THE WATERS OF THE DESERT

BY A SPECIAL CORRESPONDENT.

It is of interest to note the widespread interest that is now being taken in the possibility of conserving and utilising the rivers of the Kalahari Desert that since centuries past have poured ceaselessly to waste. With the aid of the waters of the Desert, both on the surface and underground, there is no doubt that many parts of this immense country, with its splendid climate and untapped agricultural and mineral resources, will prove a magnet alike for the farmer and rancher, prospector and merchant, tourist and health-seeker.

Prominent in the important work of reclamation and settlement which is now in progress due credit must be given to the Union Department of Irrigation under Mr. A. D. Lewis and his expert staff of engineers. Their efforts during the last few years to find water by boring, as well as their recent hydrographic surveys of the river system of the Desert, have been followed by the people of South Africa with a lively and sympathetic interest.

The Rivers of the Desert.

The main perennial rivers of the Kalahari region are five, namely, the Zambezi, Chobe,[1] Okavango, Kunene and Orange. And the immensity of the territory which they influence will be apparent when we mention that from the junction of the Chobe with the Zambezi—where the recent Government Irrigation Expedition commenced their surveys—a straight line drawn to the Great Ruacana Falls on the Kunene River would measure roughly 600 miles, while from that point to the Great Aughrabies Falls, or Cataracts of King George, on the Orange River, is approximately 800 miles. In discussing, even in a casual manner, the water system of this huge area, we must glance for a moment at what is widely and popularly known throughout the country as the Schwarz Kalahari scheme. It will be of special interest to the public, and more particularly to the farming community, to learn in due course what the Union Irrigation Department has to say of this project in their forthcoming report. Meanwhile, it may be instructive to give a brief outline of the scope of this scheme.

[1] More correctly called "The Linyanti River."

The Schwarz Scheme.

In the eight years that have elapsed since Professor Schwarz launched his gigantic scheme for the rewatering of the Kalahari Desert, it cannot be said that anything of a practical nature has yet been accomplished along the lines of his ideas. It is true that the Schwarz scheme has made a powerful appeal to the popular imagination, and has even been debated in Parliament, yet it has failed to gain the support of the scientific and technical circles of South Africa. Professor Schwarz has read papers on his scheme before the South African Association for the Advancement of Science and the Royal Geographical Society of London, and it is set forth in his book entitled "The Kalahari or Thirstland Redemption."

Creating Rain Clouds.

Briefly, the Schwarz scheme aims at bringing the rivers of the Angola Highlands into the Kalahari Basin. It is contended that the evaporation from a series of inland lakes would result in the formation of rain clouds, which in turn would

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spread far and wide beyond the limits of the Kalahari region, refreshing the Angola Highlands, and producing humidity over the rest of Africa.

To establish this control of climate, Professor Schwarz proposes to erect a weir 40 feet high on the Kunene River above the Cataracts, and another on the Chobe River not far from its junction with the Zambezi. The first weir would, it is claimed, divert the surplus waters of the Kunene into the Etosha Pan, while the second weir would make it possible for the waters of the Chobe to pass through old dried up river channels into the Makarikari Pan. Professor Schwarz calculates that the area which could be rewatered by the turning back of these rivers into their former channels would be as follows: Ovamboland, 70,000 square miles; Etosha Pan, 5,000 square miles; Makarikari Pan, 15,000 square miles; total, 90,000 square miles. Professor Schwarz lightly remarks: "I believe that I can obtain sufficient water from the Chobe and Okavango Rivers to fill the Makarikari." But for confirmation on this point we must await the publication of the Kalahari Reconnaissance Report.[2]

Criticism of Scheme.

Five years ago Professor Schwarz read a paper on "The Control of Climate by Lakes" before the Royal Geographical Society in London. This lecture was noteworthy because of the critical discussion that followed, conducted by two or three of the leading British meteorologists, and in particular by Mr. F. E. Kanthack, formerly Director of the Union Irrigation Department.

Mr. Kanthack, speaking as an irrigation engineer who had recently studied the flow of the Kunene on the spot, severely criticised Professor Schwarz's statements.

[2]This article was written before the publication of the Government Kalahari Reconnaissance Report. The Report which has since been issued contains a strong indictment of Professor Schwarz's assumptions, amazing errors and inaccuracies of statement.

He pointed out that the vast discharge of the Kunese was crammed into a few months, and to talk about building a temporary weir 40 feet in height to deal with 100,000 cubic feet of water per second in order to divert this flow over a plain of 70,000 square miles was a tall order. A 10-feet depth of water in the Etosha Pan, as proposed by Professor Schwarz, would call for the entire Kunene River, while to divert even 50 per cent. of the water over the plain would require a weir of not less than 100 feet high. Assuming that half the flow of the Kunene could be diverted, Mr. Kanthack calculated that the amount of water which would reach and could be spread over the Etosha Pan, comprising an approximate area of 1,200 square miles, would mean a depth of only from 18 to 24 inches in the pan, which would not be likely to affect the rainfall

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on the Angola Highlands, where in some places as much as 60 inches per annum have been recorded. Mr. Kanthack added that from a practical standpoint the Schwarz scheme was entirely impossible, and that it was unfortunate that Professor Schwarz did not possess first hand, or even accurate information about the Kunene river before formulating his scheme.

The Danger of the Swamp.

In his book Professor Schwarz lays special stress upon his proposal to turn Ovamboland into a swamp, and he affirms that with swamps the Ovambos may suffer a little from malaria, but that is better than perishing from hunger. It may be so; still, it is surely strange in this enlightened age to find a scientist who can calmly advocate a condition of existence which would not only mean the continuous loss of life amongst hundreds of the native races of that region, but would also make white settlement on a permanent scale and the reclamation of those fertile plains for ever impossible. Certainly, we may safely assume that no Government in South Africa would approve of any scheme which would turn Ovamboland into an uncontrolled swamp of death. And in this connection it is worthy of note that the Union Department of Health is even now co-operating with the Department of Irrigation in Pretoria with a view to checking the possible swamping effect of the irrigation waters of that scheme, and the consequent danger of malaria, over the comparatively small area of land that falls under the influence of the Hartebeestpoort Dam.

However much we may applaud the enthusiastic author of this vast project of development, the intelligent public of this country will be quick to see that the great defect of Professor Schwarz's scheme is that he seems to ignore the rôle of the irrigation engineer. And so long as he makes no effort to win the sympathy and secure the support of those who must ultimately be responsible for the carrying out of his ideas, the Schwarz Kalahari scheme will remain a mere fantasy of a perfervid imagination to delight an idle hour, but of no real value or practical assistance to our drought-stricken farming community.