

smaller quantities are given in an Appendix. The inferences which all these data warrant are assessed by the Forest Economist, Captain H. Trotter, in a *Foreword* written with the scientific detachment appropriate to such a publication. It is a great merit of this book that it emphasises again and again that the data are all indicative rather than conclusive. One is apt to overlook that it is a hundred years since pressure creosote treatment was patented by John Bethell; equally old is the zinc chloride method. And still, to-day after all these years, the last word on these processes has by no means been said. "Ascu", but

five years old, is thus still in its infancy, and as this book shows, a very promising infancy with every indication that it will stand the test of time.

This very useful publication should appeal to everyone interested in timber preservation. Its value to the research worker would have been even greater by the inclusion of two more appendices—one giving the exact terms of the patent specifications of "Ascu" and another, a bibliography of the literature that has appeared on "Ascu" to date.

EMMENNAR.

The Geological Survey of India.

THE General Report of the Geological Survey of India for the year 1937 just published by the Director Dr. A. M. Heron, is an impressive record of the large volume of work done by the officers of the Department during the past year. During the field season, most of the officers were out on geological survey work mapping in great detail areas of special interest in different parts of India. In the North-East Circle, Dr. Fox and his associates were engaged in surveying the Garo Hills and the Khasi and Jaintia hill districts of Assam. In the North-Western Circle, Dr. Coulson spent some time in Waziristan and made valuable observations having an important bearing on the geology of parts of north-western India. Mr. W. D. West completed his mapping of the Shali area and worked out in detail the structural features of this part of the country. As regards the age of the Shali limestone, Mr. West thinks that its correlation with the Krol limestone cannot be regarded as certain. It is probable that the two series are of the same age but this cannot yet be asserted on definite evidence. In the Southern Circle, Mr. H. Crookshank and Dr. P.K. Ghosh devoted a considerable amount of time to mapping in the Bastar State, as a result of which several interesting observations have been made. According to Mr. Crookshank, the banding of the hematite-quartzite in this area has probably nothing to do with the original stratification of the rocks, but is due to the deposition of iron ore along the planes of cleavage or schistosity of the original ferruginous phyllites or slates. Dr. Ghosh has recorded several phenomena indicating assimilation and hybridisation in the granitic rocks of this area.

In addition to this extensive Geological Survey work, the Department has also found time to assist the general public in connection with the large number of economic enquiries from all over India, regarding the occurrence and possible development of various kinds of mineral deposits. On Engineering and allied questions, especially water supply, the opinion of the geologists of the Survey has been frequently sought not only by private individuals but also by local and provincial governments, and on every one of these occasions, the Department has readily given authoritative and expert

advice with commendable willingness. In the Elephanta Caves near Bombay, which are a well-known treasure-house of ancient figures and sculptures of great archaeological interest, it is noticed in recent years that there has developed a tendency for the rocks of these sculptured figures to decay and crumble gradually due to natural processes of weathering during the long period of nearly 1400 years during which they have been in existence; and the Government of India recently appointed a Committee to go into this question and suggest the measures to be taken to combat this; and on their request, an officer of the Geological Survey of India—Dr. M. S. Krishnan—was deputed to advise the Committee on the geological aspects of the matter. Dr. Krishnan has investigated this problem thoroughly, and in his Report to the Director-General of Archaeology, has made valuable suggestions for the prevention of such decay and disintegration.

The Department is also anxious to educate the layman in geological matters and stimulate in him a general interest in the geology of his country; and with this object in view, attempts are being made to reorganise the Museum so as to make it more attractive and instructive,—an important new feature being the preparation and display of descriptive labels in the several common Indian languages like Hindi, Bengali and Urdu, to enable the public to understand and appreciate the several exhibits. In the Palæontological Section, considerable work in this direction is being done by Dr. M. R. Sahni, under whose direction the fossil galleries have been entirely rearranged and illustrated with restoration drawings of some of the more interesting genera. Notable amongst these are the serial wash drawings illustrating various stages in the evolutionary history of such interesting animals as the Elephant, the Horse, etc.

To those who are frequently inclined to doubt the utility of geology and geologists in public service, a perusal of the present Report gives a good idea of what a well-organised Geological Department could do for promoting the progress and prosperity of a country.

GEO.