

Nile, as has been already pointed out, are mainly derived from the outflow of the Great Lakes in equatorial waters, the tributaries, Bahr el Ghazal and Sobat supplying a small amount. This outflow suffers great diminution, mainly on account of the evaporation in the swamp district. The discharge of the White Nile, being a lake overflow, is, therefore, fairly uniform throughout the year, and the water is comparatively clear, and does not carry any alluvion. The silt-bearing floods of the River Nile, with which probably all are more or less familiar, are derived entirely from the Atbara and the Blue Nile. These rivers are subject to enormous annual fluctuations; the flood discharge of the Blue Nile is as much as 10,000 cubic metres per second, or more than forty times its lower water discharge, while the Atbara has the peculiarity of flowing during the flood season only, and being entirely dry for a period of the year. These rivers take their rise in the Abyssinian mountains, where the rainy season produces a torrential flood discharge and sends down enormous volumes of a reddish brown mud, the finer particles of which remain in suspension and are deposited along the entire length of the Nile, and eventually discharged into the sea. It is this silt-bearing flood which, from time immemorial, has been the great fertilizing agency of Egypt and the Nile valley. The discharge of the flood waters and the resulting deposit upon the land have always been a matter of great concern to the population. Were it not for the fertilizing agency of the annual floods, combined with the extraordinary regularity with which the floods take place and the uniformity of the rise of the river, the wonderful agricultural sources of Egypt would not exist.

When the Blue Nile is in flood the waters rise to a much greater extent than those of the White Nile, and a peculiar flowing upwards is observed in the White Nile for a considerable distance above the confluence at Khartoum. The White Nile, some distance above Khartoum, is of great width, and thus serves to some extent as an equalizing reservoir.

The great rise in these rivers occurs during August and September, when the event of the flood waters is looked for in lower Egypt with the greatest interest, and all the irrigation canals and basins are prepared, as far as possible, to receive it.

*Irrigation Methods in Lower Egypt.*—There are two principal methods of irrigation in lower Egypt. The first and older of these, which has been in use from time immemorial, is the overflowing or basin system. By this method the land to be irrigated is enclosed in sections by an earthen embankment, and the water during the flood is allowed to enter and remain standing within these enclosures until it has precipitated all the alluvium, after which the flood subsides and the water is drawn off. As soon as the surface of the ground is dry enough to carry a yoke of oxen, it is scratched