

Nevertheless, I note that the suggestions of the various contributors will suffer a lack of clarity and precision until the units involved are more specifically bounded.

Related to this point is a final comment addressed to the Service paper: If it is true that China, enjoying "the privilege of historical backwardness," is on the verge of a great leap forward, which (due to the "law of proportional development" so hotly discussed by the economists of Mainland China) will place China ahead of both the United States and the U.S.S.R., it is at least equally true that, until a bare 150 years ago, China was representative of a dominant culture capable of assimilating most others or, at least, of shrugging them off. Obviously the "law of evolutionary potential" does not, under present conditions, favor the truly backward and unspecialized cultures, but only those which have temporarily dropped a stride behind the leaders.

Although brief, *Culture and Evolution* is a valuable work that merits a wide readership, not only among anthropologists but among biologists and those in the physical sciences as well. Compliments to these bold authors; I hope that they have whipped up a storm, initiated a debate that will cross disciplinary lines and, perhaps, lead on to a more triumphant synthesis.

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I.C.A.R. Monographs on Algae. No. 1, *Zygnemaceae*. M. S. Randhawa. 478 pp. Illus. Rs. 26. No. 2, *Cyanophyta*. T. V. Desikachary. x + 686 pp. Illus. Sh. 72. Indian Council of Agricultural Research, New Delhi, 1959.

These excellent monographs constitute the first steps in the realization of an ambitious and commendable project undertaken by the Indian Council of Agricultural Research: the comprehensive taxonomic treatment of all groups of Indian algae. Randhawa's *Zygnemaceae*, however, is much more than a local floristic account. He treats this sharply defined group of fresh-water algae on a world-wide basis, recognizing 580 species in 13 genera, of which 174 species in 9 genera have so far been recorded from India. Most of the many species originally described from India

have not yet been found elsewhere. Randhawa's task, on first consideration, would seem formidable, but was made possible (as he acknowledges) by the existence of several monographs on this group; the most recent was the monograph by Transeau (1951), who recognized 534 species in 13 genera. Part of the increase in the number of species recognized by Randhawa is due to the publication in the present work of 14 new species identified by M. O. P. Iyengar (unfortunately these species are invalidated by lack of Latin diagnoses). Randhawa follows the example of Kolkwitz and Krieger in providing chapters on occurrence and geographical distribution, cytology, and reproduction, in addition to an interesting introductory account of the history of phycology with special reference to the Zygnemaceae and to India. But the fact that Randhawa had excellent models to guide him should not diminish the high praise that he deserves for producing a first-rate work which retains the best features of existing treatments and enhances the subject by consistent and accurate bibliographic documentation and by incorporating the results of recent investigations.

Desikachary's monumental treatment of blue-green algae is limited to India and its neighboring countries, largely because of the size of the group: the number of species recognized is about 750, representing 85 genera. The systematic account is preceded by a welcome discussion of the cytology, morphology, reproduction, ecology, and phylogeny of Cyanophyta. Steering a middle course between Drouet and Elenkin, Desikachary accepts Fritsch's scheme of classification with certain modifications. Several new taxa are described. The illustrations, mostly red-drawings, generally are satisfactory, but some are sketchy. The bibliographic documentation is thorough and accurate.

Both authors write in a clear and pleasing style. The books are well manufactured, although the bindings may not be strong enough to support the weight of the high-quality paper. The Indian Council of Agricultural Research and the authors are to be congratulated on these scholarly achievements, which bring to public attention the prominent rôle that Indians play in phycological research.

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The Mysterious Earth. Lester del Rey. Chilton, Philadelphia, Pa., 1960. xii + 214 pp. \$2.95.

You and the Universe. N. J. Berrill (with support from Walt Whitman). Dodd, Mead, New York, 1958. viii + 215 pp. \$3.50.

The Forest and the Sea. A look at the economy of nature and the ecology of man. Marston Bates. Random House, New York, 1960. 277 pp. \$3.95.

These three books are all concerned, in one way or another, with man's place on the planet or in the universe. Lester del Rey's book is a factual popularization of material about the earth and life, apparently summarized for the most part, from *Scientific American* articles. It is for brighter young people and will serve a useful purpose, although it might have been improved by some illustrations.

N. J. Berrill, a zoologist turned philosopher, wants to know "just what are we doing here, spinning on a tilted planet swinging round a star" and examines the nature of the planet and the life on it in chapters with themes set by quotations from Walt Whitman. It is the sort of book intended for those fascinated with the "Wonder Of It All," pinnacled, as Shelley said somewhere, deep in the intense inane.

The book by Marston Bates is something else again, an attempt to bring to the reasonably educated man the essence of ecology, and of man's place in nature, in the ecological rather than in the philosophical-evolutionary sense. It is a significant, careful treatment that deserves to be widely read by all who are concerned with nature and with where man's bread is to come from. However, it is not a plundered planet book except, perhaps, by implication, but an original treatment of what might best be called general ecology.

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Introduction to Theoretical Meteorology. Seymour L. Hess. Holt, New York, 1959. xiv + 362 pp. Illus. \$8.50.

This is a very useful addition to the list of meteorological textbooks. It has many didactic merits. In particular, the attempt to deduce the complex atmospheric conditions from basic physical