

SOIL AND CIVILIZATION

The Veld and the Future

A Book on Soil Erosion for South Africans. By Edward Roux. Pp. 60. (Cape Town: The African Bookman, 1946.) 5s.

Food or Famine

The Challenge of Erosion. By Ward Shepard. Pp. xi+225+16 plates. (New York: The Macmillan Company, 1945.) 12s. 6d. net.

Reconstruction by Way of the Soil

By G. T. Wrench. Pp. 262. (London: Faber and Faber, Ltd., 1946.) 12s. 6d. net.

THESE three books bear witness to the ever-increasing awareness of the world problem of soil erosion. Ward Shepard goes so far as to claim that "modern man has perfected two devices, either of which is capable of annihilating civilization. One is total war; the other is world soil erosion. Of the two, soil erosion is the more insidiously and fatally destructive. War disrupts or destroys the social environment which is the matrix of civilization. Soil erosion destroys the natural environment which is its foundation."

The three books are complementary. Wrench restates the problem and pleads for the recognition of natural laws in the symbiotic relationship of human society to the soil, Ward Shepard presents the American view and urges a practical programme for the American continent based on the recognition of the fact that man does not conquer Nature but at best has the privilege of co-operating, on terms and conditions set by Nature. Edward Roux's modest paper-covered volume is concerned solely with the South African veld—yet of the three it breaks new ground and strikes a new note. National leaders may be aware of the problems, but even the best considered schemes depend for their success on the co-operation of the individual—the ordinary farmer. The T.V.A. had to win the confidence of the local people man by man—an aspect of its successful work far too often overlooked. So Roux has written a little book in the simplest of language—for school-children, farmers and townsmen—illustrated by the simplest of line drawings of veld grasses, of the causes and cures of erosion. The book is a model of its kind because the author does not sacrifice scientific accuracy to 'popular' appeal—he succeeds in a few brief pages in making crystal clear the meaning of plant succession, climax vegetation and the all-important stabilization of seral communities which include the valuable grasses. There is only one criticism: the book ought to cost sixpence in order to secure the widest use—not five shillings.

Ward Shepard sees the solution of the problem in North America through the creation of a nation-wide organisation of land-management districts based essentially on river basins. What he calls "integral watershed development" envisages restoration of vegetation cover combined with drainage and flood control after the now familiar model of the Tennessee Valley. He devotes considerable attention to problems which are domestic rather than world-wide—to demonstrating, for example, that the public acquisition of low-grade land is not necessarily socialism, that authorities such as T.V.A. need not be "undemocratic" and that their powers can be compatible with the maintenance of "States' rights". Unfortunately, he has the too common fault of spoiling his case by overstatement. It is scarcely true to say

that "soil stability in Europe was purchased at the expense of the ruthless exploitation of the soils in the new continents"—it is rather that the new lands have had to learn by painful experience the wisdom which is the heritage of the European farmer. However much credit is due to H. H. Bennett—and it is very great—it is scarcely true to say that the menace of soil erosion was not appreciated until the formation of the United States Soil Conservation Service in 1933.

It is difficult to assess the value of Dr. Wrench's book. He confesses himself the product of an English public school where no effort was ever made to arouse interest in the local environment, as a medical student led to ponder, "Why disease?", and as a student in Germany revolting against the profit motive of a mechanical age. The field he surveys is world-wide: it ranges from a correlation of the rise and fall of Rome with the substitution of slave labour and the development of an urban mentality for an earlier peasant economy, to the Second World War and its inevitable return to subsistence farming. He devotes Chapter 23 to a summary of the preceding chapters and re-emphasizes his admiration of the agricultural systems of ancient Peru, Islam and China. Quite rightly he stresses the supreme importance of returning to the soil what has been taken from it, and abhors the profligate waste of water sewage systems. But like so many others who hold to farming as a way of life, he confuses the abuse of science with its use. Instead of advocating a wise use of new knowledge he sees the only solution in a return to peasantries as the prime cultivators of the soil.

L. DUDLEY STAMP

PREHISTORIC ARCHÆOLOGY OF GUJARAT

Investigations into Prehistoric Archæology of Gujarat

Being the Official Report of the First Gujarat Prehistoric Expedition, 1941-42. By Prof. Hasmukh D. Sankalia. (Sri-Pratāpasinha Mahārāja Rājyābhisheka Granthā-mālā, Memoir No. 4.) Pp. xviii+336+31 plates. (Baroda: Baroda State Press, 1946.) 21 rupees.

THIS volume gives the results of a series of expeditions sponsored by Rao Bahadur K. N. Dikshit and led by Dr. Hasmukh D. Sankalia, with Dr. B. K. Chatterjee and Mr. V. D. Krishnaswami as collaborators. The aims of the expedition were to examine the river beds of Gujarat for the remains of palæolithic man, to investigate certain microlithic sites, and as a result to obtain a sequence of prehistoric cultures for the area. Little had been done in the district since the days of Bruce Foote, and the time was ripe for such investigations to be made.

Gujarat lies in the northern part of the Bombay Presidency. It is bounded to the north by the Aravalli Range and the Marwar Desert; to the west lies the Gulf of Cambay, southwards is the Deccan plateau, while to the east are the gorges of the Narmadā and the Tāpī and the Mewar and Malwa plateaux. Within the area occur many different kinds of geological deposits, some of riverine and some of æolian origin. Considerable archæological finds were made and numerous sections are given. The artefacts include various kinds of *coups de poing*, cleavers, disks, etc. Some 'pebble' tools were also collected, as well as a small 'flake' industry. Judging from the illustrations, it would seem that influences