

### **Reserve management, weather and fire are linked together like the strands of a spider's web.**

Nobody can deny that the weather this year has been unusual. It hasn't just been this year either but for several years now the issue on everyone's mind has been climate change and global warming.

I am no climatologist and don't assume that I have any answers, but I do like to consider events from what I can see with my own eyes and the impacts that it has on our daily lives. For 22 years I have been keeping records on the weather on Grietjie and there have certainly been some interesting records.

In the last newsletter I made mention that for the first time ever we recorded zero rainfall in February. February is traditionally one of the wetter months and so immediately this should make us sit up and think that something is different. Last year we had 50mm on 1<sup>st</sup> June, a month when we should have had zero rainfall. This year again we recorded around 80mm rainfall in May, again traditionally a month with little to no rainfall on average. I don't think we can ever say that our weather is predictable anymore. For several years I have said to students and colleagues that the years of predictable rainfall patterns of afternoon thunderstorms and 7-10 years wet/dry cycles is something from the past. Not only on Grietjie but worldwide, the trend now seems to be one of extremes, either very wet or very dry seasons, and even the seasons are changing their boundaries.

I take empathy with climatologists, and those people who profession it is, to predict the weather so that people like you and I can sit in the comfort of our homes and try to plan the week ahead depending on what the weather forecasts are going to be. Weather is determined by an overly complex set of variables, that to get it right all the time is extremely difficult and open to criticism from people that don't understand how these forecasts are created. If it's difficult to get it right for the coming week, then consider how anyone is supposed to get it right for the coming season.

Trying to manage the ecology of the reserve requires an understanding of how the ecosystems work together, how the fauna and flora are influenced by each other and how they determine the survival of individuals going forward. We can only make decisions based on scientific data and advice given by professionals whose opinions we need to trust as best we can.

One of the management tools available to us is to use fire to remove moribund material and to promote new growth in the vegetation. Fire helps to open areas where bush encroachment has occurred, allows light to penetrate to the ground level where new shoots emerge. In some cases, fire assists the germination of plant seeds and has and always will be an active and essential factor in the ever-changing environment we find ourselves in.



This year we had originally hoped to start our burning programme using the patch-mosaic system in May but the unusual weather and rainfall we experienced forced us to delay the start by several weeks. We will hope to have conducted our fire management by the end of June.

One of the benefits of burning now is that it will reduce the load of moribund material that is out there and, in some areas, reduce the chances of uncontrollable fires impacting us later in the season. I recently had the opportunity to speak with Craig Ferguson, Warden of Ukhosi and BNR ecologist, and he was saying that he was concerned for the late season fires this year due to the excessive material available, created especially because of the late rains we have had this year. Many of the reserves in the APNR and the Sabi-Sand reserves have already conducted early burns this year and this should yield some interesting observations regarding the condition of the veld as we go forward. The following list details all those regions that have successfully conducted burns already this year:

**In the Greater Kruger region:**

- 21 April - Manyeleti Patch mosaic burn.
- 9 May - Timbavati - patch burns started.
- 10 May - Manyeleti patch burns continuing.
- 11 May - Houtboschrand KNP - Block burn
- 17 May - Manyeleti patch burns continuing.
- 20 May - Timbavati - Patch burns
- 25 May - Klaserie - patch burns
- 01 June - Thornybush - Patch burns
- 02 June - Mala Mala fire breaks before patch burns commence.
- 3 June - KNP Kingfisherspruit - fire breaks Orpen area

**Inside Balule** the following has been or will be conducted in the next month or so.

- 06 June - Jejane shareblock - Patch burn.
- Still in June: -York, MRNR (Mohlalabetsi River Nature Reserve) and MSNR (Mohlalabetsi South Nature Reserve) patch burns are scheduled.
- July - ORGR (olifants River Game Reserve), OWNOR (Olifants West Nature Reserve), Ukhosi and Maseke all plan to conduct burns.

A recent article published in the Africa Geographic magazine expands on the importance of managing the open plan ecosystems and understanding and keeping track of animal populations. Ian Nowak recently shared this article on the Chat group, and I would recommend everyone to read it. <https://africageographic.com/stories/keeping-count-wildlife-populations-in-kruger-private-nature-reserves/>

In the article, it refers not just to counting individuals of distinct species but keeping records over an extended period and analysing the trends of increase or decrease in the numbers. It also refers to

the importance of linking this data with that of rainfall, vegetation analysis and combing all this information together to generate well-informed management decisions.

Grietjie is part of the open system, and we also need to adopt the same management protocols as the rest of APNR. Every year we conduct veld assessments using ARC, Agricultural Research Centre, with Mike and John Peel as leading experts in this field in South Africa. They also assist us with annual game counts which are done normally during August with helicopter counts. Our predator numbers are conducted as part of the wider Balule predator census. This information is essential scientific data which is on record and has been kept ever since I arrived in Grietjie in 2000, if not before. Grietjie management therefore can assure you as owners that the scientific data that is used in the decision process is based on an extended series of data.

Earlier in the year we advised owners of our intention to begin with a burning programme that will be rotated during a 10-year cycle. By the end of each 10-year cycle every section of the reserve should have been burnt, weather dependant and assuming that the vegetation covers is sufficient to justify it. There seems to have been some reticence shown by some owners when this subject of fire was raised. However, it is a fundamental part of the overall management plan and without it we cannot ever expect to manage the open system effectively.

I am convinced that because we have not been in a position for several years to be able to manage the reserve with the open system mentality that many people have become resigned to the fact that fire is not good and, in some cases, people are scared because they are not familiar with the process, or they don't feel in control of the outcome. Grietjie presents many challenges when it comes down to managing this process, especially with all the dwellings, but this is where the owners can make a meaningful contribution by ensuring that their properties have effective firebreaks established around the dwellings.

Management would like to remind everyone that when the vision to be incorporated into the bigger open system was formalised and accepted by almost 95% of the owners on the reserve, an understanding was also taken that as owners we would embrace the management policies associated with the vision. This means then that we need to accept that at times animal removal and introductions will be conducted, waterhole management will be introduced, that veld management through controlled burning practices will be performed along with a wide variety of other issues as well. As owners, if we are serious about being part of this open system, we need to embrace all these policies and not just those that suit us when we decide to. Any decision taken will only be implemented when it is in the best interest of the overall reserve and if the scientific data backs up that decision. We look forward to the continued support of all our owners.

Ian Owtram – Ecology and Fire portfolio