

D- Namib - geog.  
Gobabels

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## Probing the mysteries of the Namib Desert

Guarding the western approaches to South Africa, lies one of the oldest unchanged deserts in the world—the Namib Desert, which extends from Little Namaqualand, through South West Africa, to Angola. Here the Transvaal Museum has, for many years past, systematically carried out biological research that has brought to light a practically unknown fauna. This includes not only a multitude of most strikingly specialized lesser forms of life, but also new genera and species of chordata, such as reptiles. The work has, moreover, given a clearer insight into the outstanding peculiarity of the correlation between fauna and environment, and culminated in the discovery of a complex and particularly rich life in the barren dune-systems which are devoid of any active vegetation.

As it was found that the general biological rules, based on research into the life in other deserts of the world, are not applicable but **opposed** to our observations in the Namib, it became evident that we must prove our findings by experimental, physiological and ecological investigations on the spot. We needed a research station in the desert, to enable us to cope with our accumulated results; a well-equipped field laboratory was our aim.

The Transvaal Museum, however, greatly encouraged at the time by the generous support of the C.S.I.R. and other prominent scientific institutions in South Africa and abroad, decided to extend the scope of the station to a research centre concerned with all aspects of aridity. It was emphasized that such a research unit, by establishing the co-ordination of research in this field, would in fact fill an existing gap in science, not only in South Africa, but in the whole of Africa South of the Sahara.

In this connection it must be remembered that quite two-thirds of South Africa (including South West Africa) comprises semi-arid to arid, drought-stricken types of country, of which the Namib—representing the only true desert in the southern part of Africa—may be considered the extreme component. This desert presents an excessive range of solar radiation in both quality and quantity in its inner section, combined with the highest possible degree of relative humidity in the outer fog-belt, violent fluctuations in aerodynamic conditions, and so on. Under such peculiar conditions basic

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The barren sea of shifting red sand-dunes, Sossus Vlei area, southern Namib.  
(Photo: C. Koch.)

scientific research cannot but yield *unique results with possibly very wide applicability*.

Plans for a suitable building have already been drawn up and the site has been fixed at Gobabeb, on the north bank of the Kuiseb River, some 70 miles south-east of Walvis Bay and approximately 40 miles inland from the coast. This site was chosen after a careful survey for its direct accessibility to the main desert biotopes of high moving sand dunes, flat gravelly plains, and river bed with a not inconsiderable cover of vegetation. Through the kind offices of the South West African Administration a leasehold of 50 years has been granted to the Transvaal Museum on an area of 50,000 square feet; this is being fenced in and provided with a flood-proof borehole in the nearby river bed by the same Administration.

**Museums  
co-operate**

Although the project was initiated by the Transvaal Museum, operation and control of the Station is planned to fall jointly under the Windhoek Museum, the South West African Nature Conservation Department and the Transvaal Museum. At the same time, use of the Station and its facilities will not be confined to the above bodies, but will be made available to all other accredited institutions or individuals who may wish to undertake research on any of the problems associated with this desert region.

As none of the sponsoring bodies is in a position to meet the capital costs of the Station Building it has been necessary to appeal to outside sources, and it is gratifying to record that close on R8,000 has so far been received. This is still far short of the total of R16,000, which is the estimated cost of the project, but it is hoped that further contributions will soon be made by interested bodies and individuals to ensure that this unique undertaking can be put into operation as soon as possible.

The singular importance of this project cannot be over-emphasized, as its opportunities for undertaking long-term, on-the-spot research into not only biological problems, but all other problems associated with conditions of extreme aridity will be infinite; it could well produce results of value, not only in the more academic scientific field, but also in agriculture, mining, and other industrial activities.

In conclusion, it may be mentioned that it is planned to issue an independent periodical publication, in which the co-ordinated scientific results of Namib Research will be published and given the widest possible circulation, so as to draw scientific attention to the unique character of the Namib and the important work being done to elucidate its many problems.

**The Gekko**

The web-footed Gekko (*Palmatogecko rangei* Andersson), a nocturnal reptile peculiar to the sand-dunes of the Namib. The special adaptation of its feet is to enable this little creature to move freely, in snowshoe-like fashion, over soft, yielding sand.

(Photo: C. K. Brain.)

