

Gondwana TRACKS

PARK
REPORT

JULY - SEPTEMBER 2013



Likkewaanskop waterhole

Highlights

Klein Karios and Altdorn Dismantled

Brown Hyena seen in the park

Regular Leopard visits to Middelpoos

Quiver tree recruitment update

Introduction

Time has flown at an alarming rate this past quarter, with so many events and milestones, from good progress with dismantling of crumbling and unwanted old infrastructure to clearing invasive cactus plants, from removal of scrap from the Park to rare Brown Hyena sightings, from involvement in the Eco-Awards preparations to the arrival of a new intern, from pleasingly successful giraffe follow-ups to extensive borehole maintenance, from relentless, frustrating vehicle problems to some good strides in meaningful administrative work and record-keeping - the list goes on and has kept every staff member very busy.

The failure of any effective winter rain, and the fact that here in the south we can't expect any decent summer showers until a few months into next year, is a sobering thought, and we are bracing ourselves already for water-supply problems, animal pressure on waters and extreme temperatures with the associated immensely high evaporation rates that we experienced at the beginning of this year. The trend has already begun – high concentrations of wildebeest, red hartebeest, oryx and springbok governing Dassiepoort, and unbelievable numbers of mountain zebra at Jagpos and Tafelkop, whereby all water in the troughs is consumed by morning are just a few classic examples of the amount of game that this Park is catering for at the moment. But nevertheless we feel that as long as we maintain our involvement with the Greater Fish River Canyon Landscape / NamPlace initiative and encourage the continued removal of fences, and a few other good game management practices, some of the above-mentioned problems will be relieved somewhat over time. Gondwana must be doing something right: the policy of "Re-wilding the land" is working almost *too well!*

Our Rangers, General Worker staff and intern at Holoog (Park HQ) have done a magnificent, conscientious job as usual – even better than usual, in fact, in keeping everything ship-shape, operational and presentable even when both Wardens have been away, and there have been some really hectic times during this quarter. Each one has been a Star. What a team – we are proud of them!

Also, thanks to Charles at the Lodge, and to Johan at the Roadhouse, for the loan of vehicles at a critical time when both our 4x4s were out of action. Your support is much valued.

Management and Development

A brief summary of tasks undertaken during these three months is as follows:

The old and crumbling buildings, such as rooms, sheds, sheep-cribs and reservoirs at both Klein Karios and Altdorn, were demolished by hand, and at the latter, two Australian gum-trees and an extensive alien cactus infestation were also removed. Much steel wire, old poles and rolls of mesh wire discovered in the Quaggagat/Altdorn hills were retrieved and carted to Holoog: the process is still going on.



Demolition of Altdorn house and burning of alien invasive cactus plants

Quaggagat and Dassiepoort drinking troughs were repaired with fresh concrete, the reservoir overflow pipe at Likkewaan was unblocked of many years of root-growth, and a new ballvalve cover was made for Geluk waterhole. Water had to be pumped by generator periodically to Zebra and Geluk whenever windless conditions prevailed, six borehole pipes as well as the cylinder foot-valve and piston ring were renewed at Geluk, and both Palms and Klipdam reservoirs and the waterhole at Holoog were cleaned and refilled. It was necessary to supplement the water supply by bakkie and tanker on a few occasions at both Dassiepoort and Middelpoort waterholes due to drinking pressure and evaporation in July and August.



Repairing Dassiepoort waterhole



Unloading rolls of mesh wire collected from the veld near Altdorn

10 rolls of used mesh-wire were donated and delivered on site to our Lewerbreek neighbour Johan Berg, major breaks were repaired in Springfontein and Lewerbreek border fences, all perimeter fences were inspected and routine maintenance effected, and a total of 33 old telephone poles were transferred from Holoog to the Lodge upon request. Senior Ranger “Gammy” Sikongo and the Rangers re-measured the quiver-tree plots for seedling height and regeneration, and all rain-gauges were routinely measured and serviced at each month-end.

The scrap dealer Danie du Toit cleared a few tons of accumulated scrap metal from Park HQ, and a new football pitch complete with goal posts was created for the staff at Holoog, to cater for after-hours practice and team spirit and the odd bout against the lodge staff – not quite Anfield or Old Trafford mind you, but good enough for a bunch of Rangers to kick a ball around with some degree of enthusiasm and pride.



Scrap removal from Holoog

With the help of Wimpie (Wimpie's Garage) and his gas-cutting torch, our staff were at last able to cut up and remove the old lorry wreck from the hills at Jagpos waterhole.



Wimpey, Epa and Eddy cutting up the old lorry at Jagpos

The Holoog nature trail at Park HQ was cleared, and 13 indigenous trees from our Holoog nursery were transferred to the Lodge.

Camera trap data from the various waterholes and klipspringer territories was analysed regularly by Park staff – Warden Sue, and particularly Senior Ranger Gammy, assisted by Rangers Jona, Epa and Senior Ranger Eddy. Giraffe monitoring produced a regular accurate picture of the movements and whereabouts of the recently-introduced animals. An attempt for two weeks to sustain an abandoned mountain zebra filly took up much time, but proved futile in the end.

A register for weekly maintenance checks of the vehicles was initiated, and a new Stock Register was created. A stock check was carried out in detail in August. Formal weekly staff meetings were initiated for regular review of the work program and progress, allotment of duties, and any other matters. Warden Sue catalogued the entire library at Park HQ and created a library register. Both 4x4 vehicles received a major service, as well as repairs to springs, front driveshaft and transfer case in the case of the single-cab, and to recurring electrical and ignition problems in the case of the ageing double-cab. The Quad bike was also serviced.

The Management Warden fitted out a new office for himself at Park HQ (shelving, desk, registers, stationery, various stock items, etc) thus easing pressure on the existing office space. Both Wardens spent some time scrutinising the Environmental Awareness Training Manual draft produced by Wolfgang Schenk, and Research and Information Warden Sue helped prepare all the Canyon lodges for their Eco-Awards assessments, and also visited Etosha Safari Lodge and Camp to explain the awards to them and help them with their self-assessment submissions. Sue also completed the Kalahari Anib Game Count poster and a poster for lodge staff in the Canyon to help them identify and deal with local dangerous snakes.

Warden Trygve managed to get formal permission from MET and Directorate Forestry, for a project at Ai-Ais in the Fish River, whereby Gondwana will assist MET to remove alien invasive *Prosopis* infestations in the National Park, in return for our lodges being able to utilise the resultant firewood – a great cooperative project under the NamPlace initiative involving neighbours within the Greater Fish River Canyon Landscape.

Law Enforcement

No untoward incidents were noticed or reported for the Quarter. One subadult female Oryx was killed by a vehicle close to Holoog entrance on the district road.

Monitoring and Research

Climate

The first week of August heralded warmer weather, but a number of late cold fronts persisted until late September. A couple of isolated showers of rain (concentrated in the South of the park) occurred in the middle and end of August, and again at the end of September but nothing really meaningful – indeed non-measurable to nothing for most areas of the Park. Mean rainfall figures to date for the last three months are 1.4mm in the north (2.6mm last year for the same time period), 4.7mm in the central area (5.7mm last year) and 8.6mm in the south (6.6mm for the equivalent period last year).

A total of 33 rain-gauges are monitored in the Park. Selected rainfall data recorded from these gauges during the three month period is given below.

Name of rain-gauge	July (mm)	August (mm)	September (mm)	Park zone
Augurabis (Cañon Outpost)	0.0	1.2	0.0	North
Holoog	0.0	0.0	0.4	North
Cañon Roadhouse	0.0	1.0	0.0	North
Ostrich Water	0.0	2.5	0.0	North
Dassiepoort	0.0	2.0	0.5	Central
Cañon Lodge	0.0	2.0	0.0	Central
Springbokvlakte	0.0	7.5	0.0	Central
Rooiberg	0.0	11.0	0.0	South
Altdorn	0.0	6.0	0.0	South
Kanebis	0.0	13.0	0.0	South

The maximum and minimum temperatures recorded for July to September 2013 are indicated below, together with the means for each month (derived from data for 2003-2013).

	July 2003-2013 mean	July 2013	August 2003-2013 mean	August 2013	Sept 2003-2013 mean	Sept 2013
Maximum temperature (°C)	26.1	29.0	29.6	28.7	34.9	34.1
Average maximum temperature (°C)	20.1	21.5	22.3	21.0	25.7	25.4
Minimum temperature (°C)	1.0	0.4	1.6	-0.6	4.2	-0.6
Average minimum temperature (°C)	6.8	5.1	7.0	4.9	10.5	8.5

Table depicting maximum and minimum temperatures from July to September

Veld Condition

Central and northern sections of the Park are dry with much less grass than the same period last year, while the south has improved marginally following a shower of rain in August: woody plants in particular responded well there. Sweet thorn *Acacia karroo* flowered and seeded well this year and the Camel thorn *Acacia erioloba* are at present in flower.

Indigenous Plant Nursery



13 indigenous trees from Holoog nursery were transferred for planting at the Lodge (*Euclea pseudobenus*, *Aloe dichotoma*, *Zizyphus mucronata*, *Acacia erioloba* and *Hoodia gordonii*).

During the last week of September when daily temperatures rose, planting of seeds in the nursery restarted. To date, over 50 seeds from each of the following species have been sown: *Aloe dichotoma*, *Aloe claviflora*, *Zizyphus mucronata* and *Hoodia gordonii*. Other species will also be planted in the next few months.

Indigenous Plant Nursery

Wildlife and Vegetation Monitoring



There have been two confirmed sightings of Brown Hyena during the last three months, after an absence of any records for a few years. One was seen in the Dassiepoort area and another was captured on a camera trap at Stamprivier waterhole. One hyena was released into the Park about seven years ago, but there have been no confirmed sightings since, and so it is very good news for GCP that brown Hyena are again present in the area.

Brown Hyena at Stamprivier

During July and August, a female Leopard made regular visits to Middelpoos waterhole. Using the spot pattern on her coat she has been identified as 'Bellatrix', a female who was first seen in the Rosyntjebos river between Scorpion and Bushman in 2008. She was seen again at Dassiepoort in 2011, before being captured on the camera trap at Middelpoos several times this year, including five times in the last three months.



Bellatrix at Middelpoos

Professor Morris Gosling, who is studying the Mountain and Plains Zebra within GCP recently sent us this very interesting update on his recent analyses, including a possible explanation for why the Mountain Zebra foal that we unsuccessfully tried to save, was abandoned.

'I have been spending a lot of time on the Gondwana Mountain Zebra recently. Partly monitoring and partly individual life histories, tracking social groups back in time. This is really fascinating and includes the way in which females sometimes stay with a particular male (for example ZR026m and ZR027f, first seen as adults in 2005, are still together) and sometimes move between harem groups. The females do not stay together when a male loses his harem and females join different males. Sometimes when a male loses his harem (in some cases at least after a damaging fight) one or two females stay with him and one or two of the others join the new male. One such fight occurred shortly after a foal was born so the competition may have been over an oestrus female. And to link it with your foal, there must be considerable mayhem at such times and foals could easily get lost.

The number of known individuals in 2013 is now up to 681 and the number that must have been present (in the 'source population') in 2012 is up to 731. Some of these are clearly animals from outside the main area we look at and will presumably return there when it rains.'

The population size of Mountain Zebra from the GCP Game Count in 2012 was 766 and in 2013 it was 1643. It will be interesting to see the final figure for 2013 from Professor Gosling's studies and we would like to thank him for his frequent research updates.



Mountain Zebra making a splash at Jagpos

A Quarterly Raptor Road count was carried out during September, as well as the Quarterly Game Count (along route 6). Results of these quarterly counts will be summarized at the end of the year.

The larva of a moth found on the ground at Holoog on 3rd July, proved to be that of a Prickly Pear Moth *Cactoblastis cactorum* known from the western, southern and eastern Cape in RSA, originally introduced from South America to control prickly pears (*Opuntia*). One wonders when and how it was introduced or spread into southern Namibia.



Cactoblastis cactorum larva

Giraffe Monitoring

The recently-introduced giraffe were monitored almost every week, and seemed to settle along the !Gab River between the release bomas and Jaghuis (east of Augurabis), drinking and browsing mainly in the Stamprivier area throughout the quarter. They split up into groups and came together again regularly. For a long time, we missed one animal, consistently recording a total of 12, but the 13th one was assumed lost or dead – then suddenly it reappeared and all 13 animals were together again on Thursday 19th September between Jaghuis and Stamprivier. Their condition is satisfactory to good - maybe even improved in fact since their release.



Giraffe in the !Gab river

Quiver tree population dynamics (submitted by Senior Ranger Ignatius ‘Gammy’ Sikongo)

As part of the vegetation monitoring for the Gondwana Cañon Park a follow-up study on recruitment and survival rate of quiver trees *Aloe dichotoma* was carried out. The study targeted six quiver tree cohort plots, three in the Incised Rocky Hills and three in the Sandy plains habitat. In addition to the recruitment survey, photographs of individuals and cohorts were taken. This will form the basis of the repeated photography to determine the long-term changes in the population.

No recruitment has occurred in either habitat. The low rainfall may have hampered recruitment in both places. Most of the surveyed cohorts are located in areas which received less than 50mm of rain during the 2012/13 rainy season. It must be noted that there has been little follow-up rain during

the season. Thus, even if seedlings did germinate, mortality was high due to drought. Seedlings/saplings in the sandy plains grew at a rate of 0.76cm per year, whilst those of the Incised Rocky Hills grew at a rate of 1.36cm.

Mortality in the plains seedlings cohorts was 13.5%, in contrast of 22% in the Incised Rocky Hills. However, most of the seedling mortality (89%) in the Incised Rocky Hills was attributed to baboon damage (own observations), either dug out or uprooted. This is an indication that baboons may have a crucial impact on the survival of seedlings. Preliminary results suggest that increases in frequency, duration, and/or severity of drought and heat stress could fundamentally alter the composition, structure and biogeography of quiver trees cohorts. Although episodic mortality occurs in the absence of severe droughts, results obtained in this study suggest that at least some of the cohorts already may be responding to drought and raise concerns that these plants may become increasingly vulnerable to die-offs in response to future droughts, even in a species that is normally considered not to be water limited.



Ranger Epa measuring Quiver tree heights



Quiver trees; incised rocky hills

Vegetation monitoring

A tool for determining biomass to be used for later assessment is currently being developed by Gammy with help from Greg Stuart-Hill. Sites with varying grass coverage were chosen and photographs were taken. At each site transects were laid out, four 1m² quadrats were placed at 10m intervals and the grass in each quadrat was clipped. The clipped grass was then dried, weighed and the average biomass per hectare was calculated (see photos below).



Biomass ±600kg/ha



Biomass ±1000kg/ha

These photographs will then be turned into a reference album which will be used in the future to estimate the biomass in different parts of the park.

A series of panoramic photos for 15 fixed photo points were also taken and stitched together. These annual photos enable us to monitor changes in the condition of the veld over time.



Dassiepoort plains – May 2009



Dassiepoort plains – May 2013

Human Resources, Information and Training



Jona practicing during his first aid course

Senior Ranger Eddie Shipulwa and Ranger Jona Naholo attended a First Aid refresher course at the Roadhouse 7 – 8 July.

Warden Sue held an Eco-Award training and assessment meeting for Lodge, Roadhouse and Village managers and Assistant Managers, to help them prepare for the end-of-August re-assessments.

Warden Sue also travelled north to spend time explaining the Eco-Awards process to the new Etosha Safari Lodge and Camp managers and staff during last week of September.

Senior Ranger “Gammy” Sikongo informally trained fellow Rangers Epafras and Jona in the measurement and recording of Quiver Tree plot seedlings, and vegetation plot assessment.

Volunteer Oliver Freyer from Windhoek arrived at Holoog on 27th August, to join the Park staff team for 3 months. He has adapted well to life in the south and has already become a valuable member of the staff team.

Two wildebeest from the recent cull were donated to Klein Karas community. Trygve and the Rangers went to deliver them to the grateful recipients.



Oliver



Klein Karas

Park HQ hosted a 2-day visit in August from Dr Jurgen Jacob, Head of Mineral Resources at NAMDEB (former Chief Exploration Geologist) who was able to enlighten us confused mortals on some of the geological mysteries of the area with much enthusiasm and wonderful patience.

At the same time, Riaan Burger, General Manager of NAMDEB at Oranjemund, visited the Lodge with his family and was extremely impressed with the welcome, friendliness and efficiency of Lando and his staff, as well as the ambiance and similar reception at the Village. Both are old acquaintances of Wardens Trygve and Sue, and will hopefully pay more visits to GCP. They are both very supportive of the natural environment and have done much to support fellow conservationists like Dr Antje Burke when she drew up the Reclamation and Rehabilitation Plan for the Sperrgebiet mining operations (who also works in the Greater Fish River Canyon Landscape on the Biodiversity Zonation map) and the MET Chief Wardens past and present of the Sperrgebiet National Park. The support and interest of like-minded neighbours such as these can only augur well for GCP, for GFRC Landscape, and for the rest of the South in the long run.

Trygve and Sue Cooper

Park Wardens, Gondwana Cañon Park

2013/10/04