

nese in 1971, and coverage of the literature is complete through 1969. Through the efforts of Karl V. Krombein (who provides a foreword), the book is now available in a translation by Alamelu Gopal. Despite sometimes awkward phraseology and use of words, perhaps inevitable because of the great differences in the languages, Iwata's meaning is always clear. Once again students of insect ethology are deeply in debt to Iwata for his untiring efforts at synthesis and interpretation of a mass of data in several languages. Especially appreciated is the first coverage in English of numerous papers originally published in Japanese, for example those of Okada and Shida.

The title of Iwata's book is somewhat misleading. Although the approach is strongly comparative, the major concern is with the phylogeny of behavioral traits rather than with selection pressures or modes of behavioral evolution. Iwata believes that "it is contradictory for a group to be both advanced and primitive." But does a group exist that is not an amalgam of generalized and specialized features?

With respect to the subtitle, it should be explained that no complete coverage of the Hymenoptera has been attempted. The ants are omitted entirely, and short shrift is given to the sawflies. Coverage of the parasitoids and bees is less thorough than that of the wasps, and such topics as the origin of social behavior and the phenomenon of cleptoparasitism are covered only incompletely. As Iwata states in his preface, he is concerned mainly with "maternal" behavior, that is, the ways in which the female provides for her offspring. Such topics as mating, grooming, and male territoriality are not discussed. A full exposition of the behavior of Hymenoptera would, after all, require several volumes. Within its sphere this book is replete with data gathered from a great many sources and organized in such a way as to suggest innumerable avenues for further research.

A few years ago John B. Free commented (in reviewing another book on wasps), "The contribution that wasp studies have made to the field of animal behavior is quite remarkable." With Iwata's book as a stimulus and source of background information, persons intrigued by the behavior of Hymenoptera are likely to bite deeply into the many problems still to be solved.

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## Books Received

**Acercamiento Histórico a la Sociolingüística.** Francisco Sánchez-Marco. Centro de Investigaciones Superiores, Instituto Nacional de Antropología e Historia, Tlalpan, Mexico, 1976. 264 pp. Paper, Mex\$60.

**The Adoption of Innovation by Local Government.** Richard D. Bingham with the assistance of Thomas P. McNaught. Lexington (Heath), Lexington, Mass., 1976. xiv, 274 pp. \$19.

**AEI Studies on Contemporary Economic Problems.** William Fellner, Ed. American Enterprise Institute for Public Policy Research, Washington, D.C., 1976. x, 370 pp., illus. Paper, \$4.

**Alcohol Control Policies in Public Health Perspective.** Kettil Bruun and ten others. The Finnish Foundation for Alcohol Studies, Helsinki, World Health Organization Regional Office for Europe, Copenhagen, and Addiction Research Foundation of Ontario, Toronto, 1975 (U.S. distributor, Rutgers University Center of Alcohol Studies, New Brunswick, N.J.). 106 pp., illus. \$8.

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**Applied Mechanics: Dynamics.** Charles E. Smith. Wiley, New York, 1976. xii, 184 pp., illus. \$11.95.

**Applied Statistics in Atmospheric Science.** Part A, Frequencies and Curve Fitting. O. Esenwanger. Elsevier, New York, 1976. xii, 412 pp. \$53.95. Developments in Atmospheric Science, 4A.

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**Avenues to Antiquity.** Readings from *Scientific American*. Brian M. Fagan, Ed. Freeman, San Francisco, 1976. x, 334 pp., illus. Cloth, \$14; paper, \$7.

**Basic Neurochemistry.** George J. Siegel, R. Wayne Albers, Robert Katzman, and Bernard W. Agranoff, Eds. Little, Brown, Boston, ed. 2, 1976. xviii, 826 pp., illus. Paper, \$15.

**Be Expert with Map and Compass.** The Complete "Orienteering" Handbook. Bjorn Kjellstrom. Illustrated by Newt Heisley and Associates. Scribner, New York, ed. 2, 1976. x, 214 pp. Paper, \$6.95.

**Beginnings of Brazilian Science.** Oswaldo Cruz, Medical Research and Policy, 1890-1920. Nancy Stepan. Science History Publications (Neale Watson), New York, 1976. xii, 226 pp., illus. \$12.95.

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**The Beilstein Guide.** A Manual for the Use of Beilsteins Handbuch der Organischen Chemie. Oskar Weissbach. Springer-Verlag, New York, 1976. iv, 98 pp., illus. Paper, \$4.90.

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**NMR.** An Introduction to Proton Nuclear Magnetic Resonance Spectroscopy. Addison Ault and Gerald O. Dudek. Holden-Day, San Francisco, 1976. viii, 142 pp., illus. Paper, \$4.95.

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**Optics.** W. T. Welford. Oxford University Press, New York, 1976. viii, 152 pp., illus. \$9. Oxford Physics Series.

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**The Psychodynamics of Hostility.** Leon J. Saul with Barbara Wrubel. Aronson, New York, 1976. x, 234 pp. \$12.50.

**Public Places and Private Spaces.** The Psychology of Work, Play, and Living Environments. Albert Mehrabian. Basic Books, New York, 1976. xiv, 354 pp. \$15.95.

**Reactor Core Fuel Management.** P. Silvenoinen. Pergamon, New York, 1976. xii, 258 pp., illus. Cloth, \$17; paper, \$11. Pergamon International Library.

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**Systems Thinking and the Quality of Life.** Proceedings of a meeting, New York, Jan. 1975. Society for General Systems Research, Washington, D.C., 1975. viii, 628 pp., illus. Paper, \$15.

**Theory and Design of Broadband Matching Networks.** Wai-Kai Chen. Pergamon, New York, 1976. xvi, 432 pp., illus. Cloth, \$30; paper, \$15. Applied Electricity and Electronics. Pergamon International Library.

**Three Paradoxes Neglected by Atomic Physics.** Alternative Nuclear, Atomic, and Molecular Structures Are Suggested. Lawrence Wainwright. Vantage, New York, 1976. viii, 48 pp., illus. \$4.95.

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