INTRODUCTION

The monitoring and ringing of Lappet-faced Vultures (LFV) *Aegypius tracheliotos* (formerly *Torgos tracheliotos*) in the Namib-Naukluft Park (NNP) started in 1991. Annually more areas were investigated until most of the known breeding areas were checked and the chicks ringed. The only exception is the Koigab area north of Aus, which due to the distance involved, was only surveyed once in 1998 and then from the air in 2005. At the same time areas south of Sossusvlei in the NNP and adjacent NamibRand Nature Reserve were flown. This is the longest running project of its kind in Namibia. It is providing an increasing amount of data, which can be used for wildlife management planning, by ornithologists and biodiversity researchers.

In 2000, an aircraft was used to survey part of the breeding area at Ganab. In 2001, an aerial survey of 15 hours was done, which covered most of the known breeding areas. No ringing was done in 2001. In October 2002, an aerial survey of 18.5 hrs was completed and then 46 chicks were ringed, although breeding attempts by 55 LFV were recorded. In 2003, after an aerial survey, 52 breeding attempts were recorded and 44 chicks ringed. The following year (2004), 52 chicks were ringed and another four breeding attempts recorded, again after an aerial survey.

AERIAL SURVEY 2005

In 2005, due to increased sponsorship, we were able to survey the area from south of Sossusvlei to the Orange River for the first time.

The above-mentioned survey, on Monday 26/09/2005 and Tuesday 27/09/2005, was a joint Vulture Study Group (VSG) / Ministry of Environment and Tourism (MET) operation organized and funded through the VSG. Nedbank funded the aircraft fuel and transport from Walvis Bay. Rob Field of Zebra River Lodge piloted the aircraft, a Cessna 182 without charge to the VSG. Observers were, René Koral, Andreas Keding, Peter Bridgeford and Marc Dürr. A total of 11 hrs was flown, including ferry time. Breeding attempts were recorded on NamibRand, Kumbis and in the Diamond Area south of Aus. The biggest disappointment was not finding any signs of breeding in the Koigab area, although many old nests were seen. Accommodation and meals were provided by Tok Tokkie Trails, from where the survey took place. Piet Swiegars of Klein Aus Vista transported the fuel from Keetmanshoop, to the Aus airfield and fed the starving crew.

The second part of the survey (15 hours) took place from Saturday 1/10/2005 to Monday 3/10/2005. This was the area surveyed in past years, between the Swakop River and Sossusvlei. Manfred Loth piloted the aircraft. Warden Crispin Nkonwena and Ranger Enos Kalundingo assisted observers Malcolm Taylor and Peter Bridgeford. After completing the Ganab area, the crew moved to Weltevrede Guest Farm. The rest of the survey was flown from there. Manfred and Malcolm sponsored the cost of the aircraft hire. Rolf Wehnert is thanked for the reduced hire costs. Food and accommodation were provided by Weltevrede Guest Farm. KPMG sponsored the aircraft fuel and the cost of transporting the fuel was funded by Nedbank.

During the aerial survey, occupied nests were plotted on a GPS and additional information usually recorded on a tape recorder. However, the tape recorder malfunctioned once we were airborne and I attempted to take notes. Adult birds, chicks and even eggs are visible from the air in the nests. However, it is not possible to differentiate between birds roosting on nests and breeding birds.
RINGING

Ringing took place as follows:
7/10 to 10/10/2005 and 13/10 to 14/10 2005......Ganab
20/10 to 23/10/2005 ............................................Saagberg/Kamberg, Tsondab/Escourt
28/10/2005 ..........................................................Sukses/Sossusvlei

Ringing was done by Peter Bridgford and Marc Dürr, who now also has a licence to ring vultures and is a keen VSG supporter. Malcolm Taylor and Tok Tokkie Trails (Marc Dürr) provided the transport for the ringing and Nedbank and KPMG sponsored the fuel. Academia Friendly Supermarket provided funding for new equipment, food and other expenses.

During the ringing, a BBC crew filmed a chick being ringed near Hotsas.

RESULTS OF THE RINGING

Certainly not as good a year as 2004, with only 37 chicks ringed. A further seven breeding records were noted: namely three nests with abandoned eggs, two chicks too small to ring and two chicks which had fledged and flew off the nest at our approach.

DISCUSSION OF RESULTS

The aerial survey has the advantage that marginal breeding areas can easily be checked, whereas in the past they were often left because a vehicle survey was a slow, tiring exercise and time was limited. Almost all the GPS marked points were investigated, although on occasions no active nests were found. It is assumed that birds perched on nests were mistaken for breeding birds.

The Tsauchab River, which leads to Sossusvlei, has shown the biggest decline over the past few years, with only one breeding bird found this year. The numbers found in the Sukses/Tsamsvlei are back to their average (6 ringed) after the high of 2003, while the Tsondab area is the same as the past three years (four ringed, one too small and one egg). Numbers of chicks ringed in the Saagberg/Kamber area, have decreased from eight in 2002, to two this year. The Ganab area is back to the 2002/2003 figures with 26 nesting records (23 ringed). Last year had a record number, with 40 chicks ringed.

During the aerial survey and ringing, it was seen that in the Gemsbokwater area there were large numbers of mountain zebra, gemsbok, springbok and ostriches. There were more animals in the southern areas than last year, when it was suspected that the increase in breeding birds in the Ganab area was a result of birds moving closer the food source. Another factor affecting vulture breeding, specifically in the Sossusvlei area, may be the large number of tourist vehicles and aircraft on pleasure flights in and over the Tsauchab River valley.

LOGISTICS

The Lappet-faced Vulture breeds over a vast area in the Namib-Naukluft Park and this increases the time and costs during the aerial survey and ringing. The additional survey in the south increased flying hours and costs to transport fuel and personnel.

Aerial survey ......................................................................................................................26 hours (11 plus 15)
Transport of fuel, equipment and personnel by vehicle during the aerial survey..............................19 hours
Distance travelled 2x4 vehicle................................................................................................1 450 km
Avgas ........................................................................................................................................6 drums

Ringing .................................................................................................................................. 7,5 days
Distance travelled 4x4vehicle...............................................................................................2200 km
Support vehicle 2x4 to transport personnel and equipment....................................................520 km
ACKNOWLEDGEMENTS

This project could not continue without the support of several people and organisations. The VSG thanks the following:
Ø MET for allowing the survey and ringing to continue.
Ø The pilots Rob Field and Manfred Loth who got us home safely every time and did not charge for their time.
Ø Marc Dürr of Tok Tokkie Trails and Malcolm Taylor, who supplied the 4x4 vehicles.
Ø Weltevrede Guest Farm for accommodation and meals during the aerial survey.
Ø Nedbank for their continued support of the project over three years, without them we could not have started the aerial surveys. They paid for aircraft and vehicle fuel.
Ø KPMG who donated the fuel for the aerial survey and other transport costs.
Ø Academia Friendly Supermarket for all those unforeseen expenses and new equipment.
Ø Malcolm Taylor and Manfred Loth for funding the survey in the south.
Ø Klein Aus Vista for their support.
Ø Simone and Walter Swart of Solitaire Guest Farm who assisted with the ringing.
Ø The KPMG partners and the Slabbert family who financially supported and assisted with the ringing.

Peter Bridgeford
VSG Co-ordinator.

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<tr>
<th>YEAR</th>
<th>TSAUCHAB</th>
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<th>TSONDAB</th>
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Table 1: Number of Lappet-faced Vulture chicks ringed in the Namib-Naukluft Park.
(In 2000 only a partial survey of Ganab and Tsondab was done. In 2001 no ringing was done).