

## THE RE-INTRODUCTION OF SPRINGBOK *ANTIDORCAS MARSUPIALIS* INTO SOUTH AFRICAN NATIONAL PARKS – A DOCUMENTATION

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*Abstract* – The introduction and establishment of springbok populations in four South African National Parks are discussed. Springbok have failed to establish themselves in the Addo Elephant National Park but are thriving in the Mountain Zebra, Golden Gate Highlands and Bontebok National Parks, although the latter Park is extralimital to their original range.

### *Introduction*

The policy of the National Parks Board of Trustees is to reintroduce wildlife species in newly acquired national parks only if the particular species in question occurred in an area formerly and naturally. The extent to which this approach has been implemented for the springbok (*Antidorcas marsupialis*) over the years will be discussed below.

Presently there are 10 National Parks administered by the Board and springbok are encountered in six. The National Parks where they do not occur allude to Kruger, the Tsitsikama parks and Groenkloof. The re-introductions and subsequent histories of the various springbok populations introduced into Mountain Zebra, Addo, Bontebok and Golden Gate will be sketched and the situation pertaining to Augrabies will be referred to. The large, resident springbok population (c. 20 000 individuals) occurring in the Kalahari Gemsbok is excluded in the ensuing paragraphs.

Re-introduction histories not only make interesting reading but are of practical importance as well – provided the facts and data are carefully and meticulously recorded. The published accounts pertaining to species handled by the National Parks Board are few in number and for detailed information the reader is referred to Barnard and Van der Walt (1961), Van Niekerk and Pienaar (1962), Pienaar and Van Niekerk (1963) and Penzhorn (1971).

*Material and Methods*

The data presented in this paper have been compiled from records kept in the National Parks Board head office in Pretoria. It included perusal of annual reports, minutes of Board meetings, quarterly reports, monthly returns by rangers as well as diaries kept by the latter. This information was also amplified by personal experience and observation during handling and culling operations.

Both the Addo Elephant National Park (near Port Elizabeth) and the Bontebok National Park (near Bredasdorp) were established in 1931. Proclamation of the Mountain Zebra National Park (near Cradock) occurred in 1937. During 1960 the original Bontebok National Park was superseded by the present park (near Swellendam) and followed by the realisation of the Golden Gate Highlands National Park (near Bethlehem) and the Augrabies Falls National Park (near Upington) in 1963 and 1966 respectively. Chronologically, springbok were reintroduced to Mountain Zebra (1941), Addo (1956), Bontebok (1960) and Golden Gate (1964).

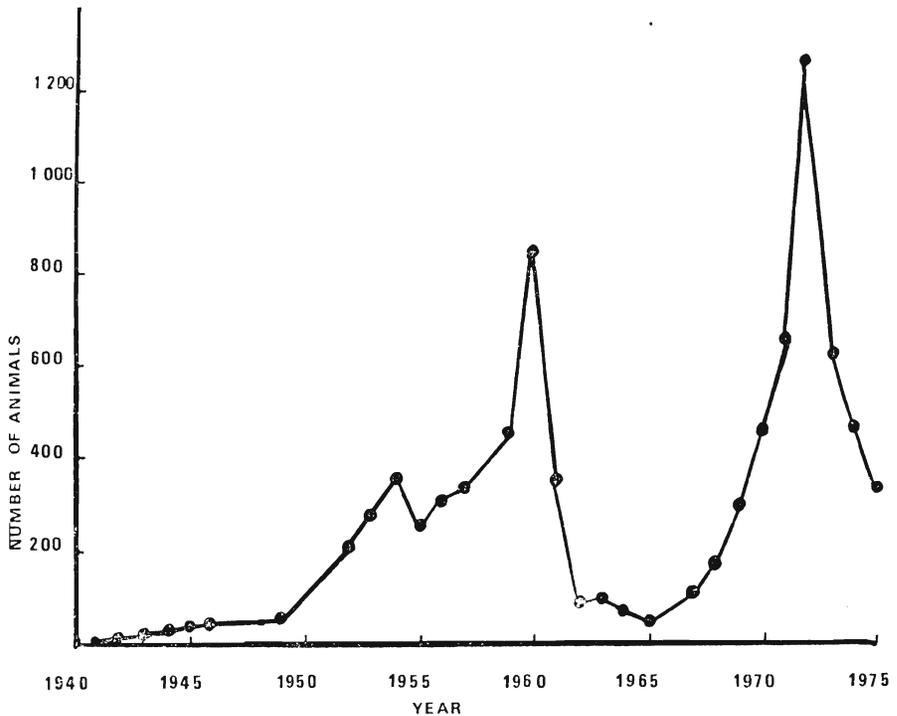


Fig. 1. Population history of springbok *Antidorcas marsupialis* in the Mountain Zebra National Park, RSA.

Mountain Zebra National Park (MZNP)

This Park falls well within the historical range of the springbok and during 1941 eight animals were released into this Park having been donated by E. Bowker Esq. of Bedford (not Grahamstown as stated by Penzhorn 1971). The introduction was done as an experiment and their numbers increased to 43 in 1946. The subsequent increase in the population is shown in Fig. 1.

By 1954 their numbers had reached 300+ and the first control of their numbers took place. A total of 106 individuals were captured and sold to farmers @ R8,00 each for restocking on their farms. The remaining 250 animals consisted of a 2♀♀ : 1♂ ratio. Eleven animals were transported to the Addo Elephant National Park in 1956 and another 11 in 1958.

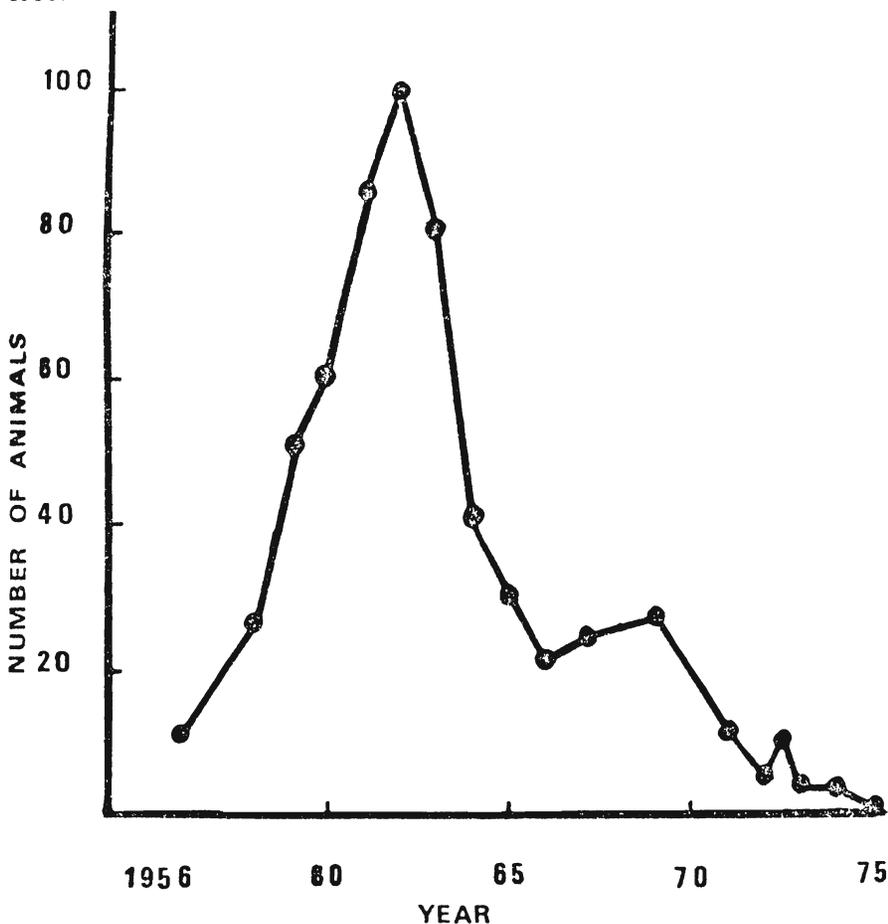


Fig. 2. Population history of springbok *Antidorcas marsupialis* in the Addo Elephant National Park, RSA.

Towards the end of 1961 they reached a peak with 450 individuals and some 205 were caught and made available to interested farmers. Twenty animals were translocated to the Bontebok National Park. During 1962 the overall population strength was further diminished by removal of 155 animals leaving a remnant population of *c.* 90 animals. Annual increases were also harvested and by 1964 only 70 animals remained.

In 1964 the Park was substantially enlarged by the acquisition of adjoining land. Within eight years (1974) the springbok population increased to an all-time peak of *c.* 1267 animals, which prompted the initiation of control procedures. During 1972 and 1973 a total of 823 individuals were removed, mainly by shooting (Penzhorn 1974), and by 1975 the population had been reduced to 345 animals.

*Addo Elephant National Park (AENP)*

Eleven springbok were translocated to this Park from the flourishing population in the MZNP in 1956. These were later augmented by further springbok (16) from the MZNP (1958) and the Nduli Nature Reserve, Umtata, Transkei (Penzhorn 1971). The springbok increased steadily to

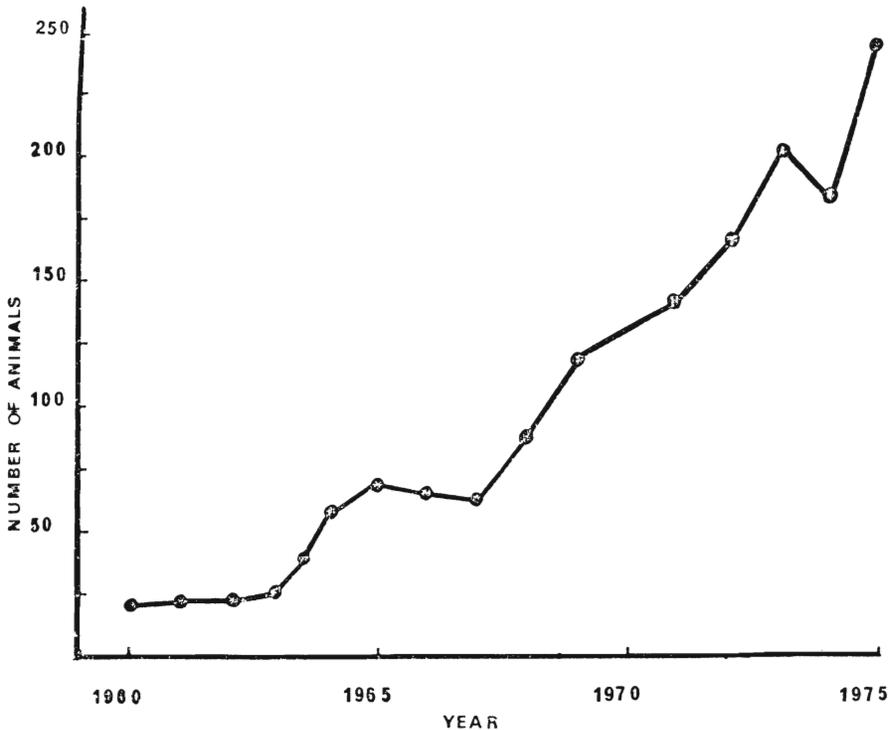


Fig. 3. Population history of springbok *Antidorcas marsupialis* in the Bontebok National Park, RSA.

over 100 individuals by 1962 (Fig. 2) but by 1964 more than 60% of the population succumbed, mainly after contracting heartwater. Since then there has been a steady decrease and only a few individuals remained in 1974 (♀♀) which was further reduced to a single female in 1975.

*Bontebok National Park (BNP)*

The springbok in the BNP were also introduced from the MZNP. A total of 20 animals was transported, seven of which died shortly afterwards. The population had increased to 246 by 1974 (Fig. 3). During 1966, animals from this population were transferred to the Golden Gate Highlands National Park.

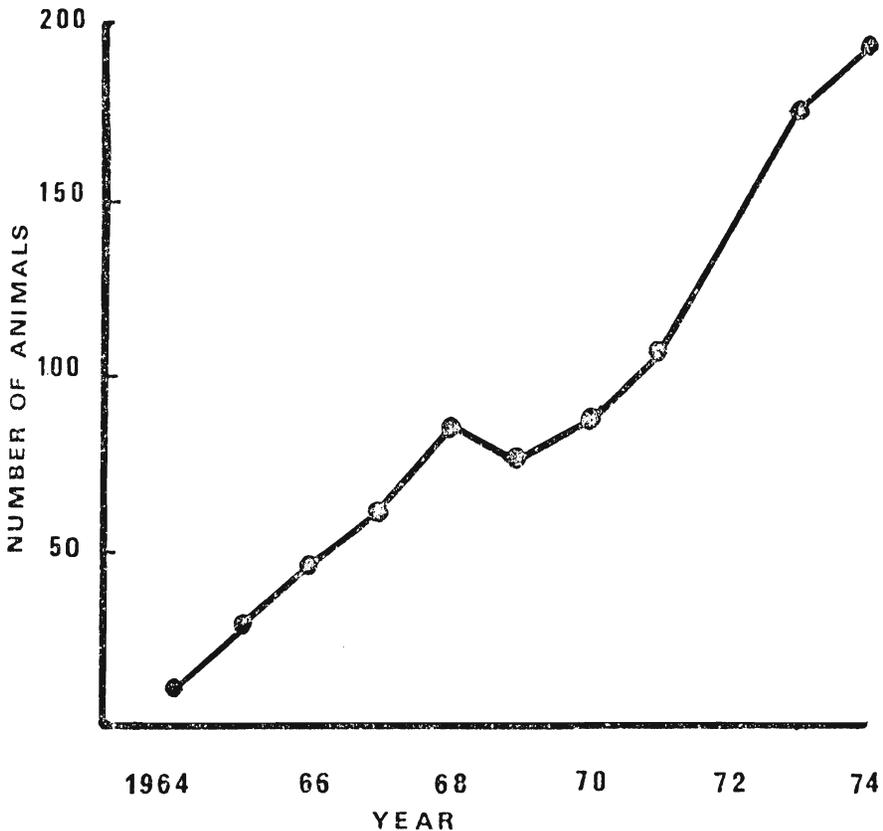


Fig. 4. Population history of springbok *Antidorcas marsupialis* in the Golden Gate Highland National Park, RSA.

*Golden Gate Highlands National Park (GGHNP)*

This population also hails from MZNP originally, when 10 animals were introduced in 1964. These numbers were augmented by a mixed bag from MZNP and BNP respectively in 1966/67 and in 1968/69 the

population stood at 86 animals. Subsequently, they have increased to just over 200 individuals by the end of 1974.

*Augrabies Falls National Park (AFNP)*

Although this Park falls within the past and present range of distribution of springbok, this species has not been re-introduced as yet. There are small resident herds on adjoining farms and these animals occasionally stray into the Park.

*Discussion*

It is clear that although we do have a fair amount of information available amassed over the years, there are glaring gaps in the data, pertaining especially to dynamics of the different populations. Valuable opportunities have been missed for constructive studies pertaining to the process of adaptation which occurs in populations placed in new habitats. There is no detailed information available on the social organization of herds within the populations, or, for that matter on ecology and ethology in the broad sense of the words. This emphasizes once again the importance of meticulous documentation and the sustained upkeep thereof.

To what extent has the re-introduction of springbok been successful?

There seems to be no uncertainty of the positive results obtained in the MZNP. Since 1941, some 1750 animals have been removed from the population, while the populations in three other parks also originated from this Bedford stock. This response is and was to be expected, for the MZNP falls right within the typical springbok habitat and therefore in the historical range of distribution of the species.

Although springbok occurred in the vicinity of the AENP in historic times (Skead 1958), the park itself does not represent ideal springbok habitat. The dense Addo Bush is unsuited to the plains-inhabiting springbok and attempts at artificially creating habitat for certain antelope by clearing the natural vegetation have fortunately been abandoned.

Sclater (1900) stated that springbok did not occur south of the Swartberg. Bateman (1961), who made a survey of the mammals indigenous to the Swellendam district, stated that springbok are not generally considered to have inhabited this region. In view of the stated policy of the National Parks Board, it is therefore surprising that springbok were introduced to the BNP shortly after the Park was established at Swellendam in 1960. According to Du Plessis (1969), the BNP falls outside the original distribution of springbok, while Ansell (1971) termed this introduction “. . . very probably, outside the natural range of the species.”

Although the springbok population in the BNP is well-established and flourishing, its entire removal is recommended.

In contrast, the GGHNP falls well within the past and present range of springbok distribution and all accounts point to a well-adapted population. The finite size of the Park, however, has to be kept in mind and in

all probability their numbers will have to be reduced considerably in due course.

Although earlier documentation of springbok introductions was incomplete, this is partially levelled-up by recent work. In a pilot study of the parasitology and pathology of springbok in MZNP, Young, Zumpt, Basson, Erasmus, Boyazoglu and Boomker (1973) reported 13 species of parasitic metozoa and two protozoa. Pathological effects were described where applicable. Serological tests for virus diseases were negative but biochemical analyses of liver samples suggest deficiencies of Mn, Co, Mg and especially Cu in the diet.

A serious by-product of the introduction of springbok to the BNP is the accompanying infestation of bontebok *Damaliscus dorcas dorcas* with parasites associated with springbok. The lungworm *Dictyocaulus magna* was not recorded from bontebok before they were transferred to Swellendam (Barnard *et al.* 1961). During 1960, 20 springbok were also introduced and *D. magna*, “. . . a well known parasite of the springbok . . .” (Verster, Imes and Smit 1975) was undoubtedly introduced at the same time.

In this case the introduction of springbok into the BNP, beyond their original range was not only ill-conceived but proved to be detrimental to the bontebok, the *raison d'être* of this Park.

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