**Rooiels as a Research Node - Preliminary Draft Ideas**

1. **Reasons to enhance our potential to become a Research Node**
   1. We would all like to know more about our environment; to understand what flora and fauna we have in the village and to better understand how we impact on nature and what actions we could take to better support the environment and the KBR.
   2. Supporting research is a direct way that Rooiels can contribute to the Kogelberg Biosphere Reserve and will be important to our rationale for being included as part of the Buffer Zone for the KBR (see our draft rationale for being included in the KBR Buffer zone).
   3. As we become better known as a village that supports researchers, we will attract the kind of visitors (researchers and their friends and family) to the village who are more likely to understand our commitment to the environment and the need to take measures to avoid conflict with wild animals and to preserve our indigenous flora and fauna. Visitors who will not be put off by wind, baboons, no lights and bumpy roads
   4. We as Rooielsers can find a variety of ways through supporting research to give back to society. We can share our knowledge and experience, we can help to support further education of Overstrand youth, we can establish a repository of information and research on local biodiversity and also on how communities can adapt to living closely with nature. In this way we can put to good use the special comparative advantage of Rooiels as a society living closely with nature, with remaining areas of natural habitat, flora and fauna, as well as the skills and accommodation potential of the village.
2. **Steps Taken to Better Understand What is Needed for Rooiels to encourage researchers**
   1. Hold discussions with local universities and researchers to understand what they would find useful.

Contact has been made with

Dr. Ruida Pool-Stanvliet, Cape Nature;

Stellenbosch University: Dept of Conservation Ecology;

University of Cape Town: Institute of Communities and Wildlife;

We will be in touch with Hermanus University and Univ of Western Cape.

In future we can establish mechanisms to reach out to universities and research agencies throughout South Africa and internationally.

*Call for Rooielsers to make contacts:* Please will any person in Rooiels with a contact at a university or an NGO, research institute or company, reach out to that person and ask if they think that there is an interest for some of their researchers or students to carry out their field work in Rooiels. Ask them what they would need from Rooiels in order to initiate this dialogue and what is needed to attract their researchers to Rooiels.

* 1. Dept of Conservation Ecology, Stellenbosch University indicated that they have a range of options:
     1. To attract senior researchers and post-graduate Doctoral and Masters’ students, we would need to find scholarships, or at least cover the research costs. Alternatively, as we become known as research friendly, we may attract researchers in externally funded projects to do their fieldwork here.
     2. The most likely window, with limited expectations on us to finance, would be for us to attract Final year undergraduate students to carry out their research projects in Rooiels. In order to do this we need to put together a list of topics which are of interest to us, and which we think would be attractive to the students. This list of projects should be ready by June 2020. Students get to select the projects they are interested in as they chose things that match their passion. They will carry out most of their field research over the long vacation November – February (but not during the period 10 Dec-15 January).

*Call for Rooielsers to put forward ideas for what research we would like to see in Rooiels*

* + 1. Undergraduate students, normally classes of around 50, are taken on a week field trip annually. If we don’t have the needed accommodation, they could stay at a hostel in nearby village. However this would only be applicable in future as they are currently established in the Karoo until 2021.
  1. It will be important for Rooiels to set up a comprehensive Repository of information and research. This can be done initially on our website. It will be a way to attract researchers and as a way for us to bring together the existing knowledge on our environment.

*Call for Rooielsers to gather together any information or articles they have and share them. (*Ask any experts you know in the different fields – geology, botany, archeology, ornithology etc. etc – to see what articles in their own field they can find that are of relevance to Rooiels and to the Kogelberg Biosphere Reserve and ask them to share the links. This should not be limited to academic research – all interesting information on nature and on living with nature in the Western Cape is of relevance to include in the Repository. We would also like to have a section on Green Living and Green Building.)

* 1. Identifying Accommodation options

Once we see if there is traction (for Rooielsers to want to become a research node, and for researchers to come to Rooiels) we will need to ascertain what is available, which periods it is offered, and what the conditions are (e.g. if free for students, at a discount for researchers, including also the options at regular list prices). There is not a rush to do this yet – but we should keep it in mind.

1. **Some preliminary ideas for research**
   1. **Species Inventories.**  Most terrestrial and marine flora and fauna in Rooiels is undocumented or remains very incomplete. There is a comprehensive [bird list](https://rooiels.weebly.com/birds.html) (Ayer and Jones 2019), an identification [guide](https://rooiels.weebly.com/illustrated-guide-to-flowers-of-rooiels.html) to indigenous flowers of Rooiels (de Klerk, 2010) but there have been no scientific surveys identifying species since the incomplete surveys of the 1970s referred to in [Heinecken *et al*](https://rooiels.weebly.com/ecology-and-history.html) Estuaries CSIR Report, 1982.
   2. **Related to this is Vegetation and animal mapping**

Mapping of the vegetation and identification of particularly vulnerable species or areas is of importance to Rooiels as it continues its role as a “refuge” for the KBR with its seed banks and natural habitat.

The species lists and maps would be incorporated into the Overstrand GIS mapping project underway.

* 1. **The impact of human activity on species distribution and natural processes** (e.g. a comparison of vegetation across time - before, during and after the heavy rooikrans infestations in Rooiels; what motivates compliance with sound waste management; how conflicts between residents and nature are resoved)
  2. **The potential for Green Living and Green Building –** reviewing or experimenting with different approaches that would usefully inform us and also the Overstrand Municipality and UN MAB programme on workable solutions for sustainable living in this environment.

*Call for Rooielsers to consider ideas for Research and to share these. They can be additions to the more broad categories as outlined above or very much to be encouraged would be some specific ideas of what you would like to see researched in Rooiels or in the adjacent KBR.*

**Background**

Rooiels is supportive of all research that is carried out to increase current knowledge on flora, fauna, and ecological processes – both on land and in the sea. We are also supportive of research which considers the impact of Rooiels, as a resident community, on the natural environment. It would be interesting to know whether the existing flora is useful as a “refuge” for seeds and habitat for fauna, or if it has become degraded. It would be interesting to better understand what steps need to be taken to ensure that we do play a supportive role to maintaining biodiversity and enhancing the value of the Kogelberg Biosphere Reserve. We have had a PhD student looking at the human baboon interface who was working here for the past 4 years but is now back in Cape Town writing up her thesis. We are eagerly awaiting her thesis and this experience has encouraged Rooiels to want to take a much more supportive role towards research in future.

As a village we are particularly interested to know what species of flora and fauna we have in different parts of the village. Rooiels is particularly concerned to be able to map the vegetation in the village and to note any areas that are of particular importance.

We would like to set up a data base and to Map the species and their distribution and to link to the Overstrand GIS mapping initiative. There are currently no comprehensive data bases documenting what flora and fauna exists in Rooiels except for the [Birds of Rooiels](https://rooiels.weebly.com/birds.html). There is also an incomplete but fairly comprehensive guide to the [indigenous flowers of Rooiels](https://rooiels.weebly.com/illustrated-guide-to-flowers-of-rooiels.html). For the other flora and fauna, the most recent we were able to find are the summaries of some lists in the 1982 Heinecken et al Estuaries of the Cape, 8 Rooiels (CSIR, ECRU publication). No terrestrial invertebrates were included in that survey. Original document can be downloaded from the [Ecology and History](https://rooiels.weebly.com/ecology-and-history.html) page on the Rooiels website. That is also the only source we have on marine and coastal zone flora and fauna.