

want farming banned? It seems to me that zoos need to know something about the organisations they are occasionally forced to deal with, either directly or via the media. I don't see any good reason to engage with abolitionist groups. When faced with questions through journalists or other third parties, I would try to turn the question back and try to pin the group down to admitting its ultimate objective and giving its reasons for wanting to abolish zoos. It's very easy for these groups to get coverage, as they understand the way much of the media now works, and use it skilfully to achieve their agenda. However, if that agenda was more widely known among the general public, I do not think there would be much of an increase in support for them. Individual zoos as well as zoo organisations need to put some time and effort into devising a consistent line when having to deal with such groups. There are discussion boards and websites (e.g. [www.animalrights.net](http://www.animalrights.net) or [www.activistcash.com](http://www.activistcash.com)) where you can familiarise yourself with the kind of arguments and counter-arguments which work well against the typical animal rights positions. With the exception of their cynical manipulators at the helm of organisations, most animal rightists are pretty poor debaters. They are not to be feared.

Ray Cimino

[Ray Cimino is the manager of the Irish-based Animal Welfare Foundation, which recognises the legitimacy of internationally accredited zoos.]

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# NATIONAL PARKS, GAME RESERVES, SAFARI PARKS, ZOOLOGICAL PARKS, ZOOLOGICAL GARDENS: A TREND IN REVERSE?

BY A.C. VAN BRUGGEN

A spate of recent southern African conservation literature (e.g., Buchanan and Varty, 1999; Hall-Martin and Carruthers, 2003; Taylor, Hinde and Holt-Biddle, 2003) has focused attention on a number of new nature reserves on a smaller scale as opposed to long-established reserves and national parks. The insatiable tourist market in southern Africa, particularly in South Africa, has increased the already existing heavy demand for game and nature reserves. Many of these have been newly established, and it is encouraging to see agricultural land redeemed by nature without loss of income for the previous farming community. Elephant-proof fencing based on electricity opened the way to large-scale reintroduction of large game animals.

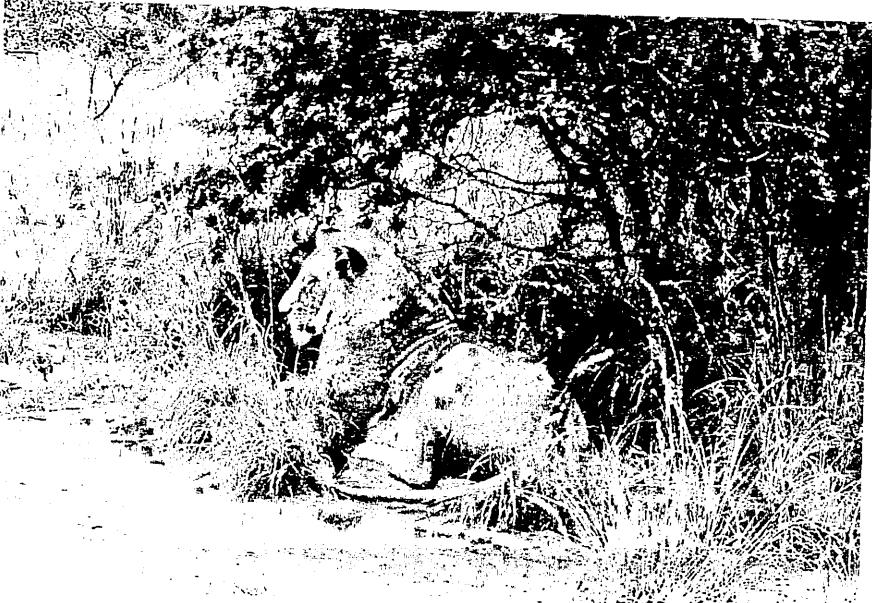
Fencing *sensu lato*, i.e. restriction of movement of animals, is the hallmark of establishments recognized as zoological parks. Eventually all national parks and game reserves world-wide will be fenced entities, once dubbed by a pessimist (or realist?) 'islands in a sea of humanity'. This is food for thought which will be enlarged upon below.

I will discuss three examples from South Africa. Some years ago I was able to visit the Krugersdorp Game Reserve (KGR, west of Johannesburg), the Ndumo Game Reserve (NGR) and the Phinda Private Game Reserve (PPGR; both in northern Zululand, KwaZulu-Natal Province). The first and last institutions have the same background – these game reserves consist of abandoned bushveld farms, sometimes (partly) severely degraded, now being restored to their original state. Both these establishments are completely fenced in and appropriate game species (mammals) have been or are being reintroduced.

The main difference is that the area of the KGR is insufficient to give large predators (in this case only lions) their freedom of movement, so that these are confined to a big drive-through enclosure (100 ha) and have to be fed (although they do hunt wild game in the form of naturally occurring hares and guineafowl). The ungulates number approximately 1,400 head. Remnants of the farming era are a beautiful Kikuyu grass pasture (*Pennisetum clandestinum*, a non-indigenous species of grass, which allows a higher density of grazers, particularly in the dry winter season) and a number of artificial year-round waterpoints. Unfortunately some ungulates have been introduced here that originally were not indigenous to the area – e.g. blesbok (*Damaliscus dorcas*), Cape hartebeest (*Alcelaphus capensis*), white-tailed wildebeest (*Connochaetes gnu*). As regards birds, ostriches have also been reintroduced; otherwise the indigenous birds

have made a significant come-back. Smaller vertebrates compatible with non-intensive farming (cattle ranching), such as monkeys, hares, small carnivores (mongoose, genet, wild cat, etc.), snakes, tortoises etc. were always present at low densities, so that there was a fair breeding nucleus. This has, for example, resulted in yellow mongoose (*Cynictis penicillata*), a locally endemic diurnal species, being common and highly visible. Some of the above would make the KGR more or less qualify for the definition of a safari park – of course, the basic difference here is that the aim is to show solely indigenous animals. A safari park in the Northern Hemisphere would normally show exotic mammals, ratites and pinioned birds, and in addition would of necessity exclusively feature the free-flying birds and vegetation of the area.

The NGR is a game reserve of long standing (1924). Although initially proclaimed as a sanctuary for hippopotamus, it now functions as a stronghold for nyala and both species of rhino; in addition it has become famous as a bird reserve because of its high species diversity. Much of the original fauna had disappeared, including some ungulates and large predators such as the lion. It is now in an isolated situation, but there are plans for a reserve in the adjoining area of Mozambique (to the north) and a merger with the Tembe Elephant Park in the east – the former without any game of note, the latter with the last truly wild elephants in Zululand, a species not represented in the NGR.



A lioness in Phinda Private Game Reserve, Zululand (November 1997) – note the seemingly pristine habitat, formerly degraded farmland. Lion reproduction here is as closely monitored as in zoological parks. (Photo: A.C. van Bruggen)

The PPGR (1991; *vide* Buchanan and Varty, 1999) is much larger than the KGR and the NGR, in fact so large that it can accommodate free-ranging reintroduced lion, cheetah, elephant, white rhino and buffalo, and three tourist lodges.

Moreover, it is wedged in between two major game reserves, the Mkuze Game Reserve to the west and the False Bay/St Lucia Game Reserve to the east. If the fences between these reserves come down (the fence with the Mkuze Game Reserve is indeed scheduled to come down in the foreseeable future), the whole complex will form a major protected block (Greater St Lucia Wetland Reserve) in north-eastern Zululand. From conversations with the various rangers it appeared that all large mammals in the PPGR are (sometimes closely) monitored. While viewing one of the lion prides, we were told that the male had already fathered too many cubs, that his genes were therefore locally no longer in demand, and that he was due for removal or vasectomy (see Table 1; refer also to Buchanan and Varty, 1999, pp.154–157, and to Power, 2003, who discusses predator management in Madjuma Lion Reserve, a 15-km<sup>2</sup> reserve). It was almost as if we were talking to a zoo director! The only difference was that we were driven around inside instead of outside the, albeit very large, enclosure – and this is also fully in accord with the fact that modern zoo enclosures are at times so large and well-vegetated that one does not always see the animals who inhabit them (e.g. the white rhinos in Pretoria Zoo). Being driven around inside an enclosure is also the hallmark of a safari park. . . A major difference between zoos and game reserves is that in the former one usually stays (i.e. sleeps) outside the establishment and in the latter one is accommodated in lodges or rest camps inside the reserve. However, in many zoos and safari parks one may nowadays spend the night in tents in one of the enclosures (e.g. San Pasqual, California, but also in some typical urban zoos, such as in the giraffe enclosure in Rotterdam).

Reintroduction programmes should be closely monitored so that only species or subspecies that previously occurred locally are transported to their old haunts. This has not always been the case, and an unfortunate mistake has been made in the Addo National Park in the Eastern Cape, where in 1961 black rhino (*Diceros bicornis michaeli*) were imported from East Africa to start a new population. This mistake, however, later appeared to be a godsend when the East African form became critically endangered in its homeland. The displaced animals slowly grew in numbers so that individuals could be exported to Mkomazi GR in Tanzania and Liwonde NP in Malawi. The population at times needed fresh blood: for example Randall, Hall-Martin and Novelle (2003, p. 212) mention a bull sent from Ngorongoro to Addo to 'strengthen the gene pool of black rhinoceros of the East African subspecies that was managed by South African National Parks as a discrete population.' Zoo-bred animals are now also being considered for inclusion in this well-protected population. As long as the foreigners in the Addo National Park are closely monitored and fenced in, there is no danger of hybridisation with the South African subspecies (*D. b. minor*). Other zoo-bred mammals 'returned' to southern Africa are sable antelope and buffalo (the latter particularly important because disease-free).

In the smaller and smallest reserves all large mammals (elephant, both species of rhino, giraffe, lion, cheetah) and also the rare ones (e.g. roan and sable antelope) are known individually – this in itself implies management. Of course, in some of the reserves all these large mammals represent reintroduced species, so that their history is known from the beginning. Some of the ungulates that procreate readily and quickly (e.g. zebra, blue wildebeest, impala), are usually no longer individually monitored after the initial phase of reintroduction.

All this serves to emphasize my point that basically there is no longer a difference between the various categories mentioned in the title of this essay.

The situation may be tabulated as follows, with rough definitions:

(1) *National park*: (very) large area with native fauna/flora under very limited management with inside tourist accommodation. Veterinary and zoological supervision is usually limited to preventing epidemics and the loss of species. Legal background and administration of a national park should be on such a footing that it will be inviolate in perpetuity.

(2) *Game reserve*: large area with native fauna/flora under limited management with inside tourist accommodation. Veterinary and zoological supervision is usually limited to preventing epidemics and the loss of species. Both national parks and game reserves may initially not have encompassed the complete fauna of large mammals. [From its inception (1898) the Kruger National Park lacked white rhino and Lichtenstein's hartebeest (*Alcelaphus lichtensteini*), both species later reintroduced; in its early phase it lost the black rhino (1936), also later reintroduced.] In practice game reserves (and occasionally national parks too) are not always inviolate in perpetuity. In both national parks and game reserves large predators are generally not controlled, depending on the size of the area available.

(3) *Safari park*: moderately large area with a few large-scale enclosures with mixed-species groups of animals under fairly limited management. Veterinary and zoological supervision should be fairly intense. Large predators are housed separately and usually intensively managed. Native fauna/flora only consists of those elements that naturally occur and/or have freedom of movement (e.g. birds).

(4) *Zoological park*: fairly large area usually not far from conurbation with large-scale enclosures normally featuring mixed groups of animals under fairly close management. Veterinary supervision is intense. Native fauna/flora is tolerated (up to a point: the presence of wild foxes is normally not conducive to keeping pinioned birds), but only consists of those elements that naturally occur and/or have freedom of movement (e.g. birds).

(5) *Zoological garden*: limited area usually in an urban or suburban setting, with small-scale enclosures normally featuring single animal species (not mixed groups) under close management. Veterinary supervision is very intense. Native fauna/flora are normally actively discouraged.

Obviously there is the law of diminishing size. National parks are usually on the grand scale, game reserves less so, etc. But what other differences are obvious? My thesis in this case is – is there indeed a difference? The transition from traditional zoological gardens to the apogee of conservation – from a lion cage (zoological gardens) to a naturalistic lion enclosure (zoological park) to a drive-through lion area (zoological park: e.g. Tama Zoo, Tokyo, photo in Fisher, 1966, p. 209) to a safari park with lion enclosure to a fenced game reserve to a fenced national park to a grand national park with only marked boundaries (nowadays increasingly rare!) – is a smooth one!

The above makes it abundantly clear that no sharp boundaries may be drawn in this case. *Mutatis mutandis* this applies to everything connected to these establishments. Why should not a safari park director have a stint as warden of a national park (and the other way round); why should not a zoo keeper serve as a game warden in a game reserve in order to experience more distant contact with animals he is familiar with in another setting?

## References

Buchanan, M., and Varty, S. (1999): *The Return: The Story of Phinda Game Reserve*. Londolozi Publishers, Rivonia.

Fisher, J. (1966): *Zoos of the World*. Aldus Books, London.

Hall-Martin, A., and Carruthers, J., eds. (2003): *South African National Parks. A celebration commemorating the Fifth World Parks Congress 2003*. Horst Klemm Publications, Auckland Park, South Africa.

Kane-Berman, S. (2001): Phinda – environmental review 2000. *Conservation Corporation Africa Ecological Journal* 3: 90–91.

Lewis, A. (1999): Phinda – environmental review 1998. *Conservation Corporation Africa Ecological Journal* 1: 10.

Lewis, A. (2000): Phinda – environmental review 1999. *Conservation Corporation Africa Ecological Journal* 2: 192.

Power, R.J. (2003): Evaluating how many lions a small reserve can sustain. *South African Journal of Wildlife Research* 33: 3–11.

Pretorius, K. (2002): Phinda – environmental review 2001. *Conservation Corporation Africa Ecological Journal* 4: 172–173.

Pretorius, K. (2003): Phinda – environmental review 2002. *Conservation Corporation Africa Ecological Journal* 5: 8–9.

Randall, R., Hall-Martin, A., and Novelle, P. (2003): The international dimension. In *South African National Parks. A celebration commemorating the Fifth World Parks Congress 2003* (eds. A. Hall-Martin and J. Carruthers), pp. 208–220. Horst Klemm Publications, Auckland Park, South Africa.

Taylor, W., Hinde, G., and Holt-Biddle, D. (2003): *The Waterberg: The Natural Splendours and the People*. Struik Publishers, Cape Town.

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Table 1. Five-year table to illustrate lion management in Phinda Private Game Reserve, 1998–2002.

1998 – ‘Lion continued to impact heavily on the herbivore population and, as a result, we decided to remove eight from the reserve, which were donated to the . . .’

1999 – ‘In order to maintain a suitable population we had to capture and sell three lions to other reserves.’

2000 – ‘To maintain balanced populations of Lion (approx. 18) and Cheetah (approx. 20) four of the former and three of the latter were relocated during the year.’

2001 – ‘Phinda suffered a setback in the loss of two male Lions . . . As a result, a suitable new male will have to be introduced in 2002.’

2002 – ‘Four male Lions were relocated to the North West Province and two new males were introduced from . . .’

(Sources: Kane-Berman, 2001; Lewis, 1999, 2000; Pretorius, 2002, 2003.)