Abstract: In southern Africa, the increasing popularity of ecotourism has resulted in the establishment of wildlife reserves in areas formerly used for intensive livestock and crop farming. In 1992, the Phinda Resource Reserve began a large-scale project to attempt the re-introduction of lions and cheetah into northern Natal, South Africa. The project has been successful in initiating the re-establishment of these two species. Both have bred quickly and the survival of the litters has been high. A long-term management plan is underway to exchange individuals of both species with other reserves in South Africa to minimize inbreeding of both founder populations of about 30 individuals each.
Reintroduction of Lions and Cheetahs in South Africa

by Luke Hunter

In southern Africa, the increasing popularity of ecotourism has resulted in the establishment of wildlife reserves in areas formerly used for intensive livestock and crop farming. These projects are laudable in their attempts to re-establish the former wildlife of the region, but the understanding of the parameters necessary to make such ambitious ventures successful are often poorly understood. At the beginning of 1992, the Phinda Resource Reserve, a privately-owned wildlife reserve of 18,500 ha, began a large-scale project to attempt the reintroduction of lions (Panthera leo) and cheetahs (Acinonyx jubatus) into northern Natal, South Africa, a region from which both species had been absent for many decades.

In conjunction with the University of Pretoria’s Mammal Research Institute, an intensive research project was implemented at Phinda to monitor the progress of reintroduced felines in an effort to establish criteria for success in this sort of manipulation of wildlife communities. This article presents a brief summary of the project’s success to date and the management implications involved in the reintroduction of large felines. Greater detail of the behaviour and ecology of reintroduced lions and cheetahs will be presented in a series of papers currently in preparation.

Phinda authorities released 13 lions and 13 cheetahs between 1992-1993. All the animals were wild-caught and, upon their arrival at Phinda, were kept in an 80 m² x 80 m² boma for 8-10 weeks. This period of captivity prior to release seems to be very important when translocating carnivores. Experience from earlier translocation efforts indicates that carnivores released without the pre-release captive period leave the release area and often head for the capture site which may be hundreds of kilometres away. At Phinda, all released animals remained in the reserve and established stable home-ranges within a few months of release. During this process the “conditioning” of animals to electro-stimulated fences was important. At Phinda, the entire reserve is enclosed by a 2.2 m high electric game-fence. The holding boma had an internal electric fence so that animals’ initial efforts to escape the boma resulted in being shocked. When released, lions and cheetahs appeared to “respect” the fence and have not crossed it, despite the temptation of livestock and game on neighbouring properties.

In addition to radio-collaring some individuals (Telenoa, Aricor, Mka), all animals brought to Phinda have been implanted with subcutaneous Trovan™ transponder identification chips and tattooed on the gum above an upper canine tooth, ensuring positive identification should animals leave Phinda boundaries. After three and a half years, all transponder chips are still working and have proved to be an excellent method of marking animals. By now, however, the gum tattoos are unrecognisable or have disappeared.

Mortality of released felines in the first three years has been high; illegal human activity in the reserve being the single greatest factor. Wire-stare poisoning at Phinda has killed five lions and two cheetahs. In the case of the lions, disruption of stable social groups resulted in the loss of five cubs, deaths which would probably not have occurred if not for the initial losses of pride mates by snaring. Three lions were destroyed when they killed a tourist, and a female cheetah with three yearling cubs born at Phinda left the reserve when an entrance gate was inadvertently left open. These animals were not recovered and moved into farmland where they were almost certainly shot. Deaths of cheetahs also occurred as a result of territorial clashes (two male deaths) and encounters with lions (two male deaths). These natural deaths aside, the influence of human activity on the success of such projects cannot be underestimated. When reintroduction of large predators is to be attempted, reserve managers need to allocate resources wisely to control such issues as movements of people and poaching within the reserve.

Nonetheless, the project has been successful in initiating the re-establishment of these two species in the area and Phinda is now one of the finest reserves in South Africa in which to view these animals. Both species have bred quickly and survival of the litter is high. Populations of both lions and cheetahs are approaching 30 individuals and a long-term management plan is underway to exchange individuals of both species with other reserves in South Africa. In small areas such as Phinda, where few numbers of individuals make up founders of a reintroduced...
Eighth International Snow Leopard Symposium

Snow leopards, specialists from 10 range countries met in Isla-
mabad, Pakistan, from 12-16 November 1995 at the Eighth Interna-
tional Symposium to facilitate cooperation for snow leopard and biodi-
versity conservation in Central Asia. The range countries represented were Bhutan, China, Kazakhstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan, Turk-
menistan and Uzbekistan. They were joined by specialists from Brit-
ain, Canada, Switzerland and USA.

The symposium was organized by the Seattle-based Interna-
tional Snow Leopard Trust and WWF Pakistan. The following
resolution was approved unanimously:

"Realizing the endangered status of the snow leopard and its
importance as a flagship species for biodiversity in the mountain
ecosystems of Central Asia, the participants...resolve that:

Effective and do-able programmes must be initiated in the
snow leopard range states to address issues of livestock predation
by snow leopards through testing of various compensation mod-
els involving local herder and pastoral communities, and helping
them to be aware of the need for better care of their livestock, as
to have programmes which indirectly compensate them for loss
of livestock through socio-economic development. Such pro-
grames have already been initiated in Pakistan, Mongolia and
Nepal and will be replicated in Kazakhstan and Tajikistan.

Key conservation areas for snow leopards must be identified
through mutual agreements, both within the range countries and
across their international boundaries, and measures adopted to
protect them from degradation and fragmentation, including the
development and implementation of management plans. Pakistan
has already developed a management plan for the Pakistani part
of the transboundary parks of Khunjerab and Central Sarakorum
in the northern areas, which needs to be implemented and ex-
tended to China. Other countries with transboundary reserves,
such as Kazakhstan (Zailissky Alatau National Park), Uzbekistan
(Gissarsky Reserve), Tajikistan (Kooperativ Lake), Kyrgyzstan
(Peak Pobeda) and China (Tomur Nature Reserve) should follow
this example.

Much important information regarding the snow leopard and
its linkages with its prey and habitat being lacking, scientific
studies should be initiated to cover aspects that help in the
conservation of snow leopards.

Poaching, fur trade and the use of certain parts of snow
leopards being direct threats to the existence of the snow leopard,
range countries must implement CITES en, if they are not Parties,
for the Convention. The symposium also urges the extension of
bans on use of tiger products to cover other species of threatened
wild species, including snow leopards.

Support should be given to efforts to work with the traditional
medicine communities to encourage sustainable use of wildlife
products, including finding alternatives for products from rare
species.

Education programmes should be developed for snow leopard
areas, and shared between range states, that address the issues of
the trade in snow leopard pelt and other products, and cover
various target groups, from local communities to the policy
makers, in different range states.

The International Snow Leopard Trust (ISLT) should deter-
mine ways and means to satisfy the feasible needs of range
countries in terms of support for training their staffs, helping them
identify new key snow leopard areas and in managing the existing
critical habitats and corridors. ISLT must monitor the progress made in implementing these
resolutions and report successes and failures to the next sym-
posium.

"Details of these recommendations, actions and activities are
contained in the attached Annexes.

Anexes

Participants in the Eighth International Snow Leopard Symposium,
held in Islamabad, Pakistan, 12-16 November 1995, present the
following resolutions as recommendations to the Board of Direc-
tors of the International Snow Leopard Trust, WWF Pakistan and
other concerned organizations for approval and implementation.

1. Predation on livestock

1.1. Encourage local communities to improve the management
and protection of their livestock from predation by snow
leopards and other large predators.

1.2. Provide better veterinary services for livestock to improve
survival rates.

1.3. Introduce ways whereby local communities can earn alter-
native income in order to reduce their dependence on live-
stock, and thereby reduce the size of livestock herds.

2. Habitat fragmentation and conservation of prey species

2.1. Identify snow leopard "hotspots" and corridors for imme-
diate conservation action.

2.2. Encourage the preparation of management plans for conser-
vation of sustainable prey populations.

3. Scientific studies

3.1. International collaboration to identify critical transbound-
dary snow leopard areas.

3.2. Establish a genetic survey of snow leopard populations,
initially using easily available materials from zoo animals
and existing scientific collections.

3.3. Study snow leopard ranging behavior in both isolated,
low-density populations, as well as high density popula-
tions.

3.4. Study snow leopard prey species population trends and
their relationship to on-going changes in pastoralism in the re-
gion. Target areas where there is little information for status
surveys on snow leopard prey.

3.5. Acknowledge the initiative of Miszkonzenko (Russia) in
sponsoring a study to determine snow leopard status in
Russia and the development of measures toward effective
conservation of this species.

4. Poaching and fur trade

4.1. Encourage countries with snow leopards which are not
Parties to CITES to join the Convention and implement its
provisions.

4.2. Initialization by the ISLT of dialogues with the World Trade
Organization on the problems arising from trade in wildlife
products.

4.3. Train wildlife staff responsible for enforcement of wildlife
laws in snow leopard range countries.