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PRELIMINARY MAP OF THE SOUTH WESTERN KALAHARI DESERT

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Introduction

In 1941 an area in the south western Kalahari Desert of Bechuanaland (now the Republic of Botswana), 40 km wide and adjacent to the Kalahari Gemsbok National Park (KGNP) of the then Union of South Africa was declared a Game Reserve. In 1971 the Government of Botswana increased the size of this Game Reserve considerably and raised it to national park status, i.e. The Gemsbok National Park (Supplement H-307 of Government Gazette Volume IX No. 39).

The Gemsbok National Park (GNP) includes a number of large pans in the northeast, north and northwestern areas. Parris and Child (1973) stressed the importance of pans to most wildlife species in the Kalahari Desert and the inclusion of these pans in the GNP ensures that wildlife will have undisturbed access to these ecologically important areas. Adjacent to the GNP on its eastern boundary is the Mabua Sehube Game Reserve. This Game Reserve is also valuable as a wildlife area as it includes the three large pans Mabua Sehube, Mpatutlwa and Bosho Bogolo, and several smaller pans.

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The GNP is situated in the flat, dry, trackless region of the south-western Kalahari Desert and the main objective of this paper is to provide the first fairly accurate map of the new Park and the surrounding areas. It also corrects errors of windmill location and of low-level aerial photograph distortion in the habitat map of the KGNP (Bothma and De Graaff 1973). In this part of the Kalahari Desert pans and dry river beds provide the most useful landmarks and therefore mainly these features are shown on the map. The farm boundaries of South-West Africa immediately west of the two Parks mapped, are also indicated as a reference guide. The Nossob River is the international boundary between the Republics of Botswana and South Africa and the geographic location of the area mapped is indicated on the inset map next to the legend of the larger map.

Material and Methods

The final map was derived from many aerial photographs, and other maps. The first copy was drawn from a series of low-level aerial photographs of the Botswana sections. To these were added details from the map of Bothma and De Graaff (1973); NASA-ERTS maps E – 1127 – 0853 – Bands 4, 5 and 7 – 01 and E – 1127 – 08050 – Bands 4, 5 and 7 – 01 of 1972.11.27 and part of the NASA-CSIR ERTS 1 participation SR 9616; Map of the Republic of Botswana, scale 1 : 1 000 000 issued by the Department of Surveys and Lands, Gaborone, Botswana 1970; and South Africa 1 : 50 000 first edition maps 2420 CC, 2420 CD, 2520 AB, 2520 BC and 2520 DA of 1972; South-West Africa 1: 250 000 maps 2318 Leonardville, 2418 Aranos, 2518 Koes, 2618 Keetmanshoop, 2718 Grünau and 2818 Warmbad, of 1971; South Africa 1 : 250 000 topo-cadastral sheet 2620, Twee Rivieren, second edition 1974 and South Africa 1 : 250 000 topographic sheet 2620 Twee Rivieren, first edition 1968.

Information gained while conducting low-level aerial game counts in both Parks, done in conjunction with the National Parks Board of Trustees of South Africa during 1973 and 1974, was also added to the map. In the KGNP the exact position of the boundary fence southwest of the Auob River has never before been indicated on a map. This fence was measured by compass and odometer of a vehicle from the South-West Africa border to Twee Rivieren in the Park and its location as indicated on the map can now be regarded as fairly correct.

In the actual mapping the boundary fence of South-West Africa where it meets with the Nossob River was taken as a null or reference point. From this point north-, south- and eastwards a grid with blocks of 3 km^2 was drawn. Information from the maps and photos listed above was transferred to this grid by using a similar scale grid overlay on these maps and photographs. Known landmarks such as Fly's Kop, Bloukop, Sekwats Pan, Twee Rivieren, Nossob Camp and Union's End were used to cross-check the locality of pans, roads and windmills. The

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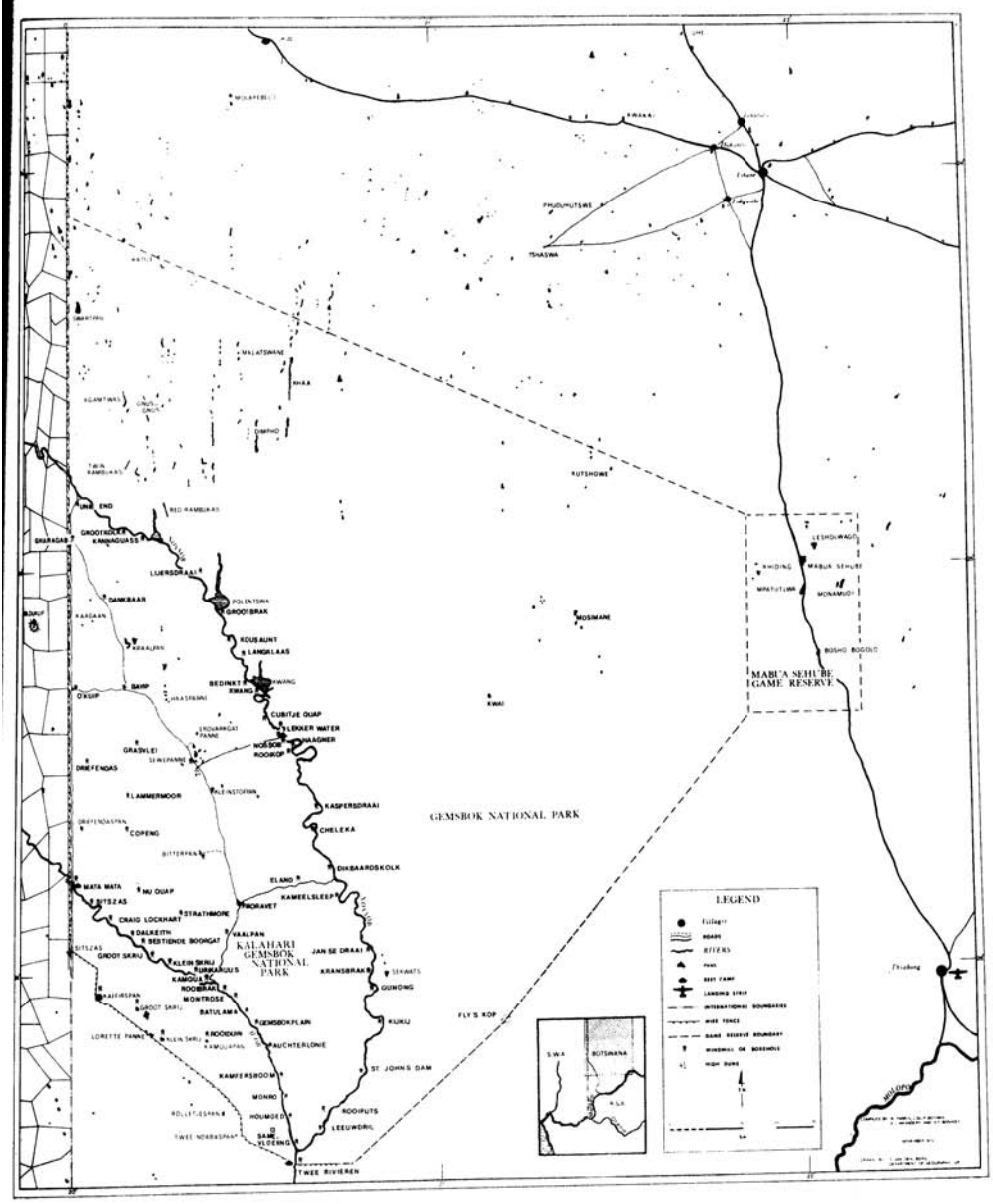

ERTS photographs were mainly used to locate river courses, fence boundaries and the major pans and especially served to eliminate photograph distortion present in low-level aerial photographs. The result is an accurate map of the main features of the two parks (Fig. 1).

Discussion

A broad classification by Blair Rains and Yalala (1972) of the vegetation in the GNP was undertaken as part of a land resource study of the central and southern State Lands, Botswana. The vegetation in the southern and western parts of the Park is classified as Arid Semi-Desert and is associated with dunes; that in the eastern and northern parts is classified as Southern Kalahari Savanna and has no regular dunes. Leistner (1959, 1967) and Bothma and De Graaff (1973) describe additional aspects of the vegetation of both Parks.

Local and possibly more extensive migrations, usually associated with rainfall, is a feature of wildlife populations in the Kalahari Desert (Parris 1972; Bothma 1972). Apart from the barrier formed by the border fence between South-West Africa and Botswana, animals can and do move without restriction between the KGNP (South Africa), the GNP (Botswana), the Mabua Sehube Game Reserve and other areas of Botswana to the north and east of the GNP. Anything which threatens to interfere with this largescale natural movement (such as fencing of boundaries), should be avoided at all costs as it will undoubtedly have a pronounced adverse effect on the wildlife populations of these areas.

In order to further improve the accuracy and hence usefulness of Fig. 1, anyone working in the area is requested to check the details, where necessary amending the map and notifying the authors.

Finally, it is hoped that this paper will stimulate greater interest in this fascinating part of the Kalahari which should be steadfastly conserved by all concerned.

Acknowledgements

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