



## BONTEBOK: *Back from the brink*

by Joseph Mulders

Image by Sashkin

THE BONTEBOK  
(*DAMALISCUS PYGARGUS*  
*PYGARGUS*). BONTEBOK  
NATIONAL PARK, SOUTH  
AFRICA.



Photo by Mogens Trolle.



BONTEBOK (*Damaliscus pygargus*).

'BONTEBOK' BY ROWLAND WARD (1848-1912).

Extinction is a scary concept. The fact that a group of organisms can be pressured to such an extent that they get wiped out is a sobering thought. Yet even in today's climate of heightened environmental awareness, extinctions do still occur; in fact, rates of extinctions have increased drastically over the past 100 years, thanks to human-induced pressures (Ceballos *et al.* 2015; Dirzo *et al.* 2014; Leakey and Lewis 1995). This happens through urban sprawl, spreading agricultural practices, pollution, exploitation (over-hunting), mismanagement and a disregard for the value of a species. Whether it is economic, environmental or social value, the loss will influence the way in which the species is perceived and treated.

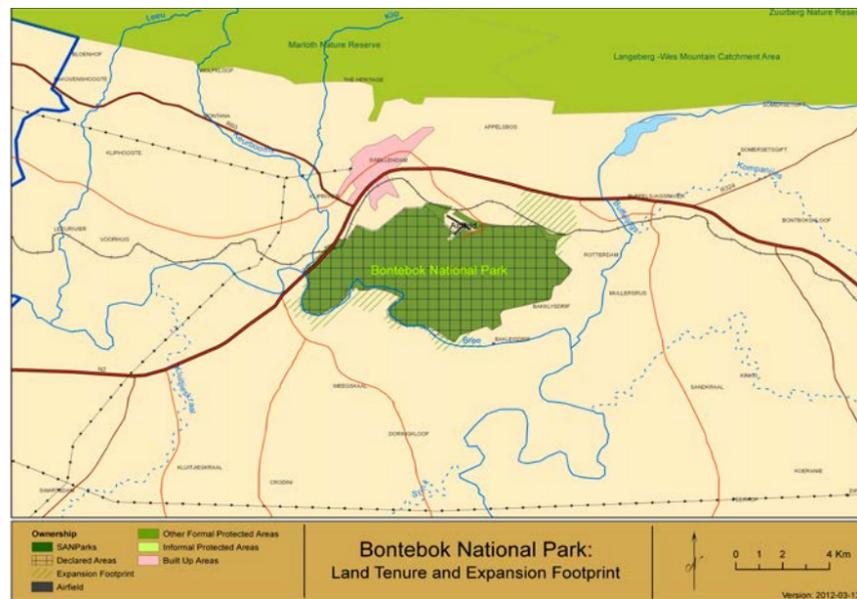
The bontebok (*Damaliscus pygargus pygargus*) is a subspecies that was almost lost in this way. Fortunately, game-breeding efforts by the private sector, combined with conservation efforts by state agencies, have pulled bontebok back from the brink.

Hunting and agricultural pressures had diminished total bontebok

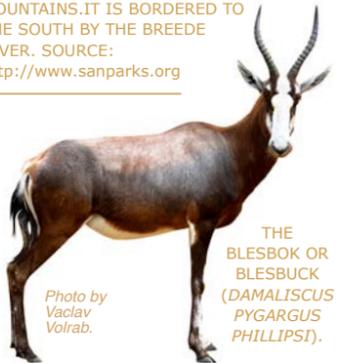


Photo by Four Oaks.





BONTEBOK NATIONAL PARK IS A SPECIES-SPECIFIC NATIONAL PARK IN SOUTH AFRICA. IT WAS ESTABLISHED IN 1931 TO ENSURE THE PRESERVATION OF THE BONTEBOK. IT IS THE SMALLEST OF SOUTH AFRICA'S 20 NATIONAL PARKS, COVERING AN AREA OF 27.86 KM<sup>2</sup>. THE PARK IS PART OF THE CAPE FLORISTIC REGION, WHICH IS A WORLD HERITAGE SITE. THE PARK IS LOCATED 6KM SOUTH OF SWELLENDAM, IN THE FOOTHILLS OF THE LANGEBERG MOUNTAINS. IT IS BORDERED TO THE SOUTH BY THE BREEDE RIVER. SOURCE: <http://www.sanparks.org>



THE BLESBOK OR BLESBUCK (*DAMALISCUS PYGARGUS PHILLIPSI*).  
Photo by Vaclav Volrab.

populations to a mere 121 individuals by 1921 (East 1999, Le Roux 2010). Various concerned Cape farmers and government officials subsequently got involved in an early conservation effort, resulting in the declaration of the species-specific Bontebok National Park in 1931.

Only 22 bontebok were introduced to this park and by 1939 the population had grown to 123 individuals. However, by 1956, due to habitat constraints, the numbers had dropped to a few dozen countrywide (there is uncertainty surrounding this number as the remaining bontebok were segregated). Once again, this crisis spurred a conservation initiative so that, in 1960, the park was moved to a new location at Swellendam. At this stage, approximately 200 bontebok remained and were distributed to the park and to various interested private Eastern Cape farmers. The new park presented a better habitat and the numbers gradually increased to approximately 700 by 1978. The park also became a source for the distribution of species to satellite areas and farms.

The species had subsequently begun to spread throughout South Africa. This ultimately enabled game breeders to get involved and, through collaboration with the government, play a key role in preserving the bontebok subspecies.

A key consideration in bontebok genetic conservation is its ability to breed with the blesbok (*Damaliscus pygargus phillipsi*).

The resulting offspring is a mixture of the two subspecies (a man-made classification and not a natural classification) that, apart from threatening genetic integrity, may negatively influence the value of the species in the wildlife industry.

To reduce the occurrences of mixed individuals, a regulation strategy was established to moderate population management throughout the country. Part of this regulation involved providing evidence of cross-breeding prior to any sales or movement of individual bontebok. Since 1989, providing proof of a pure breed was done using a phenotypically based photographic method (Fabricius *et al.* 1989). In 2010, through close

collaboration with the National Bontebok Breeding Association (NBBA), Cape Nature and various other conservation agencies, the process was streamlined with the development of a DNA method that allows for accurate detection of mixed-gene individuals (Van Wyk *et al.* 2013).

Currently, the national bontebok population is estimated at 8 000 individuals, of which an estimated 1 100 individuals occur within protected areas and the rest (seven times more than in State parks) on private land. In South Africa, government funding and available land for conservation is limited. The importance of the private sector is thus illustrated by the fact that more than 85% of bontebok reside on privately owned land. Furthermore, the ranching industry holds three times more land than national and provincial parks, making the sector crucial for bontebok conservation when parks reach capacity. The NBBA and the associated provincial conservation authorities are busy with a process of verifying which of the 8 000 animals are mixed-gene individuals and which are pure.



Image supplied by Dr Johan Strydom.



Image supplied by Jenny Currie.

Bontebok's rarity has created a significant economic value in the game-breeding industry and this has created an incentive for the private sector to invest in this national biodiversity asset. Today, a bontebok can be sold for anything between R130 000 and R150 000.

This is a significant success story made possible through the joint initiatives of government and the private game-breeding sector. The co-operation between government and the ranching sector in the case of bontebok preservation has been highly effective.

"Authorities from the ranching industry are working closely with government departments, creating regulations for efficient management and control to ensure that conservation needs for the bontebok are met, but at the same time balancing practical needs for use of the species in the industry," says Dr Johan Strydom, chairman of the Bontebok Advisory Committee and a provincial representative of the National

Bontebok Breeders Association (a WRSA advice committee).

"I am proud of the working relationship we have with government authorities and the way we work together to solve issues between sustainable utilisation and conservation of the bontebok," says Johan.

Now that species numbers have been replenished, what is the next step in terms of conservation? According to the scientific manager: biodiversity, at CapeNature, Guy Palmer, "To conserve the bontebok as a species, it is crucial to safeguard its genetic integrity. This does not only refer to correct breeding management but also refers to ensuring that the species is exposed to similar environmental conditions and evolutionary selective pressures to which the bontebok is adapted, thus guaranteeing the most natural possible maintenance of the species."

Being highly characteristic of coastal Cape fynbos (East 1999), the bontebok is historically endemic to an already restricted rangeland of

the Overberg in the Western Cape. This makes natural rangeland conservation challenging. Much of the indigenous rangeland/natural veld already falls within protected areas such as the Bontebok National Park and De Hoop Nature Reserve.

Due to growing populations and the already fragmented and threatened vegetation in this area, however, conservation efforts have been directed at protecting regions in the adjacent extended rangeland. This is not possible without involving neighbouring private land owners into bontebok conservation initiatives, demonstrating further their crucial role and creating yet another platform for cohesion between the sectors. Already, approximately 2 600 individuals reside in their natural and extended rangelands, elevating the species to a near-threatened (NT) status on the IUCN Red Data list (Lloyd and David 2008). It is through this successful co-operation between conservation authorities and the wildlife ranching industry that this

BONTEBOK AT VERGELEGEN, WESTERN CAPE. THERE'S EVERY REASON TO MARVEL AT THE BONTEBOK — THEY'RE NOT ONLY EXQUISITE, BUT ALSO LIVING PROOF THAT, WITH THE RIGHT ATTITUDE, THREATENED EXTINCTION CAN BE REVERSED TO STEADY GROWTH.

Photo by Meldt van der Spuy.



Photos courtesy Meyrick Bowker.

balance between utilisation of the species and conservation can be realised.

Thus, driven by a combination of conservation concern and economic demand, the bontebok species has been pulled back from the brink. The combination of the regulations, science and economic demand applied through conservation and game-breeding initiatives have been instrumental in this. Now it is more important than ever that both

momentum and balance be maintained. It is thanks to the balance between economic growth, environmental conservation and cohesion between public and private sectors that the future of the bontebok looks to be a bright one.

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