent Islands, 1758-1952.* Eleanor M. O. Laurie and J. E. Hill. British Museum (Natural History), London, 1954. 175 pp. + 3 plates. £1 10s.
- Bibliography on Research Administration—Annotated.* George P. Bush. University Press, Washington, D.C., 1954. v + 146 pp. \$4.
- Proceedings of the Second National Cancer Conference, 1952.* vols. I and II. American Cancer Society, New York, 1954. 1687 pp. + index. Illus. Set, \$7.50.
- Abhandlungen aus der Sowjetischen Astronomie.* Folge II. Gesellschaft für Deutsch-Sowjetische Freundschaft. Otto Singer, Ed. Verlag Kultur und Fortschritt, Berlin, 1951. 223 pp. Illus.
- The Method of Trigonometrical Sums in the Theory of Numbers.* I. M. Vinogradov. Trans. by K. F. Roth and Anne Davenport. Interscience, New York-London, 1954. x + 180 pp. \$5.
- Science and Civilisation in China.* vol. I, *Introductory Orientations.* Joseph Needham. Cambridge Univ. Press, New York, 1954. xxxviii + 318 pp. Illus. + plates + maps. \$10.
- Geographical Essays.* William Morris Davis. Douglas Wilson Johnson, Ed. Dover, New York, 1954. vi + 777 pp. Illus. \$5.50.
- The Zoo Comes to You.* Burr W. Leyson and Ruth Manecke. Dutton, New York, 1954. 88 pp. Illus. \$2.95.
- Rutherford: By those who knew him.* Being the collection of the first five Rutherford lectures of the Physical Society. Physical Society, London, 1954. 69 pp. Illus. + plates. Paper, 8s. 6d.
- Organic Chemistry.* A one-semester course. Lawrence H. Amundsen. Holt, New York, 1954. xii + 368 pp. Illus. \$4.75.
- Annual Review of Plant Physiology*, vol. 5. Daniel I. Arnon and Leonard Machlis, Eds. Annual Reviews, Stanford, Calif., 1954. ix + 399 pp. \$7.
- Africa Drums.* Richard St. Barbe Baker. George Ronald, Wheatley-Oxford, Eng. and British Book Centre, New York, rev. ed., 1954. 159 pp. Plates. \$3.
- Faune de France.* vol. 58, *Mollusques Opisthobranches.* Alice Pruvot-Fol. Lechevalier, Paris, 1954. 460 pp. Illus. + plate. Paper, F. 6500.
- The Interrelations of Demographic, Economic and Social Problems in Selected Underdeveloped Areas.* Proc. of a round table at the 1953 annual conference. Milbank Memorial Fund, New York, 1954. 200 pp.
- Qualitative Inorganic Analysis.* A new physico-chemical approach. G. Charlot. Trans. by R. C. Murray. Methuen, London and Wiley, New York, ed. 4, 1954. xi + 354 pp. Illus. \$7.
- The Symbols of Religious Faith.* A preface to an understanding of the nature of religion. Ben Kimpel. Philosophical Library, New York, 1954. x + 198 pp. \$3.75.
- Weather Modification: Past, Present and Future.* Kenneth M. Arenberg *et al.* Weather Modification Group, Wollaston, Mass., 1954. 50 pp. Paper, \$3.
- Biochemistry and Human Metabolism.* Burnham S. Walker, William C. Boyd, and Isaac Asimov. Williams & Wilkins, Baltimore, ed. 2, 1954. xii + 904 pp. Illus. \$10.
- Indian Corn in Old America.* Paul Weatherwax. Macmillan, New York, 1954. ix + 253 pp. Illus. + plates. \$7.50.
- Biochemistry of Cancer.* Jesse P. Greenstein. Academic Press, New York, ed. 2, 1954. xiii + 653 pp. Illus. \$12.
- Hydraulic Systems and Equipment.* R. Hadekel. Cambridge Univ. Press, New York, 1954. viii + 224 pp. Illus. \$3.75.
- The Kinetic Basis of Molecular Biology.* Frank H. Johnson, Henry Eyring, and Milton J. Polissar. Wiley, New York; Chapman & Hall, London, 1954. vii + 874 pp. Illus. \$15.
- Résistance et Soumission en Physio-Biologie.* L'hibernation artificielle. H. Laborit. Masson, Paris, 1954. 120 pp. Illus. Paper, F. 650.
- Antibodies and Embryos.* F. W. Rogers Brambell, W. A. Hemmings, and M. Henderson. Athlone Press, London, 1951; John de Graff, New York, 1954. 103 pp. Illus. \$2.25.
- L'Instabilité en Mécanique.* Automobiles, avions, ponts suspendus. Y. Rocard. Masson, Paris, 1954. viii + 239 pp. Illus. Paper, F. 1200.
- The Theory of the Photographic Process.* C. E. Kenneth Mees. Macmillan, New York, rev. ed., 1954. x + 1133 pp. Illus. \$21.50.
- Mineral Nutrition of Fruit Crops.* Deciduous and evergreen tree and small fruits. Norman Franklin Childs, Ed. Horticultural Publ., Rutgers Univ., New Brunswick, N.J., 1954. 907 pp. Illus. + plates. \$10.
- Méthodes et Réactions de l'Analyse Organique.* vol. III, *Réactions Colorées et Fluorescences.* Maurice Pesze and Pierre Poirier. Léon Velluz, Ed. Masson, Paris, 1954. 297 pp. Paper, F. 2750.

Miscellaneous Publications

- Stabilized Turf Shoulders.** Highway Research Bd. Spec. Rpt. 19. 13 pp. Illus. 30¢. **Nutrition under Climatic Stress.** Proc. of a symposium sponsored by the Quartermaster Food and Container Inst. for the Armed Forces (Order from Quartermaster Food and Container Inst. for the Armed Forces, Chicago 9). 204 pp. Illus. Gratis. Natl. Acad. of Sciences—Natl. Research Council, Washington 25, 1954.
- The Marching of Beech.** Beech Utilization Ser., No. 9. S. H. McIntire. Northeastern Forest Expt. Sta., Upper Darby, Pa., 1954. 6 pp.
- Social Aspects of Farm Ownership and Tenancy in the Arkansas Coastal Plain.** Bull. 545. J. L. Charlton. Agr. Expt. Sta., College of Agr. Univ. of Arkansas, Fayetteville, 1954. 85 pp. Illus.
- Sealing of Joints in Concrete Canal Linings, with Special Reference to the Kiewa Hydroelectric Project.** Div. of Building Research Tech. Paper No. 1. B. M. Holmes. Commonwealth Scientific and Industrial Research Organization, Melbourne, 1954. 32 pp. Illus.
- A Supplement to W. M. Tattersall's Review of the Mysidacea of the United States National Museum.** Proc. of the U.S. Natl. Museum, vol. 103, No. 3334. Albert H. Banner. Smithsonian Institution, Washington 25, 1954. 9 pp.
- West Coast Marine Shells.** Occasional Paper No. 9. Myrtle E. Johnson. San Diego Soc. of Natural History, San Diego, Calif., rev. ed. 1954. 36 pp. Illus.
- Aluminum Association Alloy Designation System for Wrought Aluminum.** Effective 1 Oct. 1954. Aluminum Assoc., New York 17, 1954. 4 pp.
- The Smog Problem in Los Angeles County.** A report by Stanford Research Inst. Western Oil and Gas Assoc., Los Angeles 14, 1954. 134 pp. Illus. Gratis.
- Effect of Lecithin on the Dispersion of Titanium Dioxide in Latex Paints.** Max Kronstein. Office of Information Services, New York Univ., New York 53, 1954. 8 pp. Illus. 25¢.
- Catalogue of Rock Collections.** Pt. 3, *Antarctica and Australasia*. W. Campbell Smith and P. M. Game. British Museum (Natural History), London, 1954. 90 pp. 12s.
- Die Verhaltensweisen der Form.** Pt. 6 of *Die Forschung am Menschen*. Egon Freiherr von Eickstedt. Ferdinand Enke, Stuttgart, Germany, 1954. 135 pp. Illus.
- Fifty Years of Graduate Education at the University of Wisconsin.** Conrad A. Elvehjem, W. J. Brogden, and J. Homer Herriott. Wisconsin Alumni Research Foundation, Madison, 1954. 72 pp. Illus.
- Staff Publications, 1945–1952.** Bull., vol. 99, No. 3. Polytechnic Inst. of Brooklyn, Brooklyn 1, N.Y., 1954. 66 pp. Gratis.
- Seasonal Variation in Production and Price as It Affects Profits from Egg Production.** Circ. 134. Earnest M. Morrison and Roice H. Anderson. Agr. Expt. Sta., Utah State Agr. College, Logan, 1954. 15 pp. Illus.
- The Pacific Islander and Modern Commerce.** Tech. Paper No. 54. V. D. Stace. South Pacific Commission, Noumea, New Caledonia, 1954. 29 pp. Illus. 2s.
- Conditions Physico-Chimiques et Biologiques, et Statistiques de la Pêche dans 48 Lacs du Parc des Laurentides.** vol. 2. Vadim D. Vladikov. Univ. of Montreal, Montreal 2. 177 pp.
- Thesis Abstracts and Faculty Publications.** Case Inst. of Technology, Cleveland, 1954. 39 pp.
- General Survey of the British Pharmacopoeia 1953.** A series of lectures by members of the British Pharmacopoeia Commission 1948–1953. Pharmaceutical Press, London, W.C.1, 1954. 44 pp. 4s 6d.
- Ninth Report of the Biological Bureau, 1951–1952.** Game and Fisheries Dept., Quebec, 1953. 521 pp. Illus.
- Statistical Theory of Extreme Values and Some Practical Applications.** Applied Mathematics Ser., No 33. Emil J. Gumbel. Natl. Bur. of Standards, Washington 25, 1954 (Order from Supt. of Documents, GPO, Washington 25). 51 pp. Illus. 40¢.
- Annual Report 1953.** Bernice P. Bishop Museum, Honolulu, 1954. 57 pp. Illus.
- Guía para la Clasificación de los Datos Culturales.** Tech. Manual 1. Pan American Union, Washington 6, 1954. 248 pp.
- New Hope for the Retarded Child.** Public Affairs Pamph. No. 210. Walter Jacob. Public Affairs Committee, New York 16, 1954. 28 pp. Illus. 25¢.
- Methodological, Psychiatric and Statistical Study of a Large Swedish Rural Population.** Tage Larsson and Torsten Sjögren. Ejnar Munksgaard, Copenhagen, 1954. 250 pp. Illus. Kr. 25.
- Annual Report 1953.** Leo Noro. Occupational Medical Foundation, Inst. of Occupational Health, Helsinki, Finland, 1954. 43 pp. Illus.
- Conference Transactions of 18th Annual Meeting.** Held at Mellon Inst. 18 Nov. 1953. Bull. No. 27. Industrial Hygiene Foundation of America, Pittsburgh 13, 1954. 183 pp. Illus. \$3.
- L'Évolution de la Partie Optique du Microscope au Cours du Dix-Neuvième Siècle.** Communication No. 89. Ed. Frison. Musée National d'Histoire des Sciences Exactes et Naturelles, Leiden, Netherlands, 1954. 168 pp. Illus.
- Annual Report 1953.** East Malling Research Sta., Maidstone, Kent, England, 1954. 232 pp. Illus. \$2.
- The Plum Curculio on Peaches in Arkansas.** Bull. 542. W. D. Wylie. Agr. Expt. Sta., College of Agriculture, Univ. of Arkansas, Fayetteville, 1954. 46 pp. Illus.
- Potentiometric-Model Study of Edge-Water Encroachment.** Quarterly, vol. 49, No. 3. Warren J. Mason. Colorado School of Mines, Golden, 1954. 30 pp. Illus. \$1.
- Gum Flow and Pitch-soak in Virginia Pine Following Fusarium Inoculation.** Sta. Paper No. 40. George H. Hepting. 8 pp. Illus. **Pine Sawmilling Costs by Log Size: An Estimating Method.** No. 43. Walter C. Anderson. 16 pp. Southeastern Forest Expt. Sta., Asheville, N.C., 1954.
- Metabolic Integrations.** P. G. Watson. W. Heffer & Sons, Cambridge, England, 1954. 12 pp. 4s.
- Indigenous Cellulosic Raw Materials for the Production of Pulp, Paper, and Board.** Pt. 17, *Writing and Printing Papers from Castor Stems* (*Ricinus communis*, Linn.). Indian Forest Bull. No. 176. R. V. Bhat and Narendra S. Jaspal. Manager of Publications, Delhi, India, 1954. 6 pp.
- Die Evolution der Organismen.** Ergebnisse und Probleme der Abstammungslehre. No. 1. Gerhard Heberer, Ed. Gustav Fischer, Stuttgart, Germany, 1954. 172 pp. Illus. DM. 12.10.
- Bibliography and Index of Literature on Uranium and Thorium and Radioactive Occurrences in the United States.** Pt. 2, *California, Idaho, Montana, Oregon, Washington, and Wyoming.* Bull., vol. 64. Margaret Cooper. Geological Soc. of America, New York 27, 1953. 69 pp.