

point is not fully discussed) because the salt deserts are often found in physiographic situations with enhanced moisture as well as salt in the soil. To quote, "Maritime salt marshes . . . comprise areas of land bordering on the sea, more or less covered with vegetation, and subject to periodic inundation by the tide. . . . Salt deserts, on the other hand, are inland areas carrying a similar or almost identical type of vegetation." Although not excluded by the definition of salt marshes above, mangroves were not discussed. The criteria for excluding coastal, tidal communities (such as mangroves) and for delimiting salt desert seems to be the presence of a similar type of vegetation throughout, based largely on the plant community approach.

The heart of the text is a thorough discussion of salt marshes, in much detail for England and becoming more attenuated with remoteness from the general North Atlantic region. The focus is primarily vegetational, with an emphasis on diagrammatic "successional" relationships. In this broad synthesis, the author points out the difficulties inherent from the different terminology and methods of study used by various researchers. For the nonspecialist reader this difficulty is greatly compounded. I feel that the enthusiasm of some plant sociologists for reducing communities to an orderly sequence of names has almost forced the awakening of the schools which emphasize the species-level approach to vegetation. In the present text the very commendable section on autecology could have been expanded profitably. A further help would have been the inclusion, early in the book, of a table setting forth the species named throughout, in their taxonomic relationships, together with life form or similar means of bringing the names to life for a reader in another part of the world. The illustrations are numerous and seem well chosen. They were not always fully intelligible to me; this is more so for materials close to the author's background and work. I felt somewhat like an intruder when confronted with places whose names were given or which were even mapped on a very local scale, but which diligent use of an atlas failed to reveal.

I have included these criticisms, which certainly are minor considering the scope of Chapman's valuable work, as suggestions for the forthcoming publication on mangroves, and as a plea for further recognition by authors of the

fact that a work as important as this one will have an international audience, the members of which simply are unable, with the references reasonably available to them, to enter on terms of familiarity into a discussion of local situations.

A world map showing the extent of salt marsh and salt desert vegetation would have been very helpful. This map would better define the world-wide extent and importance of these areas and would help in locating local areas. It would also clarify whether a given area, which may be known to the reader, had been omitted from the discussion because of limited space or because it was not considered to meet the criteria for the book.

Little discussion is included on the animal life and the nature of the ecosystem in the several areas. A special dividend for the botanist is the care given to including the algae of those areas for which information was available. Very interesting are the reports of mosses in certain northern salt marshes. Throughout there are excellent cross references for the discussions. *Salt Marshes and Salt Deserts of the World* advances significantly our understanding of one of the world's partially remaining frontiers of agricultural and scientific knowledge.

WILLIAM C. ASHBY

Department of Botany,
University of Chicago

New Books

Mathematics, Physical Sciences, and Engineering

Bayet, Michel. *Physique nucléaire*. Masson, Paris, 1960. 407 pp. NF. 65.

Bergen, J. T., Ed. *Viscoelasticity*. Phenomenological aspects. Academic Press, New York, 1960. 160 pp. \$6. Papers presented at a symposium sponsored by the Armstrong Cork Co., 28-29 April 1958.

Bluemle, Andrew, Ed. *Saturday Science*, Dutton, New York, 1960. 333 pp. \$5.95.

Bube, Richard H. *Photoconductivity of Solids*. Wiley, New York, 1960. 480 pp. \$14.75.

Clauser, Francis H., Ed. *Symposium of Plasma Dynamics*. Addison-Wesley, Reading, Mass., 1960. 378 pp. \$12.50. Based on an international symposium held at Woods Hole, Mass., June 1958.

Collar, A. R., and J. Tinkler, Eds. *Hypersonic Flow*. Academic Press, New York; Butterworths, London, 1960. 447 pp. \$13.50. Proceedings of the 11th symposium of the Colston Research Society, held at the University of Bristol, 6-8 April 1959.

D'Eye, R. W. M., and E. Wait. *X-ray Powder Photography in Inorganic Chem-*

istry. Academic Press, New York; Butterworths, London, 1960. 230 pp. \$8.50.

Emmons, William H., Ira S. Allison, Clinton R. Stauffer, and George A. Thiel, *Geology*. Principles and processes. McGraw-Hill, New York, ed. 5, 1960. 491 pp. \$7.95.

Frechette, V. D., Ed. *Non-crystalline Solids*. Wiley, New York, 1960. 554 pp. \$15. These papers and the remarks at the conclusion of each paper represent the proceedings of a conference held at Alfred, New York, 3-5 September 1958.

Gackenbach, R. E. *Materials Selection for Process Plants*. Reinhold, New York; Chapman and Hall, London, 1960. 318 pp. \$8.50.

Gamow, George, and John M. Cleveland. *Physics*. Foundations and frontiers. Prentice-Hall, Englewood Cliffs, N.J., 1960. 569 pp. \$7.95.

Gaynor, Frank. *Aerospace Dictionary*. Philosophical Library, New York, 1960. 272 pp. \$6.

Goertzel, Gerald, and Nunzio Tralli. *Some Mathematical Methods of Physics*. McGraw-Hill, New York, 1960. 313 pp. \$8.50.

Goldberg, Samuel. *Probability*. An introduction. Prentice-Hall, New York, 1960. 336 pp. \$7.95; text edition, \$5.95.

Goodwin, Felix. *The Exploration of the Solar System*. Plenum Press, New York, 1960. 200 pp. \$6.50.

Halbwachs, Francis. *Théorie relativiste des fluides à Spin*. Gauthier-Villars, Paris, 1960. 304 pp. \$12.50.

Hess, H. H. *Stillwater Igneous Complex, Montana*. With an appendix, "Optical properties of low-temperature plagioclase," by J. R. Smith. Memoir 80. Geological Society of America, New York, 1960. 230 pp. The paper was presented as the presidential address before the Mineralogical Society of America in 1955.

Higdon, Archie, Edward H. Ohlsen, and William B. Stiles. *Mechanics of Materials*. Wiley, New York, 1960. 516 pp. \$7.75.

Hill, Terrell L. *An Introduction to Statistical Thermodynamics*. Addison-Wesley, Reading, Mass., 1960. 524 pp. \$9.75.

International Atomic Energy Agency. *Education and Nuclear Energy*. 142 pp. \$1.50. Report of a seminar held 6-10 July 1959 at the Nuclear Research Center, Saclay, France. *Heavy Water Lattices*. 142 pp. \$1.50. National Agency for International Publications, New York, 1960.

Kaufmann, Dale W., Ed. *Sodium Chloride*. The production and properties of salt and brine. Reinhold, New York; Chapman and Hall, London, 1960. 757 pp. \$20. Data on sources, production, properties, and uses of salt and brines.

Krauskopf, Konrad, and Arthur Beiser. *The Physical Universe*. McGraw-Hill, New York, 1960. 544 pp. \$8.95.

Lewis, W. V. *Investigations on Norwegian Cirque Glaciers*. Royal Geographical Society, London, 1960. 104 pp.

Phillips, Charles John. *Glass*. Its industrial applications. Reinhold, New York; Chapman and Hall, London, 1960. 260 pp. \$6.95.