

THE ADULTERATION OF THE FAUNA AND FLORA OF  
OUR NATIONAL PARKS.

BY

DR. R. BIGALKE,

*Director of the National Zoological Gardens.**Read 4th July, 1946.*

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Whenever Europeans have settled in new countries, they have not only taken their domesticated animals and domesticated plants along with them, but have also shown a strong tendency to introduce wild animals from their homeland into the countries of adoption. In some cases, such as the Rabbit (*Oryctolagus cuniculus*) in Australia and New Zealand and the Musk-rat (*Ondatra zibethica*) in Central Europe, the results have been disastrous. The classic example of such a policy driven to excess is, no doubt, New Zealand, into which more than 600 species of mostly non-domesticated exotic animals have been introduced(8). Great losses are now being caused by some of the introduced kinds. Thomson's detailed study of the question in New Zealand still seems to be the only exhaustive treatise on the subject(8).

National parks are intended to preserve in perpetuity the fauna, the flora and all natural features of the areas concerned. It is not permissible, therefore, and must be deprecated from the scientific point of view, to introduce animals and plants into a national park, unless the species concerned were indigenous to the particular area at some time during its history. If this principle is not strictly adhered to, the term "national park" has no meaning.

Elsewhere(2) I have tried to give an account of some of the exotic species of animals introduced into South Africa. But since attempts are still made from time to time to adulterate the fauna of our national parks, it is desirable to discuss this question.

According to Stevenson-Hamilton(7), the Square-lipped or White Rhinoceros (*Ceratotherium simum*) disappeared from the Low Veld about the sixties of the nineteenth century and the Black Rhinoceros (*Diceros bicornis*) in the nineties. He expresses the opinion that their extinction was due to the activities of Joao Albassini's native hunters, who hunted for ivory and skins in the Low Veld.

In 1895, however, Kirby(4) came across a cow and a big calf of the Square-lipped Rhinoceros in the Matamiri bush along the south bank of the Sabi River. According to him this area was a favourite resort of *Ceratotherium simum* for many

years, though it was decidedly rare there in the year 1895 and altogether extinct by 1896.

Kirby also states that a few Black Rhinoceroses survived in the Lebombo and the Matamiri bush in 1896.

The Square-lipped Rhinoceros has never reappeared in the Kruger National Park, nor could this be expected, since the nearest specimens are found in Zululand at a distance of about 250 miles from the southern boundary of the Kruger Park.

Within recent years there have been sporadic reports of the presence of the Black Rhinoceros in the dense bush south of the Sabi River within the Kruger National Park. A summary of these occurrences is given in the annual report of the Warden of the Kruger National Park for the year 1936. In that report Col. Stevenson-Hamilton infers that a few Black Rhinoceroses are present in the Lower Sabi (Matamiri) bush during the summer months, and that they probably wander away into Portuguese East Africa when the waterholes have dried up. No Black Rhinoceroses or tracks have been seen in the Lower Sabi bush subsequent to the year 1938.

Since both the Black and the Square-lipped Rhinoceros formerly inhabited the Low Veld, there would be every justification from the zoological point of view to restock the Kruger National Park with both species. But apart from the difficulty of carrying out such a project, another aspect must be considered, and that is the reaction of the animals to tourist traffic. In the Zululand Reserves tourists are accompanied by gameguards, but this arrangement would hardly be possible in the Sabi bush of the Kruger Park, since a much greater and more densely bushed area is involved. Apart from the practical difficulties of transferring specimens from Zululand, the reintroduction of the Black and the White Rhinoceros into the Kruger National Park is a knotty problem. This question did engage the attention of the late Mr. Piet Grobler when he was Minister of Lands, but it never seems to have met with serious attention.

While, therefore, no objections can be made on scientific grounds against the reintroduction of the Black and the White Rhinoceros into the Kruger National Park, the position is not the same with regard to some other species.

Some years ago it was proposed to introduce the Springbuck (*Antidorcas marsupialis*) into the Pretorius Kop area of the Kruger Park. The Springbuck is a typical antelope of the interior plateau of the Union, and there is no evidence whatever to show that it ever occurred in the Low Veld of Eastern Transvaal. Hence there can be no justification for introducing it into the Kruger Park, where it has its counterpart in the form of the Impala (*Aepyceros melampus*). Fortunately the proposal was never carried out, but if it had been, nature would probably

have rectified this bit of human folly, since the specimens would, no doubt, have fallen an easy prey to the Park's carnivores.

Apart from Sclater's vague statement to the effect that "in Zululand there are also said to be some" (5), I have been unable to find any evidence to show that the Giraffe ever occurred in Zululand. Baldwin (1) went on a hunting expedition to St. Lucia Bay in 1852 and made three expeditions to Zululand in the years 1853, 1855 and 1856 respectively, but does not refer to the Giraffe in any of his accounts.

Giraffes are a never-failing source of attraction to tourists in the Kruger National Park, and this is, no doubt, the reason that prompted the proposal to introduce them into the Hluhluwe Reserve. But unless it can be shown that this species previously occurred in Zululand, its introduction will be a scientific anomaly.

Instances are not wanting in which exotic trees have been introduced into our national parks. This has been done, for example, at Pretorius Kop and apparently also at Hluhluwe in Zululand. As there are dozens of kinds of indigenous trees in the Kruger Park, at any rate, there should be no difficulty in selecting suitable species for the rest-camps. Exotic trees are entirely out of place in our national parks.

In order to prevent the overstocking of the small Bontbok National Park, the National Parks Board undertakes the capture of surplus Bontbokke, (*Damaliscus pygargus*) at regular intervals, generally biennially, and distributes the specimens among interested farmers. If restocking is limited to areas in which the Bontbok formerly occurred, such action can be strongly commended from the zoological aspect. There is the additional advantage that new nuclei are being established, so that if an epidemic were to carry off the only national herd, the animal would not become extinct at one blow.

Throughout the world biologists are opposed to the adulteration of indigenous faunas and floras, but nowhere has the matter been more vigorously aired than in North America, where the following resolutions were adopted by the Council of the American Association for the Advancement of Science at the Toronto meeting held in December, 1921 (6):—

"Whereas, One of the primary duties of the National Park Service is to pass on to future generations for scientific study and education, natural areas on which the native flora and fauna may be found undisturbed by outside agencies; and

Whereas, the planting of non-native trees, shrubs or other plants, the stocking of waters with non-native fish, or the liberating of game animals not native to the region, impairs or destroys the natural conditions and native wildness of the parks;

*Be it resolved*, That the American Association for the Advancement of Science strongly opposes the *introduction of non-native plants and animals into the national parks* (italics by the present author) and all other unessential interferences with natural conditions, and urges the National Park Service to prohibit all such introduction and interferences."

In Britain the introduction of exotic species is also not favoured by scientists. In a report by the British Ecological Society in 1944(3) the following remarks are made in connection with the introduction of exotic animals at various times by the owners of estates: "The interest of some people in the new and bizarre is often stronger than in familiar native species, and the introducers probably gave no thought to the effects of the strangers on our native animals, or on other interests than their own, effects which are sometimes very serious. It is suggested that the introduction of exotic species should be forbidden except under special licence."

It is not, however, only the zoologists that are opposed to the adulteration of the denizens of our national parks. The same applies to the botanists in the case of the flora. In a recent study of the vegetation of the south-western Cape(9) Wicht writes as follows: "One of the greatest threats, if not the greatest, to which the Cape vegetation is exposed, is suppression through the spread of vigorous exotic plant species. These exotics are extremely difficult to control and possibly are already out of hand. It seems, at present, that unless enormous sums of money are expended on their eradication or control they will become dominant everywhere *except in nature reserves* and other selected areas *where they will be constantly destroyed*. (Italics by the present author). To botanists and all other lovers of nature the thought that such a change is likely to come is very distressing."

In order to protect the indigenous flora and fauna of Germany against adulteration, it is not permissible to liberate exotic plants or animals in that country without special permission from the state conservation department. Such matters are controlled by an ordinance for the protection of nature (Naturschutzverordnung vom 18 März 1936).

The question of the adulteration of the fauna and flora of our national parks is of the utmost importance, and although the introduction of exotic species is permissible under section 12 (3) of the National Parks Act, any such introduction would be a complete negation of the principal object of national parks. May one be permitted to express the hope, therefore, that the National Parks Board of Trustees will not only oppose any proposed introductions except in cases of restocking, but will

constantly be on its guard and will take steps to remedy the position where necessary.

## LITERATURE.

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