

Review

The Nile by H. E. Hurst, pp. 326, 30 plates, price 30 s. net (London : Constable and Company Ltd. 1952)

The Nile is the second longest river in the world being about 4160 miles in length and drains a vast area of 1,100,000 square miles, about equal to that of the Indian Union, extending over 35° of latitude from the East African lakes plateau to the shores of the Mediterranean. Most of Egypt and Northern Sudan has a rainfall of 1" or less, and it is the Nile which has made possible there one of the earliest human civilisation, and now supports 20 million inhabitants.

Dr. Hurst went to Egypt in 1903, worked there in Terrestrial Magnetism and Meteorology and became in 1915 the Director-General of the Physical Department, dealing with Survey and Hydrological work of the country, from which post he retired in 1946 to become the Scientific Consultant to the Egyptian Government. In this book he has given an accurate account of the Nile based on his collection and study of data of the river for over 40 years.

There is no river in the world for which records of levels are available for such a long time or the hydrology of which has been studied from such a long time and in such detail. The Egyptian Government has in the present century spent a large amount of money on the study of the Nile for its full development, but the cost has been repaid, according to the author, a thousand times. To engineers, meteorologists and scientists, the studies of the Nile are of very considerable theoretical and practical interest.

There are 17 chapters, a preface and an introduction in the book. In the first chapter the author gives a general survey of the Nile and in the second a general account of Egypt. In the third chapter a description of irrigation in the past and as at present is given. In the next five chapters he gives a detailed description of the Nile and the tributaries, White Nile, Blue Nile, Atbara, Sobat, Bahr-el-zebel, Bahr-el-zeref and their basins. The two chapters following contain an account of the Lakes—Victoria, Albert,

Edward and others, and the surrounding region. In the next three chapters the climate, health, vegetation, the early history and the modern explorations are dealt with. Chapters XIV and XV contain an account of the hydrology and hydrological studies of the basin, river gauges, current meter, measurement of discharge—by current meter and tank, the discharge of the Nile and the tributaries, the contribution of the tributaries to the discharge of the main Nile, the annual water balance sheets of the lakes, evaporation and transpiration, the origin of the Nile floods, the forecasting of the Nile, the silt in the river water, and the filling up of the reservoir at Aswari, when the silt content is low late in the season. The long series of level records extending over many centuries do not indicate any pronounced periodicities, and the author does not find any relationship between Victor lake levels and sunspots, but the correlation between the former and rainfall is fairly good. In the last two chapters the author gives an account of the major Nile projects and the projects proposed with a clear diagram illustrating them. For the full utilisation of the water resources it is proposed to make reservoirs of Lake Victoria, Lake Kioga, Lake Albert and Lake Tana by building suitable dams, and for water utilisation and flood protection to build reservoirs at the 4th cataract and utilise the Wady Rayan depression, the Lake reservoirs being 2000 to 4000 miles away from the mouth. At present about 6 millions of acres are being irrigated in Egypt and one million in Sudan, and the author estimates that with the completion of all the projects the irrigated area could be increased to 7½ millions in Egypt and 2 millions in Sudan.

The author has performed a valuable service in producing this important book about Nile, which will be of interest to the layman, students, engineers and scientists, particularly to those concerned with the development of rivers and in the utilisation of the water resources, especially in arid and semi-arid regions.

S.K.P.