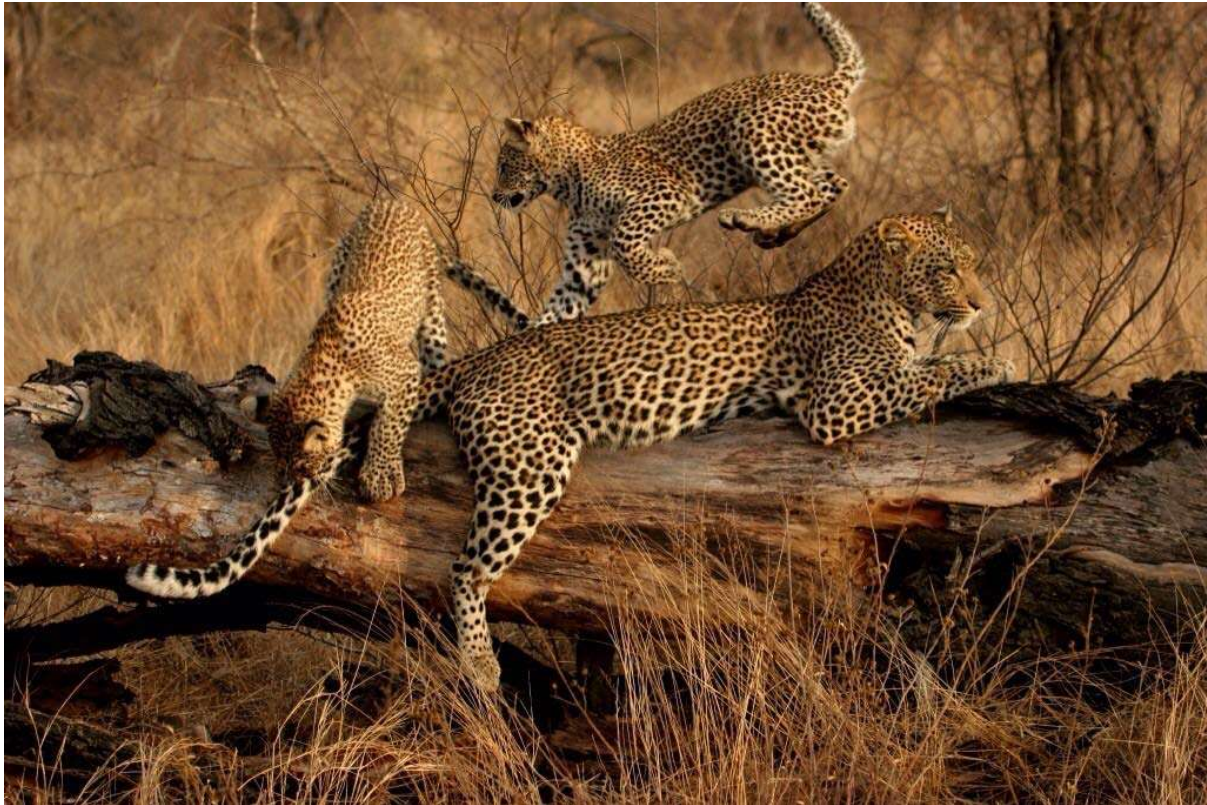


Timbavati Private Game Reserve



In 1956, a group of conservation minded landowners formed the Timbavati Association with the aim to reclaim the land for the benefit of all. They had come together after witnessing the degradation of a once pristine wilderness area.

Insensitive land use (primarily crop and cattle farming) had caused soil erosion and destruction of indigenous plant species. In addition, natural water sources had been rerouted by dams further impacting on the natural status quo. As a result, much of the wildlife common to the area was lost.

Since the formation of the Timbavati Association, every landowner in the area has been encouraged to join in the conservation effort. Today there are over 50 members who have succeeded in restoring the land to its former glory, with diverse and rare wildlife species making the Timbavati their home

In 1993, in recognition of the importance of the area, the fences between the Kruger National Park and the Timbavati Reserve were removed to encourage natural species migration.

Man's incursions into this part of the Lowveld have always been temporary and brief, from early stone age down to the early 20th century. In point of fact, large tracts of land in the northern portion of the Lowveld were never permanently settled by man. The lands now comprising the Timbavati were barely touched, and are still only lightly inhabited. This part of South Africa's bushveld region may therefore be regarded as truly unspoiled and deserves recognition as genuine wild land, as opposed to the "restored" and "restocked" lands commonly found elsewhere.

There are 4 research projects taking place in the Timbavati:



Vulture Research

The vulture nest monitoring project is done in collaboration with the Endangered Wildlife Trust of South Africa. The project has two main aims. The first aim is to monitor permanent marked nests in terms of yearly use and secondly, to monitor elephant impact on trees used by vultures. The Timbavati has the largest vulture nesting colony in the APNR. Together with the management of vegetation and elephants it is imperative to monitor vulture nest numbers as elephants impact on these trees. Vulture chicks are marked and visitors, guides and staff are requested to record their location. Some birds have been found in KwaZulu-Natal and the Kalahari regions.

Leopard Research

The Timbavati Leopard Project is a research project based on a broad co-operation between the Timbavati Private Nature Reserve, researchers and private partners. The leopard is currently listed as a “near threatened” species on the IUCN Redlist. However, it is considered likely that the species will soon qualify for a “vulnerable” status. It is therefore important to address the many threats posed to the species as part of any comprehensive management strategy.

As an effort to cast light over the current status of this elusive and secretive cat, we wish to estimate the leopard population, occupancy and space use within the TPNR.

Combined with genetic and behavioural profiling, we intend to add variables to the study that will increase the understanding of the species and directly address many of the threats against the species. Modeling the importance of behaviour in the context of spatial use and habituation remains very relevant and represents a new research approach for leopards.

This might very well have implications for big-picture leopard management planning across its range. The project is completely non-invasive to the animals, and will be based on both still shots and video footage from camera traps throughout the reserve.

The Timbavati Private Nature Reserve has partnered with Panthera, the only organisation in the world devoted exclusively to the conservation of the world’s 38 wild cat species and their ecosystems.

Elephant Research

The Transboundary Elephant Research Programme represents the South African branch of Save the Elephants. The research extends across Great Limpopo Transfrontier Park, presently continuing as *Elephants Alive*. The project officially started in 2003, but draws on data collected over more than a decade thereby representing a long-term study, focused on understanding the motivation behind elephant movements from core conservation areas such as the Kruger National Park (KNP) to the North (Zimbabwe), the East (Limpopo National Park in Mozambique) and the West (Associated Private Nature Reserves).

Previous and ongoing research efforts have resulted in an extensive individual elephant identification database for the western (more than 1500 elephants identified since 1996) and the northern study site (more than 100 bulls and 11 independent breeding herds have been identified since 2008). They have obtained an improved understanding of elephant ranging behaviour through the collaring and recollaring of 53 elephants during 75 collaring operations in the western, eastern and northern regions of the KNP.

A long term database of elephant impact on selective trees started in 2004 in order to monitor changes in the survival rates of large trees over time and the consequential influence that these changes may have on other species (tree nesting birds). The project monitors 2971 individually labelled trees to determine their survival rate. Since 2008, 62 large trees used by southern ground hornbills and 102 trees used by raptors and white backed vultures as nesting sites are being monitored to understand the influence of elephant impact on these nesting sites. They also experiment with large tree protection methods (wire netting) to foster positive human-elephant interactions as large trees are of aesthetic importance to landowners, tourists and managers alike.

The project believes that a sound scientific basis is important in wildlife management and scientific endeavour should also partly be dedicated to education and action pertaining to environmental issues. They involve local people at grass roots level in research and education to develop a conservation ethic based on local knowledge and elephant needs. Their community outreach programme, which promotes conservation amongst local children on the periphery of conservation areas, has hosted five Bush School Programmes in the Timbavati Private Nature Reserve since 2007.

Ground-Hornbill Research

The Southern Ground-Hornbill Research Program, which is run by the Percy FitzPatrick Institute of African Ornithology, began in 2000 with the aim of creating a better understanding of the breeding ecology and home range use of this cooperative breeding species.

During the breeding season that runs from October to March, the Project monitors all 58 natural and artificial nests in the Timbavati, Klaserie and Umbabat to determine the success of each breeding attempt (Figure 1). This is done to determine what makes certain groups more successful at breeding than others. During this season we also harvest second-hatched chicks which are hand-reared for the wild-release and captive breeding programmes run by the Mabula Ground-Hornbill Project (Figure 2).

Then, with the use of satellite transmitters attached to one individual in each group we are able to track their movements and calculate home range size and habitat use (Figure 3). Using this information we can better understand how Ground-Hornbills utilise this space: what habitats they favour and avoid and why.



