

# Results from the first year of camera trapping at Namibwater and Tsamsvlei, Namib-Naukluft Park

Holger Kolberg  
holgerk@afol.com.na

Camera traps (trail cameras) were installed at Namibwater and Tsamsvlei waterholes in the Namib-Naukluft Park on 5 August 2017. The main aim of the cameras is to identify

vultures with patagial tags but the images are also used in a zebra population study and to log carnivores.



Bushnell TSAMSV N 97°F36°C 04-22-2018 11:54:00

**Figure 1:** Sample image showing three birds with readable patagial tags.

Over the period 5 August 2017 to 25 August 2018 the cameras captured over 500 000 images (most of these are of oryx and zebra!). From the images 88 individual vultures could be identified on 107 and 80 occasions at Namibwater and Tsamsvlei respectively. Sixty-three birds were recorded only once whereas one bird was captured eight and another ten times.

**Table 1:** Number of times birds were re-sighted at Namibwater (NW) and Tsamsvlei (TV).

Seen	NW	TV
1 x	34	29
2 x	16	10
3 x	6	
4 x	2	2
5 x	3	1
8 x		1
10 x		1

In total there are 519 re-sightings involving the above 88 individuals. Apart from the two localities above, there are also cameras at Hotsas and Gemsbokwater in the Namib-Naukluft Park. Other re-sightings are mainly from tourists photographing tagged birds and cameras used to monitor the hyaenas at Garub in the southern Namib-Naukluft Park. One bird (L159) has been re-sighted 24 times; a total of five birds have been seen twenty times or more and another thirteen birds more than ten times.

**Table 2:** List of birds re-sighted more than ten times.

Tag	Times Seen
L159	24
F115	23
L344	21
L582	21
L448	20
L438	19
L570	19
L338	18
F135	16
L501	15
F138	14
L494	14
L181	12
L520	12
L573	11
L557	10
L586	10
L681	10

The majority of re-sightings occurred within one year of the birds being ringed whereas one bird was re-sighted more than nine years after it was initially tagged. Surely this is a factor attributable to the camera placement because only one of the five birds where more than six years had elapsed is not from the Namibwater/Tsamsvlei area, the

exception being L75 that was ringed near Tsondabvlei and first re-sighted at Hotsas.

**Table 3:** Time elapsed (in years) between ringing and first re-sightings.

Years Elapsed	No of birds
0	41
1	25
2	10
3	4
4	3
6	1
7	3
9	1

The largest cumulative distance travelled by one bird (L181) is 1 577 km and one further bird (L655) has accumulated more than 1 000 km between ringing and re-sighting. Fourteen birds have covered more than 500 km since being ringed.

**Table 4:** List of birds that have travelled more than 500 km between ringing and re-sighting.

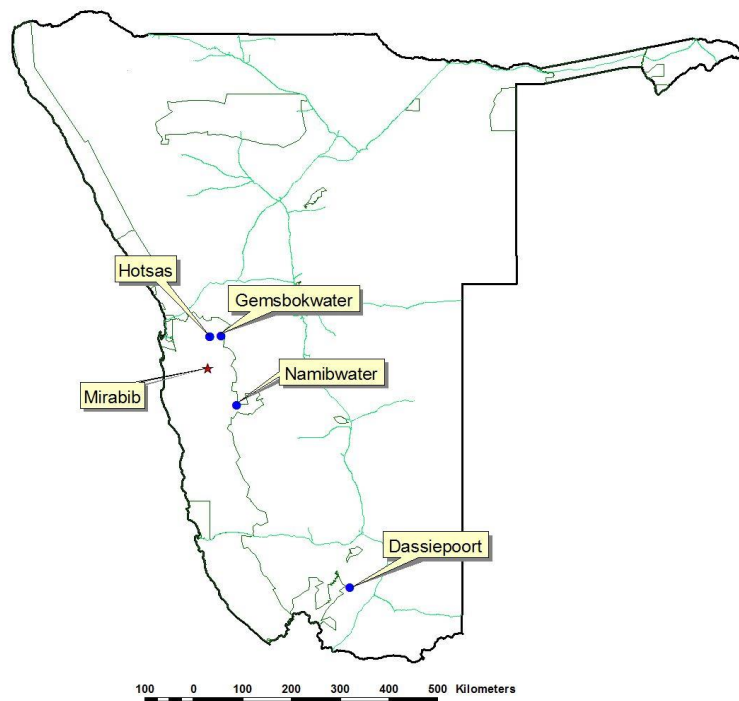
Tag	Distance
L181	1577.165
L655	1136.652
L438	989.4316
F138	794.7623
F173	766.8465
F135	734.6651
L545	705.9829
L424	669.7759
L637	668.9187
L570	659.2245
L504	598.7624
F178	560.0274
L606	549.7245
L618	500.2499

Below are accounts of some of the more 'interesting' birds:

**L181:** Lappet-faced Vulture, ringed as a chick near Mirabib on 24 October 2013. Re-sighted on 11 March 2015 at Dassiepoort waterhole in the Gondwana Cañon Park; one year, four months and sixteen days after ringing and 520 km from the ringing site. On 10 April 2016 it was captured (on camera) at Hotsas, one year, one month and one day after the previous sighting, 575 km from

Dassiepoort. It was then recorded at Gembokwater five months and three days later and on 25 August 2017 it was captured at Namibwater, 144 km further south. Twelve days later it was back at Gembokwater and then it was recorded at Hotsas another six times. The last re-sighting of this bird was on 2 February 2018, again at Namibwater.

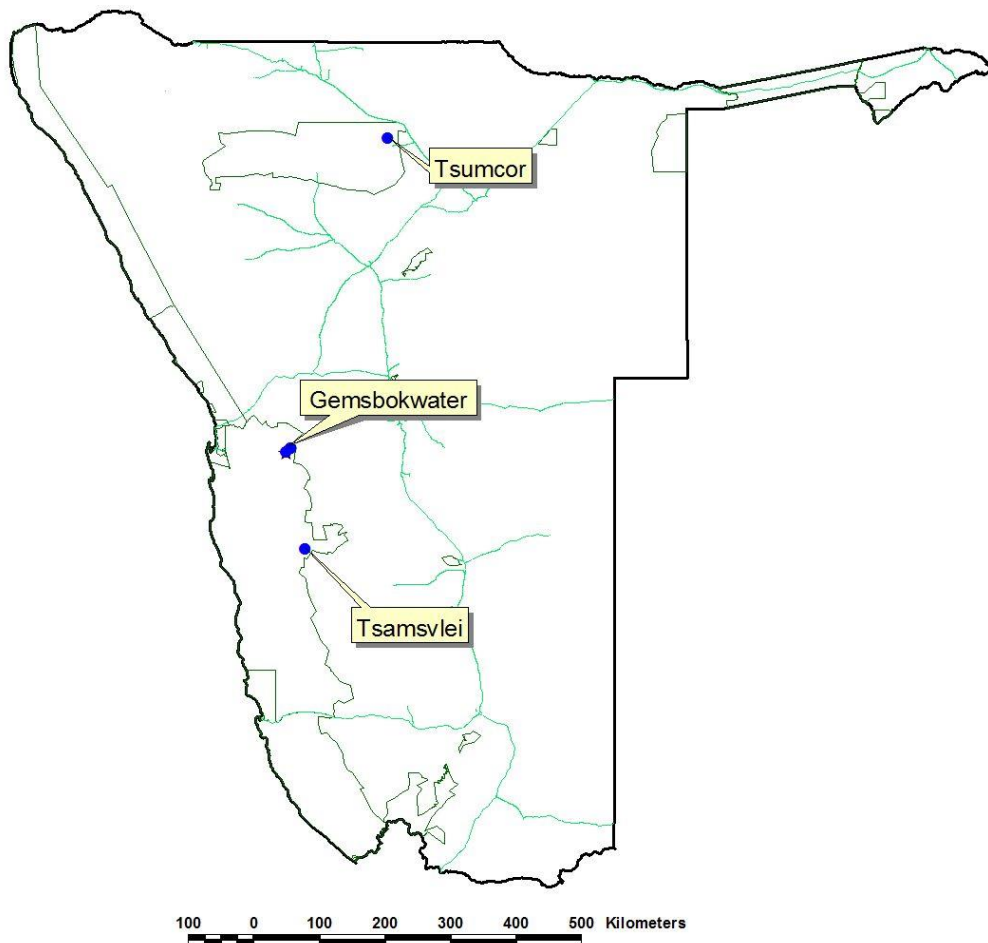
Date	Locality	Distance (km)	Time elapsed
2013-10-24	Mirabib		
2015-03-11	Dassiepoort waterhole, Gondwana Cañon Park	520.036	1 year 4 months 16 days
2016-04-10	Hotsas	575.266	1 year 1 month 1 day
2016-09-12	Gembokwater	21.867	0 years 5 months 3 days
2017-08-25	Namibwater	144.876	0 years 11 months 12 days
2017-09-06	Gembokwater	144.876	0 years 0 months 12 days
2017-09-21	Hotsas	21.867	0 years 0 months 15 days
2017-09-22	Hotsas	0.000	0 years 0 months 1 day
2017-09-23	Hotsas	0.000	0 years 0 months 1 day
2017-10-24	Hotsas	0.000	0 years 1 month 1 day
2017-10-27	Hotsas	0.000	0 years 0 months 3 days
2017-12-26	Hotsas	0.000	0 years 1 month 29 days
2018-02-02	Namibwater	148.378	0 years 1 month 7 days
	<i>Cumulative</i>	<i>1577.166</i>	<i>4 years 3 months 11 days</i>



**L655:** Lappet-faced Vulture, ringed as a chick near Gemsbokwater on 15 October 2016. The bird was still in the nest on 19 December but twelve days later it was photographed at Gemsbokwater. It was re-sighted another three times at the same place after that. On 13 August 2017 the

bird was photographed by a tourist at Tsumcor waterhole in Etosha National Park, 491 km from Gemsbokwater. Ten months and 23 days later the bird was captured at Tsamsvlei, 636 km from Tsumcor. This is also the last time the bird was recorded.

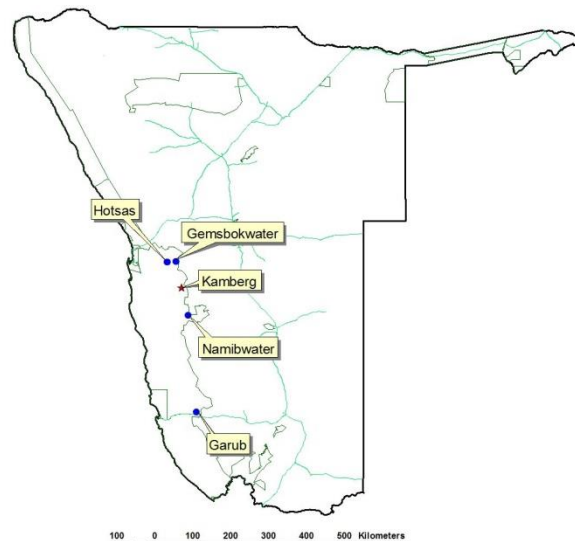
Date	Locality	Distance (km)	Time elapsed
2016-10-15	Gemsbokwater		
2016-12-19	Gemsbokwater	0.000	0 years 2 months 4 days
2016-12-31	Gemsbokwater	9.299	0 years 0 months 12 days
2017-01-01	Gemsbokwater	0.000	0 years 0 months 1 day
2017-04-08	Gemsbokwater	0.000	0 years 3 months 6 days
2017-05-30	Gemsbokwater	0.000	0 years 1 month 21 days
2017-08-13	Tsumcor waterhole	491.130	0 years 2 months 14 days
2018-07-06	Tsamsvlei	636.224	0 years 10 months 23 days
	<i>Cumulative</i>	<i>1136.653</i>	<i>1 year 8 months 20 days</i>



**L438:** Lappet-faced Vulture, ringed as a chick near Kamberg on 14 October 2013. First re-sighted one year, two months and 29 days later at Hotsas, 75 km from the ringing site. It then spent about two-and-a-half years in the Hotsas/Gemsbokwater area. On 2

January 2018 it was photographed at Garub, southern Namib-Naukluft Park, 400 km from Gemsbokwater. One month and three days later it was recorded at Namibwater and a further four months and seventeen days later it was back at Hotsas.

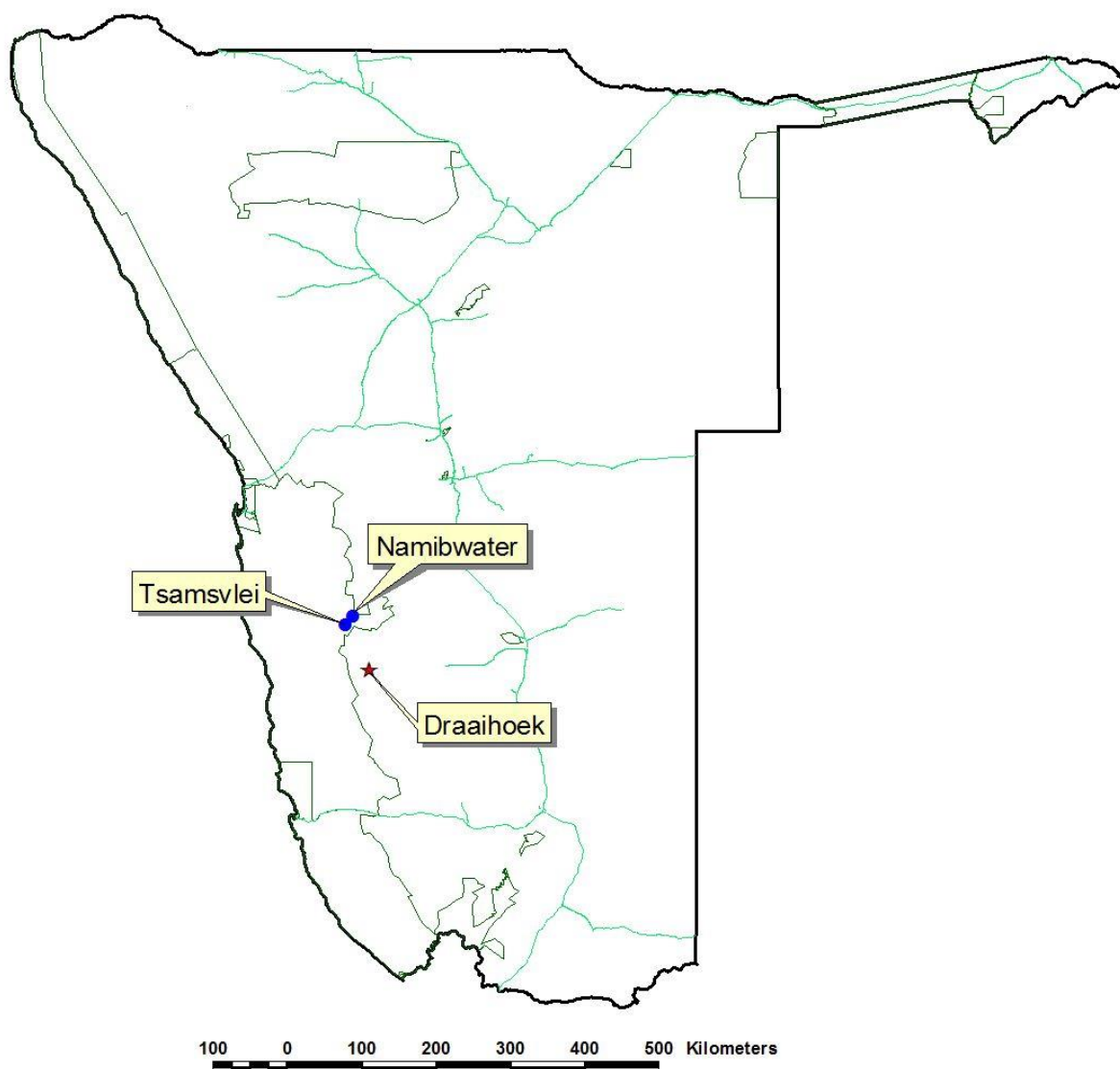
Date	Locality	Distance (km)	Time elapsed
2013-10-14	Kamberg		
2015-01-12	Hotsas	75.672	1 year 2 months 29 days
2015-06-30	Gemsbokwater	21.866	0 years 5 months 17 days
2015-09-24	Gemsbokwater	0.000	0 years 2 months 25 days
2016-04-19	Hotsas	21.866	0 years 6 months 25 days
2016-08-25	Hotsas	0.000	0 years 4 months 6 days
2016-09-15	Hotsas	0.000	0 years 0 months 21 days
2016-10-03	Gemsbokwater	21.866	0 years 0 months 18 days
2016-11-01	Gemsbokwater	0.000	0 years 0 months 29 days
2016-11-24	Hotsas	21.866	0 years 0 months 23 days
2016-12-17	Hotsas	0.000	0 years 0 months 23 days
2016-12-18	Hotsas	0.000	0 years 0 months 1 day
2017-07-05	Gemsbokwater	21.866	0 years 6 months 16 days
2018-01-02	Garub	400.077	0 years 5 months 29 days
2018-02-04	Namibwater	255.971	0 years 1 month 3 days
2018-02-05	Namibwater	0.000	0 years 0 months 1 day
2018-06-23	Hotsas	148.381	0 years 4 months 16 days
2018-06-24	Hotsas	0.000	0 years 0 months 1 day
2018-07-25	Hotsas	0.000	0 years 1 month 1 day
2018-07-27	Hotsas	0.000	0 years 0 months 2 days
	<i>Cumulative</i>	989.431	4 years 9 months 13 days



**V821:** Lappet-faced Vulture, ringed as a chick on 16 October 2007 on farm Draaihoek, NamibRand Nature Reserve. First re-sighted on 11 September 2017 at Namibwater, nine

years, ten months and 28 days after it was ringed. The bird was again captured at Tsamsvlei on 28 June 2018.

Date	Locality	Distance (km)	Time elapsed
2007-10-16	Farm Draaihoek, NamibRand Nature Reserve		
2017-09-11	Namibwater	74.476	9 years 10 months 28 days
2018-06-28	Tsamsvlei	15.048	0 years 9 months 16 days
	<i>Cumulative</i>	89.524	10 years 8 months 14 days



**F088:** Lappet-faced Vulture, ringed as a chick near Tsamsvlei on 1 October 2009. It was seen sitting on the nest in January 2010 and then

only re-sighted seven years, nine months and eleven days later at Namibwater.

Date	Locality	Distance (km)	Time elapsed
2009-10-01	Tsamsvlei		
2010-01-07	Tsamsvlei	0.000	0 years 3 months 7 days
2017-10-17	Namibwater	13.558	7 years 9 months 11 days
	<i>Cumulative</i>	<i>13.558</i>	<i>8 years 0 months 18 days</i>

**L153:** Lappet-faced Vulture, ringed as a chick near Sesriem on 1 October 2009. Also seen sitting on the nest in January 2010 but then only re-

sighted on 4 September 2017, seven years, seven months and 30 days later.

Date	Locality	Distance (km)	Time elapsed
2009-10-01	Sesriem		
2010-01-06	Sesriem	0.006	0 years 3 months 6 days
2017-09-04	Namibwater	35.415	7 years 7 months 30 days
2017-09-09	Namibwater	0.000	0 years 0 months 5 days
	<i>Cumulative</i>	<i>35.421</i>	<i>7 years 11 months 10 days</i>

**L73:** Lappet-faced Vulture, ringed as a chick near Tsamsvlei on 1 October 2009. It was captured on 4 September 2017 at Namibwater,

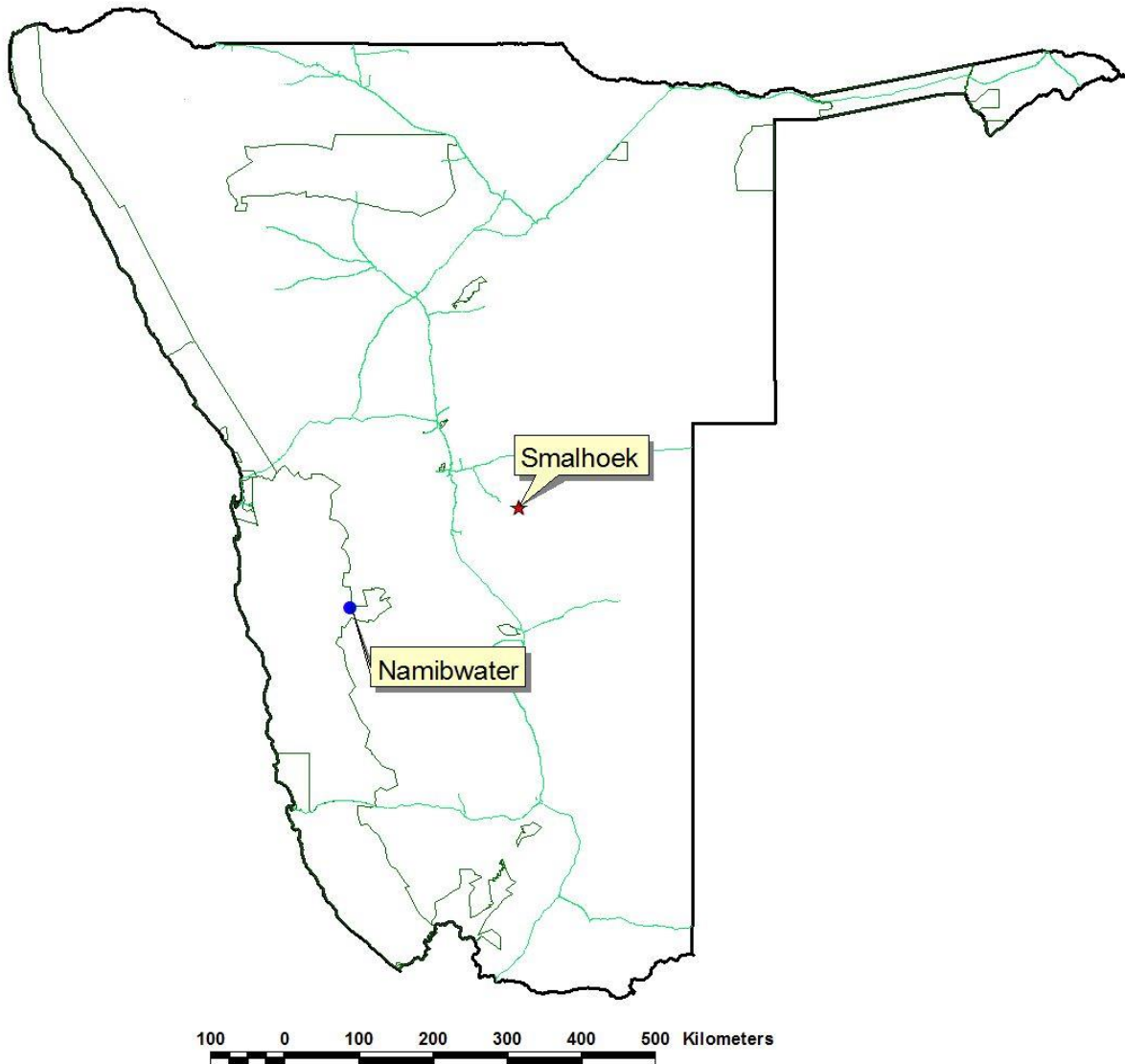
seven years, eleven months and five days later and has since been seen twice more at Tsamsvlei.

Date	Locality	Distance (km)	Time elapsed
2009-10-01	Tsamsvlei		
2017-09-04	Namibwater	8.159	7 years 11 months 5 days
2017-10-16	Tsamsvlei	15.048	0 years 1 month 11 days
2018-04-28	Tsamsvlei	0.000	0 years 6 months 11 days
	<i>Cumulative</i>	<i>23.207</i>	<i>8 years 6 months 28 days</i>

**F158:** White-backed Vulture, ringed as a chick on farm Smalhoek, near Dordabis, on 27 September 2015. Re-

sighted two years and sixteen days later at Namibwater.

Date	Locality	Distance (km)	Time elapsed
2015-09-27	Farm Smalhoek		
2017-10-12	Namibwater	248.197	2 years 0 months 16 days
	<i>Cumulative</i>	<i>248.197</i>	<i>2 years 0 months 16 days</i>

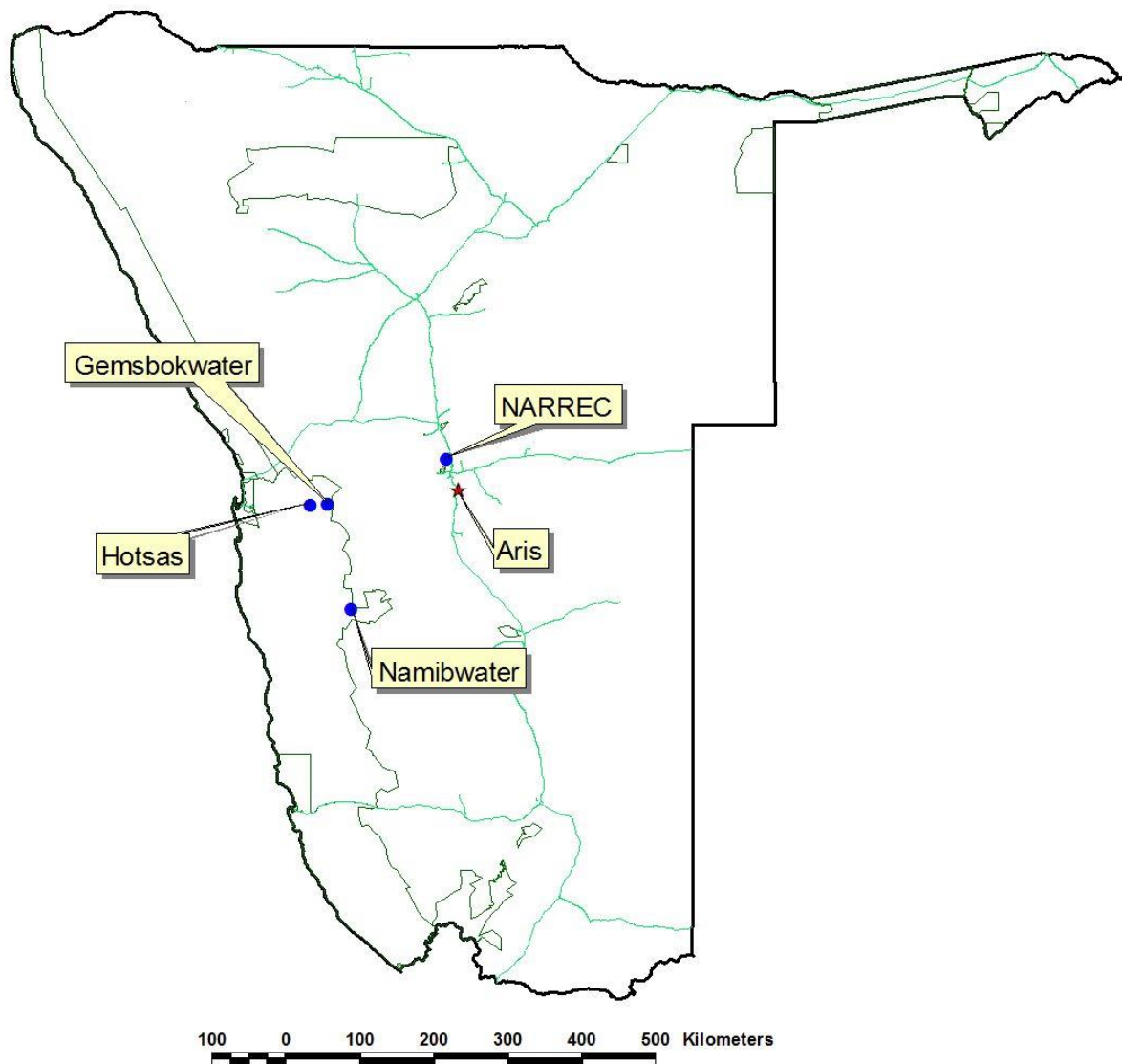


**L424:** White-backed Vulture, ringed as a chick on farm Aris on 6 October 2013. Re-sighted at Hotsas almost eleven months later and then it was photographed on 1 February 2016 at

the NARREC vulture feeding site. Twenty-two days later it was back at Gemsbokwater and was last recorded at Namibwater on 11 September 2017.

Date	Locality	Distance (km)	Time elapsed
2013-10-06	Farm Aris		
2014-09-05	Hotsas	184.880	0 years 10 months 29 days
2016-02-01	NARREC vulture feeding site	180.604	1 year 4 months 27 days
2016-02-23	Gemsbokwater	159.417	0 years 0 months 22 days
2017-09-11	Namibwater	144.876	1 year 6 months 18 days
	<i>Cumulative</i>	669.777	3 years 11 months 6 days

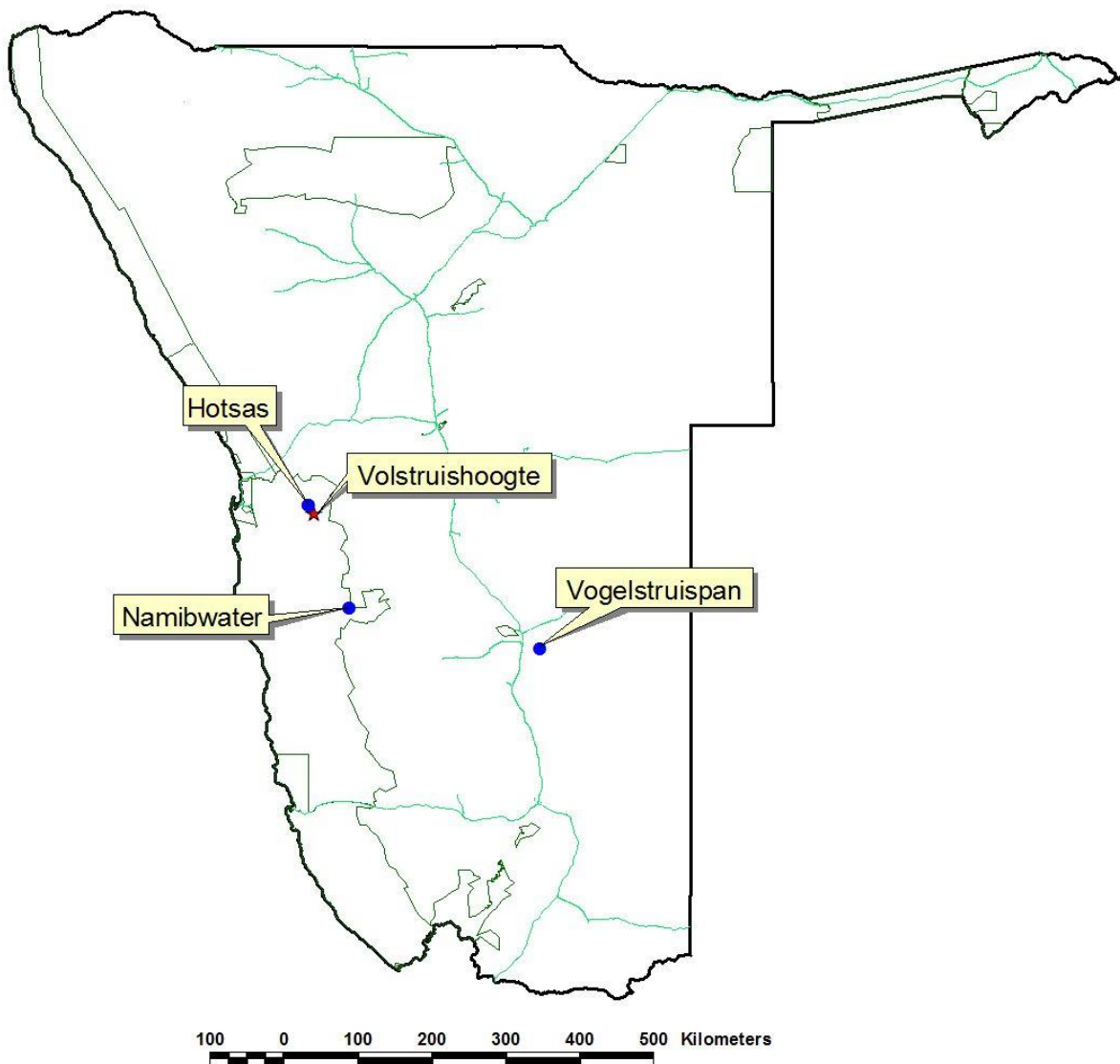




**L504:** Lappet-faced Vulture, ringed as a chick near Volstruishoogte on 20 October 2014. The bird was first re-sighted a bit more than three months later at Hotsas. On 3 October 2015 the bird was picked up on farm

Vogelstruispan near Mariental, visibly sick, probably due to poisoning. The bird was re-habilitated and captured on camera at Namibwater on 11 February 2018. It has been seen once more since then.

Date	Locality	Distance (km)	Time elapsed
2014-10-20	Volstruishoogte		
2015-01-23	Hotsas	12.308	0 years 3 months 4 days
2015-01-24	Hotsas	0.000	0 years 0 months 1 day
2015-03-14	Hotsas	0.000	0 years 1 month 18 days
2015-10-03	Vogelstruispan	345.621	0 years 6 months 20 days
2018-02-11	Namibwater	240.834	2 years 4 months 10 days
2018-06-29	Namibwater	0.000	0 years 4 months 16 days
	<i>Cumulative</i>	598.763	3 years 8 months 10 days



The above examples illustrate the value of camera traps as a conservation tool. We would not have had the available information if it was not for the cameras. Although we do not have details about the birds' exact movements between the re-sightings it does give us an idea of the range and survival of the birds. This in turn allows us to make

informed decisions about vulture conservation in Namibia.

Many thanks to Mark Boorman, Hartmut Kolb and Franz Klein who spend hours checking all the images for tagged vultures. The donors whose contributions enabled us to purchase and deploy the cameras are hereby also thanked for their support.