Notes and Records

The successful reintroduction of leopard *Panthera pardus* to the Addo Elephant National Park

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Wild felids are considered extremely difficult to translocate (van der Meulen, 1977; Mills, 1991; Hunter, 1998). In areas where predators become pests, through livestock depredation, they are occasionally trapped and moved to nearby conservation areas (Hunter, 1998; Woodroe & Frank, 2005). These individuals often move back to their original location, irrespective of the distance, possibly because the release area was saturated with conspecifics (Hunter, 1998). For example, twelve stock-raiding leopards were relocated to Kenya's Meru and Tsavo-West National Parks, but within 2 weeks, all had left the conservation areas (Hamilton, 1981). Similarly, all five lions *Panthera leo* translocated from Laikipia, Kenya to Meru National Park died (Woodroffe & Frank, 2005). Translocated tigers have also been killed by resident individuals (Seidensticker *et al.*, 1976). Here, we report on the successful translocation of a leopard from farmland to a national park. Such reports are largely absent from the literature despite their importance in illustrating successes and failures of such translocations.

A young, but adult, male wild leopard was trapped on a farm adjacent to the Baviaanskloof Wilderness Area (33°45′S; 24°10′E) on 4 April 2004 after a farmer had lost stock to large predators. The leopard was kept in a large cage trap for a week, during which time the leopard was shot – the details of this are unclear. The bullet entered the leopard's right hind leg, shattering the knee. At the end of the incarceration period, the leopard's claws were completely worn down on all four feet.

On 12 April 2004, the leopard was treated by a veterinarian, fitted with a radio collar and placed in the predator-holding boma at Rooidam (33°27′18″S, 25°45′00″E) in the Addo Elephant National Park (AENP). The leopard's intended release was to be dependent upon its recovery. A ranger stationed at the boma overnight reported hearing growls and hisses coming from the boma at 03.00 hours. Upon discovering the absence of the leopard the following morning, it was deduced that these sounds were caused when the leopard scaled the fence, which consisted of 3-m-high mesh and four strands of electric (9000 V) wire.

Searches instigated the same day failed to locate the leopard. Two months later (20 June 2004), during research observations of lions reintroduced into AENP, three male lions located a female kudu carcass cached up a small tree ~8 km from the boma. A search of the leopard's radio frequency revealed it was nearby.

Researchers have subsequently located the leopard almost daily for over a year. To date, it is occupying an 8 × 3 km section of AENP along the slopes of the Zuurkop hill. This area includes a botanical reserve encapsulating some of the densest vegetation of the park and has remained free of elephants since the park's fencing in 1954 (Lombard *et al.*, 2001). There have been no apparent attempts by the leopard to return to its initial capture location nor has the leopard approached areas associated with human activity, such as the park rest camp or boundary fences. The animal has been seen on three occasions by tourists and staff.

The survival of this leopard despite its extensive injuries is remarkable. We hypothesize that the apparent success of this translocation was due to an abundance of suitable predator-naïve prey within the preferred weight range (10–40 kg) of the leopard (Hayward *et al.*, 2006). Ultimate success will depend upon this animal being able to breed at this site – a female leopard was reintroduced in 2006 but has not been monitored. Consequently, future translocation attempts of large predators should occur into areas with sufficient density of appropriately sized prey (Hay-

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ward & Kerley, 2005; Ott, Kerley & Boshoff, 2005) and a low density of conspecifics.

The 80-km distance between the capture and release sites and/or the extent of its injuries may also have assisted in keeping the leopard within the AENP which is in stark contrast to previous studies (Hunter, 1998). Similarly, the absence of any conspecifics is likely to have minimized the likelihood of intra-specific aggression; however, the presence of lion and spotted hyaena *Crocuta crocuta* in AENP meant the leopard had to rapidly learn predator avoidance behaviours to cope with more dominant, threatening (Palomares & Caro, 1999) competitors.

Failures of the translocation arose with the inability of the existing 'predator-proof' boma facility to contain the leopard. This led to a 'hard release', which is generally less successful than 'soft releases', which incorporate a captivity period at the release site (Hunter, 1998; Moehrenschlager & Somers, 2004).

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