

of this report will be pleasantly surprised to find that this document is a successful attempt to reproduce the freshness of spirit which is found when a dozen or more brilliant individuals are assembled for the purpose of struggling with an exciting intellectual problem. I found that once I had started reading the report I could not put it down.

The basic material on which the report is based consists of 16 papers presented at the conference with varying degrees of formality and a very large amount of spontaneous discussion. The contributors, in editing their own discussion reports, have successfully retained those portions of the discussion which add significantly to the development of ideas presented within the papers themselves. In order to accomplish this purpose, discussion is freely reproduced within the text of many of the papers. Thus, each section of the report presents considerable continuity of ideas and a degree of organization which is usually lacking in such reconstituted material.

It is not feasible here to discuss the content of particular contributions. These vary from highly organized presentations, such as that of Guilford on the structure of human abilities, to speculative and free-flowing presentations which are highly imaginative even if they are not supported by any data.

A valuable feature of the work is a series of reports of committees, which are reproduced in a concluding section. The committees have been successful in gathering together the major ideas presented in the earlier reports and discussions. These committee reports are presented in the same informal manner as the rest of the material and are interspersed with the comments of the audience to which the committee reports were presented.

A final bibliographic section rounds out the report by providing a list of 131 references to which the reader may turn to find support for much that was presented earlier. All in all, one may expect that this report will be considered a major reference work in the area for at least a decade to come.

ROBERT M. W. TRAVERS
*Air Force Personnel and
Training Research Center*

Biographical Memoirs of the Fellows of the Royal Society. vol. 2, 1956. The Royal Society, London, 1956. 345 pp. Illus. + plates. 30s.

This is the second volume of a new series of brief biographies that is a continuation of the *Obituary Notices of Fellows of the Royal Society (1933-1955)*. As in the first volume and as in the older series, each article is accompanied by a

full-page photograph or portrait of the subject and a complete bibliography of his publications. The articles, which describe the lives and principal scientific accomplishments of the subjects, maintain the standard of excellence of the older series.

Biographies of the following are presented: Walter Sydney Adams, Gleb Anrep, Oswald Theodore Avery, Henry Frederick Baker, Patrick Alfred Buxton, Sheldon Francis Dudley, Lewis Leigh Fermor, Alexander Fleming, William Michael Herbert Greaves, Arthur Lewis Hall, Henry George Albert Hickling, Harold King, Charles James Martin, John William Nicholson, Robert Cyril Layton Perkins, Richard Friedrich Johannes Pfeiffer, Alexander Oliver Rankine, Sigmund Otto Rosenheim, John Alexander Sinton, William Kingdon Spencer, Edmund Taylor Whittaker, and Robert Williams Wood.—G. DUS.

Dahlak. With the Italian National Underwater Expedition in the Red Sea. Gianni Roghi and Francesco Baschieri. Translated from the Italian by Priscilla Hastings. Eleanor Brockett, Ed. Essential Books, Fairlawn, N.J., 1957. 280 pages. Illus. + plates. \$6.

The members of this expedition spent 6 months off the southwestern shore of the Red Sea, among an archipelago of which Dahlak was the largest island. Headquarters was a 135-ton motor vessel. The staff, eight in number, was divided equally into scientific and "sports" groups, but this volume deals almost entirely with the activities of the latter—their failures, successes, and especially their narrow escapes. These sportsmen were armed with shotguns, rifles, arrows, lances, harpoons, spear-guns, and dynamite. They were outfitted with goggles, compressed-air respirators, and fins. It is, thus, the most recent of a long list of volumes dealing with encounters with, and dangers of, the eternal barracudas, mantas, moray eels, and especially sharks. The authors claim that these "direct" methods take precedence, in collecting and scientific results, over the old-fashioned nets and hooks. As proof, they tell of 53 tanks of Formalin, containing 800 pounds of fish and quantities of invertebrates.

Scattered throughout the text are hints of the neglected or half-seized opportunities for behavior observation. Even these notes are negated by superficial descriptions, lack of identification, and complete absence of an index.

The account of the parturition dance of the mantas is intensely interesting but would have had great significance if the observers could have distinguished and verified the characteristics of newborn

mantas. Many cowries were collected, but apparently not a note or painting was made of the complex patterns and coloration of the owners of these shells. Nearly 2 months were spent in search and capture of the strange fish *Cefalone*. The notes would have been of real value if, before publication, a photograph of the fish had been sent, for naming, to some competent Italian ichthyologist.

A human being, kicking and swimming his way under water from reef to reef and brandishing lethal weapons, has little chance of making worth-while observations. A man running through the jungle, waving arms and legs, could not expect the birds and animals to behave in a natural manner. It is high time that an expedition was given over to trained scientific observers, armed with waterproof paints, paper, and pencils. The results would be beyond any expectation. There is much to be said for the old-fashioned diving helmet, tethered by a hose.

Francesco Baschieri has contributed an appendix which consists of a brief geologic history of the Red Sea, an account of former expeditions, and short generalized paragraphs on groups from plankton to mammals. Some of the photographs are excellent.

WILLIAM BEEBE
New York Zoological Society

American Men of Science. A biographical directory, vol. III, *The Social and Behavioral Sciences*. Jaques Cattell, Ed. Bowker, New York, ed. 9, 1956. 762 pp. \$20.

American Men of Science is edited by Jaques Cattell, son of the late James McKeen Cattell, who in 1906 issued the first edition of this directory, which has become an indispensable tool to scientists everywhere.

The present edition is divided into three volumes, of which *The Social and Behavioral Sciences* is the third. This volume contains names of individuals in some fields not included in the eighth edition, published in 1949. Psychologists, geographers, and anthropologists were dealt with in earlier editions, but, in addition to these categories, the present volume also lists workers in the social sciences, some of whom were previously included in the *Directory of American Scholars*. It was originally planned to list historians in the present volume. On advice of the American Historical Association, however, it was decided to omit historians here and include them in the forthcoming new edition of the *Directory of American Scholars*.

The eighth edition of *American Men of Science* contained some 50,000 biographies, which made a book that pressed