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### **Desert and Water Gardens of the Red Sea**

Cyril Crossland (1878-1943) was Director of the Sudan Pearl Fishery between 1905 and 1922. At this time, the British colonial government had taken charge of running the fishery, with local fishermen as employees. A marine biologist and zoologist, Crossland was praised in his obituary in the journal *Nature* as 'one of the last explorer-naturalists of the Darwin type'. This book is both an account of his life in the Sudan and a scientific survey of the coral reefs on the Red Sea coast. It offers a lively description of the region, its people and customs, and a clear, accessible explanation of the development of coral reefs. In Crossland's time this region had not been fully mapped by Western explorers and this study was an important contribution to knowledge. The book is illustrated with many of Crossland's own photographs of landscapes and people and his diagrams of the coral reefs.

Cambridge University Press  
978-1-108-01601-8 - Desert and Water Gardens of the Red Sea  
Cyril Crossland  
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# Desert and Water Gardens of the Red Sea

*Being an Account of the Natives and the Shore  
Formations of the Coast*

CYRIL CROSSLAND



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Plate I

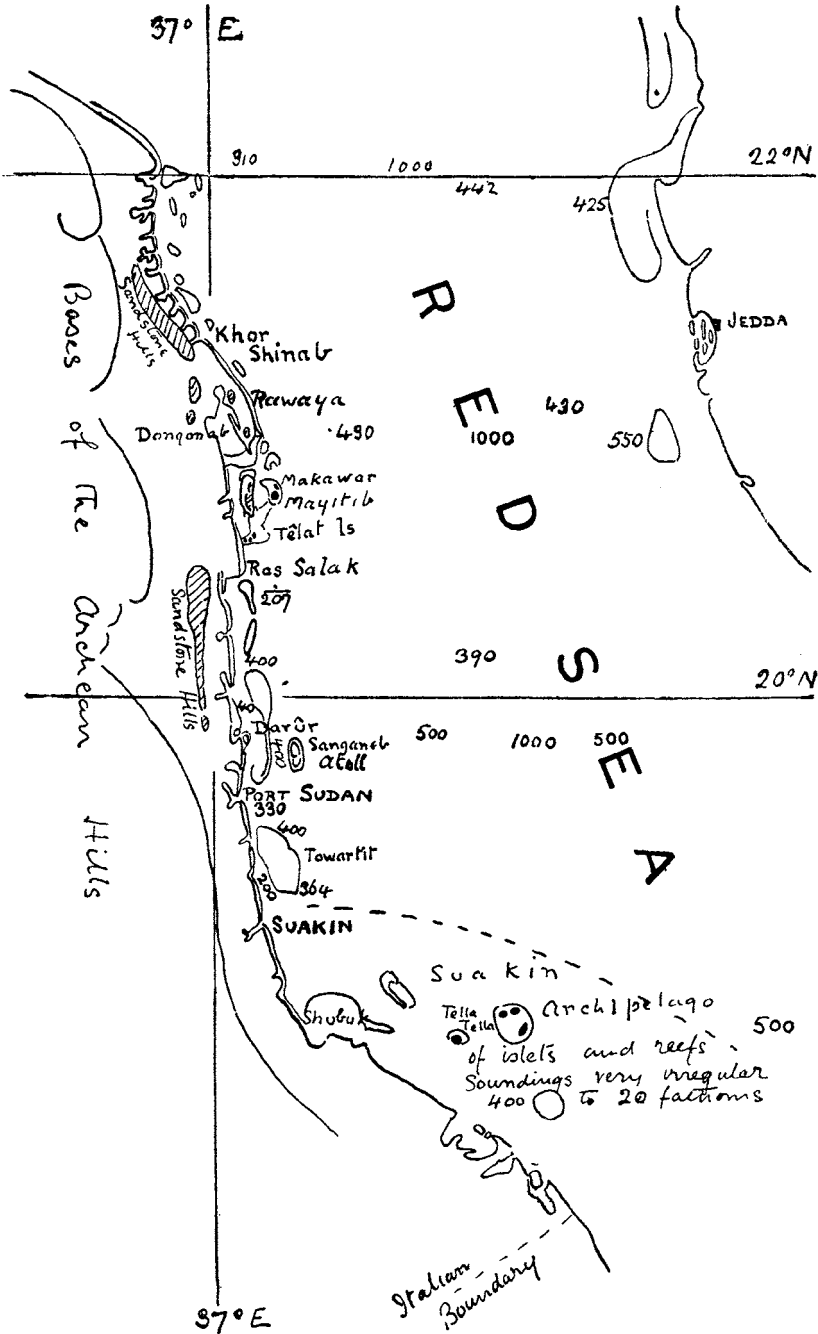


Fig. 1. Coast of the Anglo-Egyptian Sudan

Sandstone hills shaded, *small* islands black. Coastline double, the outer line being the edge of the fringing reef. The thin lines enclosing roughly oval or elongated areas at sea are the barrier reefs. Figures on sea represent depths in fathoms.

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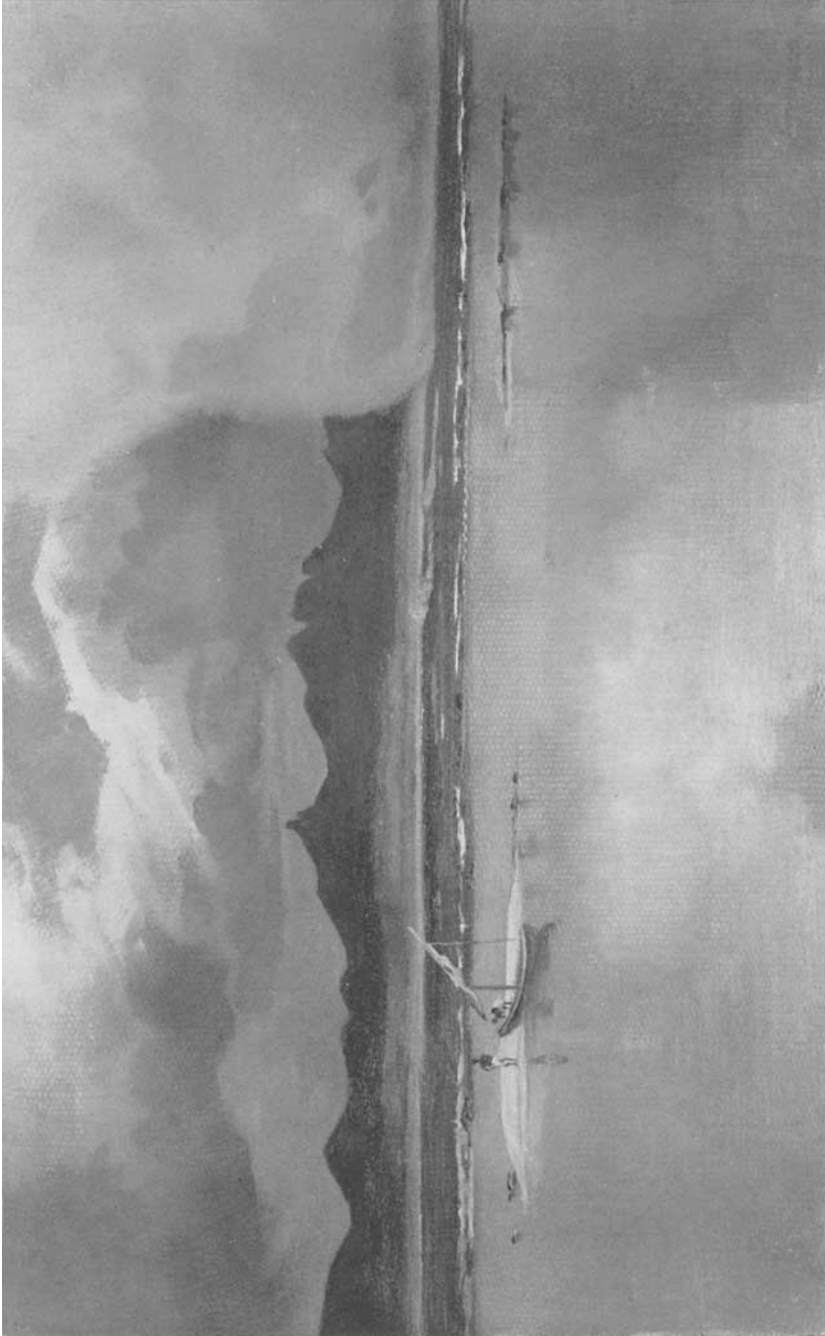
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*Plate III*



*Frontispiece*

Fig. 3. A sandstorm seen from among the Barrier Reefs



**DESERT AND WATER GARDENS**  
**OF THE**  
**RED SEA**

**BEING AN ACCOUNT OF THE NATIVES AND THE  
SHORE FORMATIONS OF THE COAST**

BY

**CYRIL CROSSLAND**  
**M.A. Cantab., B.Sc. Lond., F.L.S., F.Z.S.**  
**Marine Biologist to the Sudan Government**

**Cambridge :**  
**at the University Press**  
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TO MY WIFE

TO WHOSE BRAVE ENDURANCE OF A LARGE  
SHARE OF MY EXILE IS OWING MUCH  
OF WHATEVER I HAVE ACHIEVED, OR  
OF WHAT SUCCESS MAY YET BE MINE

## PREFACE

IT is my fortune to know intimately a portion of the Red Sea coast, that between  $18^{\circ}$  N. and  $22^{\circ}$  N. on the western side. This must be one of the least known coastlines of the world. Until 1905, the Admiralty Chart shewed an area of 25 square miles of reef, which the surveys run for the approaches to the new town of Port Sudan have proved to be non-existent. Though a considerable distance north of this point has now been accurately surveyed, practically no details of the great barrier system of reefs leading up to the Rawaya Peninsula, or of the land inside the coastline, have yet been mapped.

As I shall shew later, certain features of the maritime plain are of the greatest interest, but they have only been hurriedly examined by Mr Dunn, one of the Sudan Government geologists; and no survey of the country has yet been made.

The explanation is not to be found in any laxity in either the Admiralty or the Sudan Government surveyors. Considering that the country is an absolutely unproductive desert, traversed only by a sparse population of nomads, that no steamer passes within miles of the outermost reefs, that the native vessels sail by perhaps at the rate of one a month, the existing chart is a monument to the greatness of the Admiralty's conception of taking the whole world for its province, even the most useless desert coasts.

Perhaps the fact that this country, though so near to Europe, is only artificially made habitable at all, may add

interest to my account ; but besides the description of things and peoples more or less unique and peculiar to this country, I have aimed at giving information of general interest. For instance, in treating of the coral reefs I describe features of the barrier system which may be unique in the world, but I have combined with the description of this special point a general account of coral animals and the reefs which they build. This may recall and complete the interesting conversations I have had on such subjects with friends both at home and in those places where the very streets and houses were once parts of coral reefs.

Biologists have one way of justifying their existence which has to some extent been neglected. Their reply to the eternal question "What good is it? where does the money come in?" should be, in some cases, that of the artist. Just as there are those to whom the love of beauty in pictures, sculpture and architecture is one of the things in life they would least wish to lose, to whom the existence of professional artists is more than justified, so there are many outside the ranks of professional biologists, to whom the romance of the beginnings of life, and of strange lowly forms of being, might become an absorbing interest, an enrichment of life in which money does not necessarily "come in" at all.

This is an interest especially accessible to the exiles of the coral seas, where ordinary amusements are so restricted that their repetition produces a sense of loneliness and monotony scarcely conceivable by the man of normal surroundings. For these among my friends I have written, beginning from the beginning and omitting as not pertinent to the questions they ask me, many points vital to the science of animal anatomy, but not essential to their understanding perfectly such questions as, "What is the coral organism? How does it build up these rocks?"

*Preface*

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These questions are my own special province, I deal with them as an expert though writing so briefly, but in the rest of the book I have made no attempt at writing a treatise on anthropology or a guide book to the Sudan coast, but only to present what is to me beautiful, interesting or amusing in the places and people as I see them. What I describe I write of with all the accuracy of which my words are capable; so far as it goes, all is strictly true. But alas, no one has yet written of the beauty of this desert coast as it should be written. Could I describe one half the beauty of the memory pictures I owe to this country, I should be a poet, whereas I am only a man of facts.

I wonder much at the neglect of this route through the Red Sea by those who make extended journeys on the Nile. From Atbara a perfectly comfortable train journey carries one swiftly through desert and mountains to either Port Sudan or Suakin. I trust that I have written clearly enough to prove that a few days on this coast is time well spent.

Finally, this route to Khartum and Uganda is a quicker and cheaper one than that by the Nile.

Prof. J. Stanley Gardiner's reading and criticism of what follows is but one of many kindnesses, and is especially valuable in the case of the chapters on corals and reefs, of which our knowledge has been so greatly added to by Prof. Gardiner's researches.

CYRIL CROSSLAND.

WINDERMERE,

*September 1912.*

## POSTSCRIPT TO PREFACE

ON reading my book for the press I find that it has a moral, a thing never intended! It is that real romance and beauty are to be found in things as they are, so that the man of science, popularly supposed to be hardened by “materialistic” pursuits, has opportunities for a truer worship than has the sentimentalist who bows before idols of his own imagination.

I tender my thanks to the Council of the Linnean Society who have permitted the reproduction of most of the illustrations of Chapter IX and some of those of Chapter VIII from my papers in their *Journal*, vol. xxxi, in which the account of Red Sea Structure was originally published for Scientific readers, and to Messrs Murray and the Challenger Society for the use of two diagrams from their *Science of the Sea*. The beautiful photograph of a Suakin mosque is by my friend W. H. Lake, Esq.

CYRIL CROSSLAND.

DONGONAB, RED SEA.  
*Sept.* 1913.

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## ERRATA

- p. 88. *For* Hydniopora *read* Hydnopora.
- p. 120. Halaib is a name unknown to natives, who call the place Olê. From this the official name is derived through Arab orthography probably. The Arabic alphabet is the best possible for its own language, and the worst for any other.