

## CHAPTER 12

MANAGEMENT RECOMMENDATIONS FOR CARACALS IN THE KGALAGADI  
TRANSFRONTIER PARK

Caracals that come from the Kgalagadi Transfrontier Park have an impact on small stock farming in Namibia, but it is not possible to quantify the extent of this impact objectively. From the results of a questionnaire survey that was done in Namibia, the perception is that caracals have a serious impact on small stock production. The estimated losses of small stock to predation vary from one to 40 %. The farmers believe that the vast majority of the problem animals come across the boundary fence from the Kgalagadi Transfrontier Park. There is no way to objectively quantify whether these estimates are accurate. To do this would require a long-term monitoring programme of caracal depredation on the small stock farms in Namibia. In addition, there is also the perception among the Namibian farmers that the officials of the Kgalagadi Transfrontier Park are apathetic to what happens on the Namibian farms that are adjacent to the Park. Additionally, the Park officials are viewed as being unhelpful when Namibian farmers report predator depredations.

It is obvious that even if the estimates of the level of the impact are exaggerated and incorrect, there is a perception that predators have a great impact on the small-stock farming enterprises in Namibia close to the Park. As long as this perception remains and the South African National Parks are regarded as being apathetic to the plight of the farmers (Botha 2000), the friction between the farmers and the conservation organisation will persist.

The ranges of caracals *Caracal caracal* do include both the Kgalagadi Transfrontier Park and Namibia in some places. The caracal population in South Africa is therefore contiguous with that of Namibia. The border fence is no obstruction to the movements of caracals (Moolman 1986) whether moving to or from Namibia. Although a new fence is currently being erected, it is unlikely that this fence will stop caracals from moving freely across it. The erection of a caracal-proof fence would be too costly to consider. Although a well maintained, electrified fence should be a deterrent to caracals that want to move across the border, and consequently will reduce the frequency of such border crossings, the environment and the animals that occur near the border fence will require it to be constantly maintained. A strict protocol of border patrols should be reinstated to ensure that the fence and its electrification system are properly maintained on a regular basis.

Some of the caracals that occur in areas of the Kgalagadi Transfrontier Park that are close to the Namibian border do prey on sheep (Melville *et al.* 2004). However, the extent of caracal utilisation of small stock in the Kalahari is less than what has been recorded elsewhere where a conservation area borders agricultural land (URL: <http://lynx.uio.no/catfolk/ssacr101.htm>). Moreover, the majority of the incidences of depredation on livestock in Namibia occur in the colder months (Melville *et al.* 2004). This is synchronous with the lambing season of the sheep and the reduced abundance of natural prey in the Park. The frequency of border patrols should therefore be increased during the cold months.

One of the common practices that was noted in the Kgalagadi Transfrontier Park was the capture of rogue animals that had crossed into Namibia. It is recommended that this practice only be retained in the case of large predators crossing the fence. In the case

of caracals and other small predators, this practice will be too costly in terms of time, manpower and vehicle wear and tear. Additionally, the chance always exists that staff members could be injured in the process of tracking predators. Repatriating caracals to the Park is also often unsuccessful.

Spoor counts provide an effective and relatively low cost method to monitor predator populations (Funston *et al.* 2001). Spoor counts indicated an increase in caracal activity along the Namibian border in the cold season. A system of spoor counts should be used while doing the regular border patrols to confirm the pattern of increased use by caracals of the border area in the cold months. Additionally, the results of all the spoor counts should be communicated to the Namibian farmers so that they can identify possible high impact zones and periods.

The implementation of management strategies such as employing shepherds, running sheepdogs with the flocks and bringing the flocks in at night (Mazzolli *et al.* 2002) are not viable in the Namibian context. Not only is the viability of this strategy limited by the extensive farming system that is being used in Namibia, but also it is limited because dorper sheep are involved for mutton production in this area (Campher *et al.* 1998). Dorper sheep do not form flocks and they disperse throughout the camps, making regular control and monitoring of flocks impossible. This trait also increases the vulnerability of the sheep to predation.

Various methods of lethal predator control, including gin-trapping, box-trapping, poisoning, predator-calling, tracking, hunting and using packs of hounds are employed (Bowland *et al.* 1990), by the Namibian farmers, to eliminate problem animals. Most of

these methods are unselective and therefore there is no guarantee that the predator responsible for killing livestock is the one that is killed during such control operations.

The most effective, and selective method of destroying a problem animal in the Kalahari is spoor-tracking. The benefit of this method is that, provided that the spoor is followed from the fresh sheep carcass onwards, there is a high likelihood that the animal responsible for killing the sheep will be found and destroyed. All predators will visit a carcass, and if the carcass is not fresh there is a high likelihood that other predator spoor will have obscured the spoor of the responsible predator. Where fresh carcasses are found in the veld it is normally possible to determine whether the animal was killed by a predator or had died of other causes.

Unselective extermination of predators is not the ideal solution to predator control. Predators such as the caracal are opportunists and utilise the most suitable available prey resource. Small stock depredation is a learned behaviour (Stahl *et al.* 2001), and once a predator has experienced killing small stock it is likely to continue doing so. The destabilisation of a predator population by random extermination simply promotes increased recruitment in these areas because there is a surplus of available space and the environment does not limit the predator population. Where possible, it is therefore preferable to eliminate the individual animal that is responsible for the killing of the stock (Stahl *et al.* 2001). In the case of caracals it is difficult to recognise individuals from a distance, and therefore most small stock farmers assume that all caracals are problem animals.

The most effective and selective method for controlling small predators such as caracals is the use of toxic collars (Bowland *et al.* 1990). The collars are fitted to particular sheep

and the poison affects only animals that attack those sheep. The problems are the capital outlay that is required to acquire the collars initially, and the labour involved in putting the collars on the sheep. This method may be appropriate for use on high value stud animals, but whether it is justifiable to use it extensively on large flocks of dorper sheep is questionable.

The use of poison baits is generally unacceptable unless the implementation of such a strategy is closely supervised by an experienced person, because of its non-selective nature and the likelihood of secondary poisonings (Bowland *et al.* 1990).

Stuart (1982) suggested that methods such as aversive conditioning and chemosterilants be used. These methods may be effective in controlled intensive pasture systems or areas with relatively high predator densities, but it is questionable whether such methods would be effective in the open, arid spaces of the Kalahari.

The final alternative is to change the production system on the farms, either to an alternative breed of sheep, or to a combination of sheep and wild animals. Although perhaps not as profitable as the dorper sheep an alternative might be to change over to Damara sheep production. The Damara sheep is an indigenous breed that is known to protect its young aggressively from predators. This breed is also adapted to thrive in harsh environmental conditions (Campher, Hunlun & van Zyl 1998). An option that many farmers seem to be implementing currently is the introduction of wild animals as an additional source of revenue, either through tourism or through consumptive utilisation. The problem with such a switch in breed or livestock type is the initial financial loss that will inevitable.

There is no cheap, effective solution to the predation of small stock by caracals or any other predators along the Namibian border with the Kgalagadi Transfrontier Park. The method that is likely to reap the most immediate benefits is an increase in management effort from both the South African National Parks and the individual Namibian farmers. A joint but sincere effort by the farmers and the Parks officials should be made to maintain the fence. However, from various discussions with the Namibian farmers it was clear that they felt that the maintenance of the fence was not their problem. This attitude will have to change to the mutual benefit of both parties involved if they are serious about reducing stock losses to predators.

Where known problem animals can be identified, they should be eliminated. Such a strategy should be adopted with caution, however, because the removal of animals that do not prey on sheep will make space available for colonisation by another individual that might be more inclined towards preying on domestic stock than the one that was removed.

Communication between the South African National Parks and the Namibian farming community should be improved. An open exchange of ideas and information is the ideal. In doing so, the rationale behind the Park's management decisions should be communicated to the farmers. Ultimately an educational process has to take place to change the attitude amongst the farmers from the belief that all predators are problem animals to one that only some predators become problem animals, and must be dealt with.

Any active management programme for the control of predators on farmlands should be implemented with the economic viability of the endeavour in mind. If the control method

is more costly than the value of the actual stock losses, there obviously is no profit in implementing such a management programme.

## References

- BOTHA, T. 2000. Probleemdiere – waar lê die knoop? *Landbouweekblad* (13 Oktober 2000: 24 – 27) Caxton / RP Magazines, Johannesburg.
- BOWLAND, A.E., MILLS, M.G.L. & LAWSON, D. 1990. *Predators and farmers*. Endangered Wildlife Trust, Parkview.
- CAMPHER, J.P., HUNLUN, C. & VAN ZYL, G.J. 1998. *South African livestock breeding*. South African stud book and livestock breeding association, Bloemfontein.
- FUNSTON, P.J., HERRMANN, E., BABUPI, P., KRUIPER, A., KRUIPER, H., JAGGERS, H., MASULE, K. & KRUIPER, K. 2001. Spoor frequency estimates as a method of determining lion and other large mammal densities in the Kgalagadi transfrontier Park. Unpublished research report to the management of the Kgalagadi Transfrontier Park. (Pp 36 – 52).
- MAZZOLLI, M., GRAIPEL, M.E. & DUNSTONE, N. 2002. Mountain lion depredation in southern Brazil. *Biol. Cons.* 105: 43-51.
- MELVILLE, H.I.A.S., BOTHMA, J. DU P. & MILLS, M.G.L. 2004. Prey selection by caracal in the Kgalagadi Transfrontier Park. *S .A. J. Wildl. Res* 34(1): 67-75.
- MOOLMAN, L.C. 1986. *Aspekte van die ekologie en gedrag van die rooikat Felis caracal Schreber, 1776 in die Bergkwagga Nasionale Park en op die omliggende plase*. MSc. dissertation, University of Pretoria, Pretoria.
- STAHL, P., VANDEL, J.M., HERRENSCHMIDT, V. & MIGOT, P. 2001. The effect of removing lynx in reducing attacks on sheep in the French Jura Mountains. *Biol. Cons.* 101: 15-22.

STUART, C.T. 1982. *Aspect of the biology of the caracal (Felis caracal) Schreber 1776, in the Cape Province of South Africa.* MSc. dissertation. University of Natal, Pietermaritzburg.

URL : <http://lynx.uio.no/catfolk/ssacr101.htm>: *Manifesto on cat conservation.* Cat specialist group, IUCN.