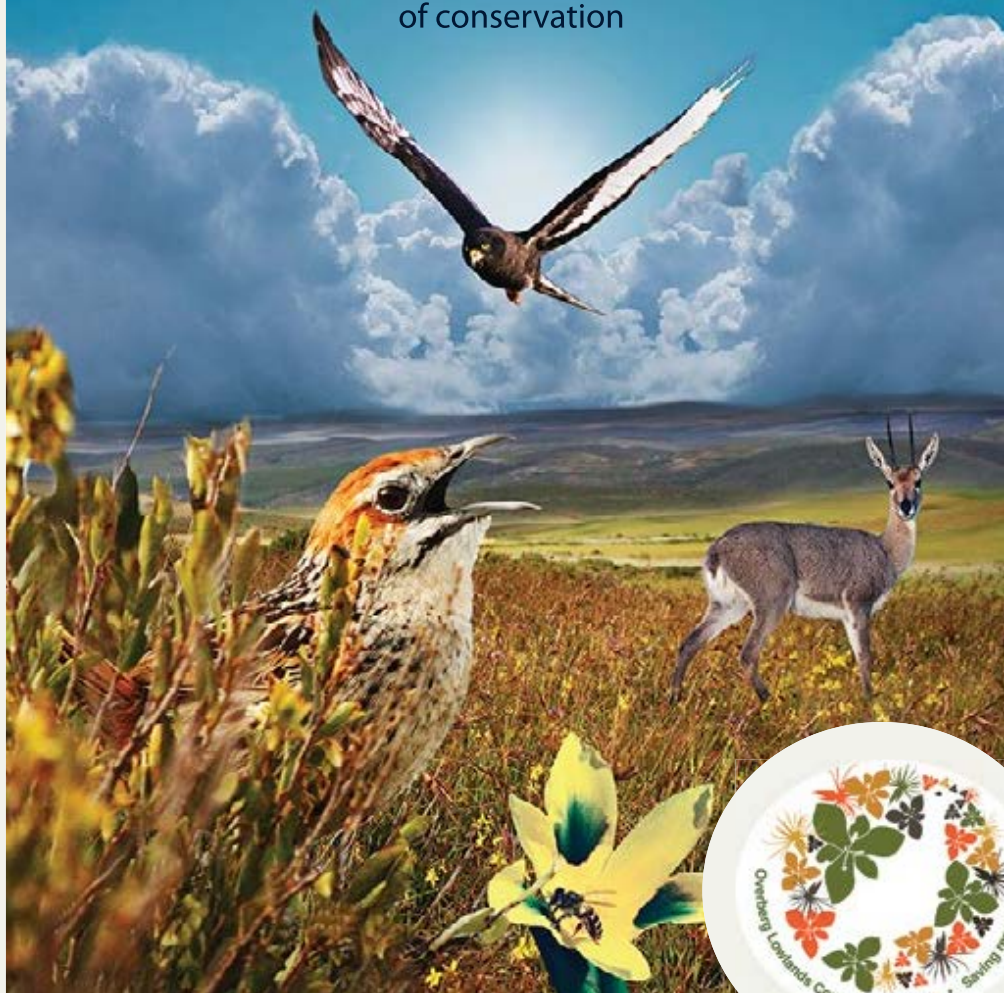


# THE OVERBERG RÛENS RENOSTERVELD

A unique biodiversity  
hotspot in urgent need  
of conservation



# THE PURPOSE OF THIS BOOKLET



**T**he Cape Floristic Region, within which you are farming, is the smallest, yet richest *Plant Kingdom* in the world. It is comprised of Mountain Fynbos (nutrient-poor soils), Coastal Strandveld (nutrient rich, alkaline soils) and Renosterveld (nutrient-rich, clay-derived soils). Fynbos and Strandveld tend to be dominated by the showier Proteas, Ericas and Restios, while Renosterveld is generally dominated by grasses and shrubs belonging to the daisy family. Because Renosterveld is found on more fertile soils, it has been converted extensively to croplands, to such a degree that less than 5% remains. Lowland Renosterveld, often referred to as uitvalgrond ('wasteland') by farmers, has been overlooked, misunderstood and largely neglected. However, Renosterveld is considered the richest bulb habitat on Earth and is renowned for its incredible spring flower displays - many popular horticultural bulbs were bred out of the Renosterveld species, such as the Freesias and Gladiolas. This unique habitat is a *biodiversity hotspot*, but is now teetering on the brink of extinction.

In this guide, we aim to introduce you to some of the plants and animals that depend on these remnants of Renosterveld, as well as to provide guidelines as to how best to care for it and to ensure its long-term survival. We also provide information on the key conservation role-players

in the Overberg wheat belt, so that landowners can see how we are all working together towards a shared vision, through partnering with farmers to ensure the long-term survival of this Critically Endangered habitat and all its dependent wildlife. The remnants and watercourses that hold the ecological functioning of the Rûens wheat belt together are currently threatened by mismanagement. In contrast, several coastal and montane reserves exist in the areas surrounding the wheat belt. The remnants of natural habitats and watercourses in the Rûens can be considered the 'life blood' of this region. Landowners are starting to realise that a paradigm shift in mind-sets and management is required if we are to keep this landscape alive and functioning. The Overberg Lowlands Conservation Trust is committed to facilitating these changes, through building relationships with landowners and assisting with management on the ground.

This booklet is our gift to landowners in the Overberg Rûens. You are the custodians of our remaining Renosterveld and it is our dream that you will be inspired to take care of it, so that future generations can enjoy its hidden gems.

**Dr Odette Curtis**  
Director, Overberg Lowlands Conservation Trust.

# THE HISTORY AND PLIGHT OF RÛENS RENOSTERVELD

When the first European settlers arrived in the southernmost reaches of the African continent, the region was teeming with life: from large mammals including Black Rhino, Buffalo, Hippo and Zebra, to herds of Grey Rhebok, Bontebok, Bluebuck and Red Hartebeest, to the more solitary Duiker, Steenbok and Grysbok, which grazed and browsed the plethora of habitats available to them. A host of predators in the form of lion, wild dogs, hyaena, leopard, lynx, wild cat, genet, mongoose and fox graced these expanses in search of quarry, which was abundant and readily available. Unusual termite-specialists such as the Aardvark and Aardwolf scoured the land for anthills, while Honey Badgers searched for active beehives. Endemic raptors, such as the charismatic Black Harrier and the wetland-dependent Marsh Harrier foraged for small mice and birds over the shrublands and nested within the watercourses and pans, while the graceful Cape Vultures soared high over the cliffs and plains. Endemic brightly-coloured Sunbirds and bizarre long-tongued flies foraged for nectar amongst showy tubular Lilies and Irises. Girdled Lizards sunned themselves on the rocky outcrops and chameleons sat camouflaged amongst the shrubs. Underpinning and supporting this abundant wildlife was the tiniest and richest Plant Kingdom known to man: The Cape Floral Kingdom. This kingdom comprised both grassy and shrubby habitats, sometimes interspersed with thicket and forest, particularly in the drainage areas and watercourses. On the coastal



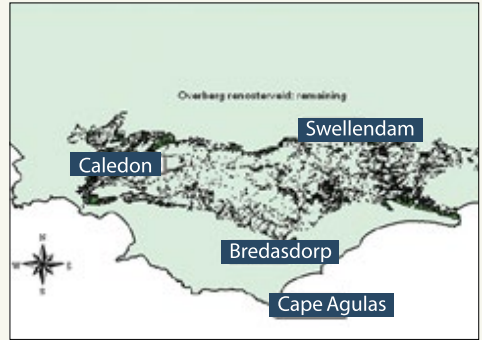
reaches beaches were full of endemic Black Oystercatchers and other shorebirds, while the seas provided a refuge for calving Southern Right Whales, Great White Sharks and an abundance of fish. It was paradise. One can only imagine the awe experienced by these early explorers!

The larger game were nearly shot-out of the landscape, with the endemic Bluebuck and Quagga being exterminated forever, the Bontebok making a narrow escape from the extinction list, while the Black Rhino, Buffalo and Hippo became locally extinct.

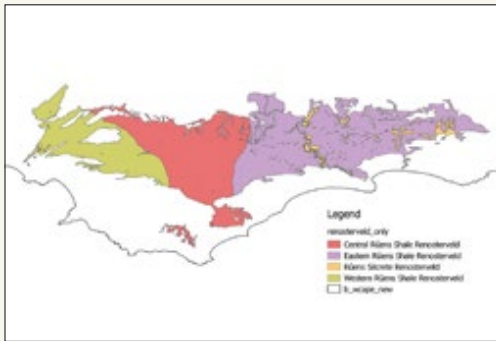
With less competition for grazing, domestic livestock (sheep and cattle) were introduced to the landscape and farming took on a new form, which contrasted substantially with the traditional, nomadic, pastoral farming methods used by the indigenous Khoi-Khoi people prior to European arrival.



Overberg Renosterveld historical extent.



Overberg Renosterveld remaining.



Renosterveld vegetation types of the Overberg.



Quagga

Permanent settlements were created and land was claimed and divided and owned. After some time, these landscapes became degraded by the non-migratory livestock. Human populations expanded and vegetation became overgrazed and the need to grow more food increased. The advent of machinery in agriculture enabled large-scale conversion of natural habitats to production lands for crops and so began the demise of the fertile lowlands.

During the last 50-100 years, extensive areas of virgin land were converted for agriculture and because the low-lying fertile regions were naturally more suitable for crop development, these were transformed the most. Today, there is less than 5% Renosterveld remaining in these lowlands and what remains is severely fragmented with tiny waterways often being the only linkages (if any) between these natural remnants. The Overberg Rûens is made up of four different vegetation types (known as Western-, Central- and Eastern-Rûens Shale Renosterveld and Rûens Silcrete Renosterveld), all of which are classified as Critically Endangered. Despite these levels of habitat loss, these remnants still represent one of the richest biodiversity hotspots on earth, requiring urgent conservation attention.

# MAINTAINING LIVING LANDSCAPES:

## Conservation and agriculture want the same thing!

In the past, conservation was seen as the 'man in khaki', who drives around in a nice bakkie all day, dishing out fines and all sorts of other unfriendly and uninvited 'advice'. Conservation was also almost entirely focused on state reserves and protected areas, while the department of Agriculture enabled farming to grow exponentially, encouraging landowners to turn as much land into production as possible.

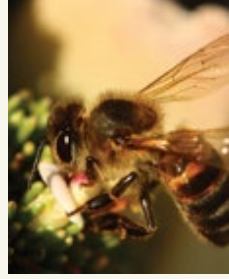


However, since the connection between healthy ecosystems and farming landscapes has been made and since the plight of our lowlands has become better understood, both conservation and agriculture have made a paradigm shift. Conservation started to focus outside of reserves, as it became clear that protecting these reserve islands in isolation from the rest of the landscape would eventually lead to the demise of entire ecosystems. Similarly, the loss of biodiversity, of soil quality and health, of functioning watercourses and rivers, was seen as negative for production landscapes and so agriculture realised the need to encourage a different practice to the one they had advocated previously. Thus, the approach to

habitat management by both conservation and agriculture started to overlap significantly, to the point where today's environmental laws for both sectors hardly differ.

This has often been very difficult for landowners to accept, as they feel they have been bombarded with several conflicting laws and opinions about what they should or shouldn't do on their land. The Overberg Lowlands Conservation Trust hopes that the information we provide in this booklet will enlighten landowners about the importance of good environmental management, not only for conservation, but also for the well-being of productive farms for the long-term.





## THE IMPORTANCE OF MANAGEMENT

The Renosterveld we see today is very different from how it was 300 years ago: Before the advent of large-scale commercial agriculture in the Western Cape, Renosterveld supported large numbers of big game (including Black Rhino, Eland and the now extinct Bluebuck and Quagga) and may have been a far grassier system at this time too. The combination of grazing and browsing game animals of varying sizes maintained the diversity and structure of this system. The replacement of large, migratory game animals with small, selective feeders (cattle and sheep) in fenced camps combined with years of poorly-informed management (i.e. over-grazing and too little or too much burning), has allowed extensive areas of this unique veld to become severely degraded and often dominated by 'unwanted' shrubs, such as Renosterbos. Thus, the grey, 'drab' veld that we see today is probably largely a result of the legacy of mismanagement and is NOT always representative of true Renosterveld – on the contrary, this vegetation type ranks one of the richest in the world!

Not only has Renosterveld been altered by management, it has also been severely transformed for agricultural development. With an increasing demand for food due to an exponentially growing human population globally, more and more land has been converted for agriculture. In the case of Renosterveld, over 95% has been irreversibly converted to croplands, rendering this vegetation type in urgent need of conservation attention. The survival of Renosterveld, as a functioning and healthy ecosystem, is entirely dependent on how it is managed into the future.

The following pages provide a brief summary of the most important management “do’s and don’ts” in order to assist landowners and conservation managers with managing their Renosterveld habitats.

## MANAGING RENOSTERVELD FRAGMENTS:

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- **Burn in late summer or early autumn:** This favours palatable grasses and bulbs while summer burning favours unwanted species, such as Renosterbos.
- Do not burn too frequently - every 7-12 years, or 15 or more in the drier Eastern Rûens, is probably preferable. Rather be safe than sorry! Burning frequencies will vary depending on the type of veld and rainfall (with higher rainfall areas being more tolerant of higher burning frequencies).
- **GOLDEN RULE:** never graze immediately after a fire, but rather rest the veld for a minimum of 18 - 24 months before grazing - and then graze only in the late summer months for a short period. Resting allows all species an equal opportunity to rejuvenate after fire and therefore promotes the growth of favourable species such as Rooigras and other palatable grasses. Grazing too soon after a fire will promote unfavourable species at the expense of favourable ones, causing the veld to be dominated by unwanted plants such as the Renosterbos.
- Avoid feeding animals in the veld, as 1) these areas tend to get excessively trampled and fertilized and 2) this often results in alien grasses, weeds and thistles moving into the area due to seed coming in with feed, as well as excessive disturbance.
- Overgrazing usually arises from the fact that Renosterveld is seldom managed as a separate camp and is subjected to whatever land-use is being applied on the adjacent arable lands. This results in the veld being rested appropriately while adjacent to a grain crop, but often being severely overgrazed when it is part of a lucerne

camp for several consecutive years. Ideally, fragments should be fenced or temporarily fenced (using electric polywire) in order to facilitate more appropriate grazing regimes. This is costly and not always immediately possible, but is probably the most effective way of ensuring the long-term viability of Renosterveld

A dominance of Renosterbos is believed to be a sign of either overgrazing, lack of fire (old veld), or both. If the veld is old, and / or has been overgrazed in the past sometimes the solution is to burn. But again, the most important thing here is to REST the veld after the burn. If the veld has been heavily grazed it is also a good idea to rest it before attempting to burn it, so that it can build up enough of a fuel load for a successful burn.





- Current knowledge suggests that grazing should only take place between early December and early March (as this promotes bulbs and palatable grasses) - i.e. the Golden Rule is: No or minimal livestock in the Renosterveld camps during winter and late spring. Rather, use these camps as reserve food sources in the summer. Where landowners are left with no choice but to use Renosterveld for grazing, due to, for example, a winter drought, it is evident that veld which is managed appropriately the rest of the time will be far more resilient to this once-off exception in grazing regime than it would be if it were continually grazed throughout the rest of the year.
- Because area-specific knowledge in this field is lacking, constant monitoring of the veld for signs of overgrazing is essential. Pay attention to what species the animals are targeting and monitor these. If these plants are reduced significantly in size and height and are prevented from flowering, it would be best to remove the livestock and rest the veld until these '*indicator species*' recover.

## MANAGING RENOSTERVELD CORRIDORS, RIVERS AND WATERCOURSES:

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- **NEVER** plough through, or within at least 10m of a watercourse. Ideally, a buffer of 20-30m wide should be fostered on either side of the watercourse or river. Rivers should not be ploughed within 30m of their banks.
- No amount of engineering, channeling, or other intervention can keep drainage areas, watercourses and rivers intact like Mother Nature can. There is absolutely no need, EVER, to do this. If you need advice on this, you can contact the Department of Agriculture's LandCare section, or the Breede-Gouritz CMA (see PARTNERS at the end of this booklet).
- If we manage Renosterveld fragments in isolation, without making any effort to connect these fragments to one another, there is a very good chance we will lose many more species, as a result of the loss of processes. In other words if we lose processes such as pollination, seed dispersal, predator-prey interactions (including those that take place between smaller species





such as insects and birds) we will slowly lose more and more biodiversity.

- If you have any small pieces of Renosterveld, remember that these can act as 'stepping stones' for animal movement and are particularly important for insects. Irrespective of how many rare and endangered plants these small pieces may or may not have, they remain important for this reason. Ploughing these is illegal by law.
- Road verges are sometimes the only remaining corridors and often contain a surprising amount of biodiversity. We strongly advise against spraying or clearing road verges, as they play a critical role as corridors in a landscape where so little natural vegetation remains.
- Consider your fragment / watercourse / corridor as part of a living landscape – i.e. consider how it links to your neighbour's veld or watercourse, or how it fits into the bigger landscape, in terms of how much other veld is remaining in the area. It will then become more obvious how important your 'patch' is – **i.e. your patch is not a single piece of veld, but it is part of a critical network**

**of one of the most threatened habitats on earth!**

## MANAGING PRODUCTION LANDS AROUND RENOSTERVELD:

- How you manage your production lands is as important for landscape conservation as how you manage your Renosterveld, rivers and watercourses.
- Consider the impacts of herbicide / pesticide drift or fertilizer run-off on natural veld and watercourses. Try to avoid spraying on windy days, or too close to the edge of any natural habitat.
- Wherever possible, allow a buffer of undisturbed land to form around natural fragments (i.e. do not plough right up to the edge of natural habitats), as this will aid in protecting these habitats from potentially harmful (and often unavoidable) activities taking place on the adjacent productive lands. It will also reduce the impact of chemical run-off, which often leads to salinization, particularly in watercourses.

## MONITORING POWER CABLES AND OTHER DANGEROUS STRUCTURES:

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- Monitor power lines and transformers for wildlife collisions or electrocutions and report any 'problem areas' to the EWT/Eskom Strategic Partnership on 0860 111535 or [wep@ewt.org.za](mailto:wep@ewt.org.za), who can then erect bird flappers and other preventative devices to reduce these deaths.
- If you are using electric fencing, avoid using electrified wires at low levels, to prevent electrocuting and killing tortoises and other small animals.
- Drinking troughs can be death traps for animals that fall in and cannot get out. Packing some stones, or fixing a plank inside these troughs can save many lives.

## WILDLIFE MANAGEMENT AND PROTECTION

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- If you are aware of a roosting, feeding, or breeding site for any particular species, or



group of species, please protect these from disturbance on all levels – whether this involves people or domestic animals and livestock. Ground-nesting birds usually take about three weeks for their eggs to hatch, after which they become immediately mobile and the main danger is passed.

- Spring is a particularly precarious time for most species, trying to raise their young. Therefore, try to avoid having any domestic animals (particularly uncontrolled dogs) in the veld at this time of the year, as some species will desert their eggs or young if disturbed while breeding.
- It is useful to remember that one should try to avoid touching mammal babies that one finds in the veld, as they are usually rejected by the adults should they pick up an unknown scent on them. Birds, on the other hand, have a very poorly developed sense of smell, so if you need to pick up a bird and put it in a safe place nearby, it is very likely that the adults will continue to rear it. For example, if you were to pick up an owl chick on the ground and put it in the safety of a nearby tree, the adults will usually continue to feed it.
- Educate your family, farm workers and friends to not collect birds' eggs or young, wild animals as pets!
- Do not allow feral cat populations to establish on your farm, irrespective of where on the farm they appear to spend their time. The most important reason for this is that these cats hybridise with our indigenous (and locally rare) African Wild Cat and in so doing ultimately weaken the gene pool of this species. Also, feral cats do a lot of damage to the local biodiversity and it is well-known that they generally kill a lot more than is 'necessary'.



## **PLOUGHING OF VIRGIN LAND:** what does the law say and why?

Unfortunately, illegal ploughing of virgin land remains a significant threat to Renosterveld and other threatened veld types. We would therefore like to highlight the laws dictating the terms on which virgin land may or may not be ploughed, as many landowners are not aware of these issues. These laws have not been put in place to make farming more difficult for landowners, as so many people incorrectly believe. They are there to protect our natural agricultural resources, in order to maintain healthy, living landscapes, where farming can continue successfully for many more generations. Healthy ecosystems are the basis for productive farms. They provide **Ecosystem Services**, in the form of natural drainage (intact vegetation in wetlands and watercourses), pollination services, erosion control (intact vegetation assists with preventing erosion in gullies and on steep slopes), while natural grazing and shelter is provided by well-managed veld.

Thus, one needs to consider what a landscape without this 'free' assistance from nature would be like and to ensure that farms are managed for the well-being of all habitats (cultivated and natural).

Two laws are currently in place to control the cultivation of virgin soil & management of natural resources: **NEMA** (National Environmental Management Act) and **CARA** (Conservation of Agricultural Resources Act). Both clearly state that it is illegal to plough **virgin land or land that has not been cultivated within the last 10 years without the necessary permit**. It is a criminal offence to plough virgin land and is punishable by law (jail sentence and/or up to R5 million fine and a criminal record). This law is enforced by the Department of Environmental Affairs and the Department of Agriculture.

# UNDERSTANDING THE RED DATA LISTS

A few years ago, a list of every single plant and its respective status was made in South Africa – an incredible 20 456 species, of which 13 265 are endemic (i.e. found only in SA). Every plant in the entire country's plant kingdom has been classified according to its threat status. In addition to categorising plants into their Red Data Category, the book also describes the reasons for population decline and current threats to the species. The list is now available online

[www.redlist.sanbi.org/](http://www.redlist.sanbi.org/) and you can visit this page and search for the Red Data status of any South African plant – a very useful resource!

You can also search the IUCN's website for Red Listing of several animals ([www.iucnredlist.org](http://www.iucnredlist.org)), while you can get the Red List Status of SA's birds on BirdLife South Africa's website ([www.birdlife.org.za](http://www.birdlife.org.za)).

## THE RED DATA LISTING FOR SPECIES WORKS ON THE FOLLOWING CATEGORIES (FROM MOST- TO LEAST- THREATENED):

**EXTINCT (EX):** No doubt that the last individual has died.

**EXTINCT IN THE WILD (EW):** No doubt that the last wild individual has died, but that it is known to survive in cultivation, or in an area outside its natural range.

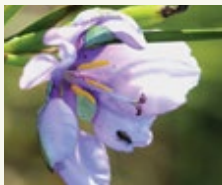
**CRITICALLY ENDANGERED (CR), ENDANGERED (E), and VULNERABLE (V):** In order to determine which of these categories a species fits into, a combination of five key criteria (which influence extinction risk) are analysed. Broadly, these factors include: i) the extent of population decline, ii) small geographic range or highly fragmented population, iii) small population

size & decline, iv) very small population size or very restricted distribution and v) probability of extinction over a specified period of time.

**NEAR-THREATENED (NT):** These species do not yet qualify for any of the above categories, but are likely to become at risk of extinction in the near-future.

**LEAST CONCERN (LC):** These species are not at risk of extinction, based on any of the qualifying attributes used to determine threat status.

**DATA DEFICIENT (DD):** These species cannot be accurately assessed in terms of threat status because they are poorly known.



**CR** *Moraea atropunctata*, with only one known population remaining.

**EN** *Aristea biflora*.

**VU** *Aspalathus quartzicola*.

**NT** *Geissorhiza foliosa*.



## OPTIONS FOR FORMALISING CONSERVATION ON PRIVATE LAND

South Africa has been at the forefront globally in developing opportunities for private landowners to formalise conservation commitments on their properties by entering into various agreements that will secure the conservation portions on site for future generations. There are various role players active within the landscape working in partnership with committed landowners to secure critical biodiversity and ecosystems within the landscape. Due to capacity constraints and the need for conservation action within the landscape, a handful of organisations are active with various models that have been developed

by institutions such as CapeNature, WWF-SA, Overberg Lowlands Conservation Trust and SANParks. These models assist the landowner in protecting his conservation assets, with a few options discussed below:

### BIODIVERSITY STEWARDSHIP PROGRAMME

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CapeNature operates the Biodiversity Stewardship Programme to ensure that biodiversity persists in a changing climate outside the borders of



protected areas, with tangible benefits delivered to local communities and landowners. The vision for Stewardship is that privately-owned areas with high biodiversity value receive secure conservation status and are linked to a network of other conservations areas in the landscape. This should be achieved with tangible benefits realised by private landowners in the process of initiating conservation actions. Various options exist within the Stewardship Programme and include:

**Contract Nature Reserve** – Formally Protected and Proclaimed Nature Reserves that are promulgated in terms of Section 23 of the National Environmental Management: Protected Areas Act. This option is advised for sites of critical biodiversity importance - especially those that contain threatened ecosystems with unique and exceptional biodiversity assemblages.

**Protected Environment** – Formally Protected and Proclaimed in terms of Section 28 of the National Environmental Management: Protected Areas Act. A viable option for groups of landowners with various land use activities across the landscape.

**Biodiversity Agreement** – Contract Law agreement between the landowner and CapeNature in terms of the Western Cape Nature Conservation Board Act. Conservation-worthy land may be protected through the Biodiversity Agreement for a minimum period of ten years.

## CONSERVATION EASEMENT PROGRAMME

This is a new concept in South Africa and the Overberg Lowlands Conservation Trust is piloting Conservation Easements in the Overberg. Essentially a Conservation Easement equates to a Conservation Servitude, which is registered either over the whole property, or parts thereof, in favour of a particular NGO. This Easement “runs with the land,” meaning it is applicable to both present and future owners of the land, as it is also written into the title deeds of a property. It requires approval from the local authority and the Department of Agriculture at both local and national level. This concept is relatively new in SA, but is very similar to Stewardship, and can be done in partnership with an approved NGO. WWF-SA is also exploring options for easement contracts.

# THE MOST IMPORTANT CUSTODIANS OF RENOSTERVELD:

## THE FARMERS

**H**ere, we would like to celebrate some of the first champions for Renosterveld Conservation in the Overberg Rûens. In sharing their stories, we hope to inspire more farmers to consider doing the same. The following individuals are all large-scale commercial farmers in the Overberg Rûens who have taken a stand for Renosterveld.



### **JOSHUA HUMAN, KYKOEDIE**

Joshua farms at Kykoedie, along the Sout River, in the middle of the Central Rûens Shale Renosterveld, which is

one of the parts of the Overberg with the least Renosterveld remaining. Joshua first contacted the OLCT when he learned about the work we are doing as he wanted to share his veld with us and learn more about what he could do to look after it. We discovered the Endangered bulb, *Gladiolus vandermerwei*, on this special veld and Joshua has since committed 60 ha of Renosterveld to conservation, through a Conservation Easement with the OLCT and FFI (Fauna and Flora International, UK) and is in fact the OLCT's pilot easement.



### **KEITH MOODIE, GROOTVADERSBOSCH**

Keith is a dairy-farmer on his impressive 6th-generation family farm, Grootvadersbosch, in

the foothills of the Langeberg in the Suurbraak area. Keith has grown up with a passion for the natural environment and has committed all the Fynbos, Forest and Renosterveld on this property to conservation through Stewardship. Keith and his wife Michelle run a guesthouse on this farm, which neighbours with Grootvadersbosch Nature Reserve and forms part of the Grootvadersbosch Conservancy



### **THYS STEYN, MALANSKRAAL**

Thys farms in one of the driest parts of the Overberg, on the farm Malanskraal in the Eastern Rûens, where he also conserves a group of small remnants with

some of the highest diversity of endemic plants in the region. These remnants also contain unique quartz patches with a suite of rare and threatened plants found only on these quartz islands; Thys knows these intimately and by name.



### **DIRK VAN PAPERDORP, VOORSTEKOP / UITVLUGT**

Dirk farms just off the N2, near Heidelberg on a farm called Voorstekop. In 2008, Dirk committed all the Renosterveld

on his farm (>400 ha) to conservation, through a Stewardship Contract with CapeNature. Dirk feels strongly that farming today needs to take all aspects of the farm into consideration and that managing for biodiversity is as important as managing for successful crops and commercial gain. He is currently the Chairperson of the Board of Trustees of the OLCT and has been since its inception.

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**NEELS UYS, SKEIDING**

Neels farms on Skeiding, near Heidelberg, where he and his wife Annelize also run an agri-tourism based guesthouse. Neels applies a real sense of passion to everything he does, which includes protecting the lowland remnants on his farm. Neels has also committed all of his veld to conservation through Stewardship.

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**THYS & PIETER DELPORT, ERTJIESDAM & HERWIN**

These two brothers farm back-to-back in the Caledon district, on the farms Ertjiesdam and Herwin, where they have committed to conserving hundreds of hectares of Lowland Renosterveld and Fynbos through Stewardship.

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**FRANCOIS & COBUS UYS, ROOIVLEI**

These brothers farm in the Bredasdorp district at Rooivlei, which includes a large stretch of Eastern Rûens Shale Renosterveld and contains, amongst many special plants, a population of *Polhillia canescens* – for which there are fewer than a handful of known locations. They have also signed up with CapeNature’s Stewardship Programme.

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**MG LÖTTER, DE VLEI & KLIPFONTEIN**

MG was inspired by his father’s passion for wildlife conservation and has committed hundreds of hectares of Renosterveld to conservation through a Conservation Easement with the OLCT on his farms De Vlei and Klipfontein in the Caledon area. These farms are essentially part of the largest area of Western Rûens Shale Renosterveld remaining on Earth, thus MG is also working with the OLCT to develop a conservation landscape initiative, whereby several adjoining landowners commit their Renosterveld into some form of long-term conservation agreement. These farms are home to several threatened species, including *Moraea comptonii*, a strikingly beautiful Iris.





## DEFINITIONS:

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- **Biodiversity Hotspot:** Biogeographic region with a significant reservoir of biodiversity that is under threat from humans.
- **Biodiversity:** The degree of variation of life. It is a measure of the variety of organisms present in different ecosystems. This can refer to genetic variation, ecosystem variation, or species variation (number of species) within an area, biome, or planet.
- **Habitat Fragmentation:** Fragmented habitats are those that were once contiguous but are now separated into smaller, isolated areas.
- **Plant Kingdom:** The collection of all plants. The world's plants have been divided into six distinct kingdoms, of which the Cape Floral Kingdom is the smallest, richest and highest in endemic species.
- **Endemic:** Restricted to a certain place – i.e. not found anywhere else in the world. An organism (plant or animal) can be endemic to, for example, South Africa, or the Western Cape or to a very specific vegetation type.

• **Indicator species:** Any biological species which defines or indicates an environmental characteristic. These species can be indicative of a particular habitat, or an environmental condition, such as climate change, overgrazed or well-managed veld, pollution, etc. These species tend to be the more sensitive ones, and are often used as early warning signs of climate or habitat changes.

• **Conservation Easement:** A conservation servitude which is attached to a property's title deed, ensuring that particular parts of a farm (i.e. Renosterveld fragments in this case) are secured for conservation in perpetuity. This is done voluntarily by willing landowners and provides a platform for raising funds to assist with management interventions.



# RENOSTERVELD VISITOR & RESEARCH CENTRE IN THE OVERBERG

**H**aarwegskloof farm lies north of De Hoop Nature Reserve and is accessed from the Baadjieskraal road off the R319 (the tar road between Bredasdorp and Swellendam). This special piece of land falls within a cluster of Renosterveld which is spread over several farms and collectively makes up the largest area of Eastern Rûens Shale Renosterveld that remains today. In fact, this area is essentially the largest contiguous stretch of remnant lowland Renosterveld remaining on Earth and for this reason, the securing of Haarwegskloof for conservation in perpetuity is very significant. This beautiful 500ha reserve was bought by WWF-SA in late 2013 and was given to the OLCT to manage.

The Reserve is significant because it contains some of the best quality Eastern Rûens Shale Renosterveld remaining, as well as many rare and endemic plants, birds and mammals. We are currently compiling a species inventory of the reserve, but some of the exciting finds thus far include:

- Three of the six recently-discovered endemic plants, one of which (*Polhillia curtisiae*) is only known to grow at Haarwegskloof, plus many additional rare and endemic species, particularly those that only grow in quartz outcrops.
- Black Harrier (at least three pairs attempted to breed on the reserve in 2014), a charismatic and rare bird of prey, with an estimated population size of 1000 pairs.
- Denham's Bustard is listed as Vulnerable and we have found them breeding on our reserve.



- The Aardwolf, an elusive mammal which resembles a small Hyaena, but only eats insects. This species has been detrimentally affected by habitat loss in the Overberg and is therefore extremely rare in the region. We have recorded it on our camera traps at Haarwegskloof.

Not only is the OLCT managing the reserve, but we have also established the first-ever **Renosterveld Visitor and Research Centre**, through funding acquired by a crowd-funding campaign in 2014. This Centre is a hub for Renosterveld awareness and conservation, as well as collaborative Renosterveld research, but we are also expanding it to become a self-catering guest house. Everyone is welcome to visit the Centre! You can stay at the Centre if you would like to spend time in the area (and combine with a guided tour of the reserve, some site-seeing, whale-watching at De Hoop and wine-tasting at Sijnn Wines, Malgas). Please see our website ([www.overbergrenosterveld.org.za](http://www.overbergrenosterveld.org.za)) for details and contact the OLCT if you would like to enquire about making a booking, for either a day visit, or an overnight stay.

A close-up photograph of a Yellow Mongoose standing upright on its hind legs. The mongoose has a thick, brownish-gold fur coat and is looking slightly to the left. The background is a blurred, dry, rocky landscape with warm, golden-brown tones.

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# MAMMALS

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Since none of the mammals in our booklet are listed under any Red Data lists as Threatened, we have drawn attention with an R symbol to those which we have good reason to believe are of conservation concern locally (i.e. in the Overberg specifically).

**R** symbol, meaning they are Rare in the Overberg Rùens.

Yellow Mongoose.



### CAPE GRYSBOK.

R

*Raphicerus melanotis*

A small, stout antelope, usually solitary, with short legs and a rufous brown coat, speckled with white hairs. Only male has short horns. Moves slowly with head low and prefers to scuttle away, like a rabbit, into short cover. Nocturnal and secretive, it needs patches of undisturbed natural vegetation to survive. A selective browser and grazer, it feeds on soft shoots and leaves. Once widespread, it is now locally scarce. Endemic to SA, it is restricted to the Western, Southern and Eastern Cape.



### STEENBUCK.

*Raphicerus campestris*

A small, graceful, fairly common antelope with a sleek reddish-brown coat and large ears. Male has short, sharp horns curving slightly forward. Mainly a grazer, it feeds mostly during the day and prefers open, grassy habitat where it can be seen either alone or in pairs, sometimes with young. When disturbed it will bound away showing the distinctive white rump.

### GREY DUIKER.

*Sylvicapra grimmia*

Slightly larger and sturdier than the Steenbuk and Grysbuk, it is variable in colour, mainly grey/brown further north, but usually dark brown in our area. Nose, legs and tail have a visible dark strip, with the tail being white below. Both sexes have a tuft of hair on the crown, while only the male has short, sharp horns, often parallel and close together. Mostly nocturnal, it prefers open, bushy country, where it grazes or browses and shelters in bushes during the day, often living near homesteads.



### GREY RHEBUCK.

*Pelea capreolus*

Medium sized antelope with a grey woolly coat, white under body and under tail. Found in small groups of usually about six to eight with one male, which has long, slender, straight horns. Solitary males or bachelor groups also occur. They frequent open grassy and hilly areas, using their speed and agility to escape, jumping fences easily. When alarmed they sometimes adopt a "rocking-horse action" when the white flash of the tail can be seen. This is thought to be a warning to others of approaching danger.





### BONTEBOK. R

*Damaliscus pygargus pygargus*

Originally found in large numbers across the Renosterveld, this beautiful animal nearly became extinct in the late 1800's due to hunting and the removal of its preferred habitat. Saved by the efforts of certain Bredasdorp families, the Bontebok is now being reintroduced to many areas.



### WATER (MARSH) MONGOOSE.

*Atilax paludinosus*

A large, dark brown mongoose with a heavy head and thick bushy tail, tapering to a thin tip. Found in thick cover near water and an efficient swimmer, it is often mistaken for an otter. Usually solitary or with young, it is mainly nocturnal and feeds on fish, frogs, crabs, birds and reptiles. It leaves the crab shells whole after removing the flesh.

### LARGE GREY (EGYPTIAN) MONGOOSE.

*Herpestes ichneumon*

A holy animal in ancient Egypt and the largest mongoose in Africa, this species has long, coarse greyish hair with small black and white speckles, giving a grizzled appearance. The long, slender tail has a distinctive black tip. It is more diurnal than nocturnal and feeds on small mammals, birds and snakes. Often seen singly or in pairs, sometimes with young, it is usually near water and in good cover.



### SMALL (CAPE) GREY MONGOOSE.

*Herpestes (Galerella) pulverulentus*

A small, grey mongoose with black and white bands on the hair giving a speckled appearance, while the tail has a brown tip. It lives in sheltered places amongst rocks, singly or in small family groups. Common in the area, it is mainly diurnal and feeds on rodents, snakes, insects, small birds and animals.





### **YELLOW MONGOOSE.**

*Cynictis penicillata*

Living in small groups in burrows or rock piles, this small mongoose is yellowish-brown with a bushy white tipped tail. It feeds during the day within a safe distance of its burrow, mainly on insects, locusts and small mammals. It is very alert and flees when disturbed, sometimes using alternative escape areas and can stand up at the entrance to its burrow before taking cover.



### **STRIPED POLECAT.**

*Ictonyx striatus*

With short legs and a hunched back, this small carnivore is less agile than most others, relying for defence on the offensive spray from anal glands that leaves a disagreeable effect on victims for some time. It has a glossy black coat with white spots on the head and four white stripes down the body with a mostly white tail. Not often seen as they are solitary and nocturnal, they prey on rats, mice, insects, birds and snakes, and sleep in crevices and hollows during the day.

#### **SIMILAR SPECIES:**

### **STRIPED (WHITE-NAPED) WEASEL.**

*Poecilogle albimucha*

Cheeks black, forehead and neck all white with yellowish to white stripes down the long body. Becoming more common in our region.

### **CAPE FOX.** R

*Vulpes chama*

The only true fox in South Africa, this small, swift and agile animal uses its large, black tipped bushy tail to deceive pursuers by luring them past, then swerving sharply. The body is mainly silvery grey with some yellowish brown areas and with large tawny ears above a short sharp face. It lives singly or in pairs in thick cover, in rocks or in burrows in sandy soil and feeds on rodents, small mammals, insects and small birds, occasionally scavenging off a larger carcass. Although often a victim in anti-predator actions, it is not a stock killer and is considered a useful animal. Its numbers appear to be declining in the Overberg.



### **BAT-EARED FOX.** R

*Otocyon megalotis*

A small, lightly built fox with very large ears which it uses to detect insects underground and rodents and other prey at night. The grey coat is long and fluffy with a black muzzle, legs and lower half of tail. These useful animals live in groups in burrows, feeding mainly on insects, scorpions and small rodents and are not responsible for stock deaths. Although they will defend their young bravely, they are vulnerable to any attack and are prey to caracal, jackal and large raptors as well as being susceptible to rabies and distemper outbreaks. Their numbers fluctuate in the wild and extensive amount of habitat loss, in addition to the fact that they are highly susceptible to road deaths, has meant that they struggle to recover from major population declines. They are becoming rare in the Overberg's Rùens.





### AARDWOLF. R

*Proteles cristatus*

The size of a jackal but looking like a small striped hyaena with a mane of long hair along the back, which it raises in fright or defence. It has a weak jaw and small teeth and feeds almost exclusively on termites and has no record of killing stock. They live in disused aardvark and porcupine burrows. Once common they are now very scarce, probably due to the reduction in termite colonies (due to loss and degradation of Renosterveld) which are a necessity for their survival.



### LARGE-SPOTTED GENET.

*Genetta tigrina*

A catlike animal with a pointed face, short legs and a long bushy black tail with white rings and a dark tip. Genets have a long, light greyish body with large, dark spots. This fierce little carnivore is very agile and can jump onto roofs and climb trees in pursuit of the birds, rats, mice, snakes and insects that form its prey. Mainly nocturnal, it rests and breeds in thick cover.

### AFRICAN WILD CAT.

*Felis libyca*

This small cat is slightly larger though very similar to the domestic tabby cat with which it interbreeds easily, this being a major threat to its long-term purity and existence. It has a greyish fawny coat with varying degrees of darker bands that are more prominent on the tail and legs. The back of the ears are a rufous colour which is sometimes also vaguely present on the underside of the body. Solitary and mostly nocturnal, it preys on rodents, reptiles, birds and small mammals up to the size of a hare. It can be opportunistically preyed on by caracal, jackal and large birds of prey.



### CARACAL.

*Felis caracal*

A large, solidly built, uniformly reddish-brown cat, about the size of a medium sized dog, with a fairly short tail. It has black and white on face and muzzle and the ears have blackish backs with distinctive black tassels to the tips. Fierce and unsociable, it lives a solitary largely nocturnal existence. Caracal will climb easily when seeking refuge from pursuit. It preys on birds and rodents, small mammals, antelope up to Vaal Rhebuck size and sometimes larger. In a study of caracal stomach contents in the Overberg, the most common prey species were rodents.





### HONEY BADGER (RATEL).

*Mellivora capensis*

A strong, heavily built badger-like carnivore, black underneath and greyish on top from its forehead to its short bushy tail. It has a large head with short ears, strong jaws with canine teeth and powerful claws. A courageous and fierce fighter, said to be afraid of nothing when cornered. It is protected by a thick, very loose hide shielding it from injury and even snake bites. Largely nocturnal and usually solitary, it is omnivorous and feeds on small mammals and digs out rodents, moles, snakes and even spiders though it prefers honey and pupae of wild bees. Often associated with honey guides to find the bees, it breaks open the nest and is protected from the stings by its tough hide.



### PORCUPINE.

*Hystrix africaeaustralis*

The largest of the African rodents, it has a crest of long bristle like quills on its head while the back and tail are covered with strong, sharp black and white banded quills. Although a cumbersome animal with short legs and a heavy body, it is well able to defend itself against attack with its mass of quills, which are lightly rooted and easily become lodged in the attacker after a short charge backward. The porcupine does not shoot its quills. It lives in big excavations and being a vegetarian, feeds on root crops, bulbs, tubers and fallen fruit. It often gnaws on old bones which can be seen near the burrow and also on plastic water pipes.

### SCRUB HARE.

*Lepus saxatilis*

A large hare with long ears, the body grey above turning to white underneath but with some brown on the legs and a distinctive rufous patch at the back of the neck, just below the ears. Resting during the day under bushes, it can accelerate quickly away when disturbed. It feeds at night on grass and other plants and forms an important prey species for predators.



### SIMILAR SPECIES:

#### CAPE HARE.

*Lepus capensis*

Similar but smaller than the scrub hare with rufous legs, a rufous line between the grey of the back and the white underside, black tips to the ears and no rufous at the back of the neck. Once plentiful in the Renosterveld, this species is now extremely scarce.







### AARDVARK. R

*Orycteropus afer*

A scarce, large-bodied animal with a hunchback and sparsely covered with hairs; it has large ears, a long pig-like snout, short powerful legs with hoof-like claws and a strong tail, said to be able to deliver a heavy blow. Nocturnal and solitary, except when it has young, it uses its claws to excavate burrows to live in and also open up termite nests, which it licks up with its long, sticky tongue. It will also lick up termites and ants when found in columns. Although a slow mover normally, it can run fast when threatened and defends itself when cornered. They deposit their faeces in a small scrape and cover it up, like a cat. Only one young is born. Due to its dependence on termites, this species is very rare in the Rùens.



### FOUR-STRIPED GRASS MOUSE.

*Rhabdomys pumilio*

These large mice are well-known and can be identified by their striped backs. They do not usually enter homes, but can be found in gardens and sheds. They eat seeds and grain as well as insects. They are very common in grassy areas in Renosterveld.

### PYGMY MOUSE.

*Mus minutoides*

This is one of the smallest rodents in the world and they can weigh as little as 6g. They are in the same genus as the introduced House Mouse (*M. musculus*). They eat seeds, green plant material and insects.



### SHREWS.

*Soricidae*

These tiny mammals, with pointed snouts, resemble rodents. They are, however, more closely related to hedgehogs than to mice. They are completely insectivorous and contrary to popular belief, they do not raid pantries or nibble on wires. They are more active during the night and can devour the equivalent of their body mass in a night of foraging on insects such as crickets and roaches.





### CAPE ROCK ELEPHANT SHREW.

*Elephantus edwardii*

These rat-sized insectivores are identified by their long noses, which they wiggle around. They have long black legs and can move very fast through the vegetation in a type of hopping-run. They usually form runnels that are used in the day to hunt for their ant and termite prey. These interesting creatures are very rarely seen around homesteads. The unnecessary use of pesticides may have a negative effect on these useful mammals.

## HISTORICAL SPECIES

The Renosterveld-covered Rûens once carried many antelope which grazed on the nutritious grasses of the hills and the heavily bushed water courses, as well as all the larger predators that preyed on them. The original Quagga (*Equus quagga*), the Blue Antelope (*Hippotragus leucophaeus*) which was endemic to the Renosterveld, Black Rhinoceros (*Diceros bicornis*) and others were exterminated along with the predators, by the settlers because of competition with their stock and through habitat change. Other smaller predators, such as the Serval (*Felis serval*) also disappeared from the area in time.



Black Rhino



Bluebuck



Serval



# BIRDS

For birds, we have used the National Red Data status, as recognised by BirdLife South Africa:

**CE** = Critically Endangered

**EN** = Endangered

**VU** = Vulnerable

**NT** = Near-threatened

Black-shouldered Kite



### BLACK HARRIER. EN

*Circus maurus*

A predominantly black raptor with distinctive black and white barring on its tail and a white rump. Often seen in its characteristic quartering flight during which it glides low over the vegetation hunting for mice, small birds and reptiles. It favours Renosterveld, short Fynbos and Karoo scrub habitats where it constructs a shallow nest on the ground. It is endemic to South Africa and known to migrate from the Cape across to Lesotho and other grassland habitats further east. In the Rùens Renosterveld, it is associated with larger and more 'pristine' patches of veld and its presence can be considered an indicator of good quality Renosterveld.



### CAPE VULTURE. EN

*Gyps coprotheres*

The only vulture species present in the Western Cape, with a single breeding colony at Potberg Mountain in the De Hoop Nature Reserve. Seen from underneath when in flight, the wings have a strong contrast between the lower black flight feathers and upper white wings and body, whilst their back appears creamy-white and they have a long, bluish coloured neck. They roost and breed on high cliffs, but forage widely over the farmlands and adjacent areas, scavenging on animal carcasses. They do not hunt live prey and are not responsible for livestock losses.

### SECRETARYBIRD. VU

*Sagittarius serpentarius*

A very large, upright raptor with a predominantly grey body and black feathers on its thighs above long, bare legs. They are often seen walking through the veld and prefer more open grassland habitats where they hunt snakes and other reptiles, small birds, rodents or amphibians, using their strong legs and feet to strike and kill their prey. They have a distinctive yellow-orange facial skin and a crest of feathers often seen standing up in the wind. They nest on the top of flat trees (e.g. Milkwood trees in the Rùens) and are under threat due to habitat loss across South Africa.



### MARTIAL EAGLE. EN

*Polemaetus bellicosus*

One of the largest raptors in South Africa, and the world, they have a dark chocolate brown head and neck, with a slight crest, which contrasts with a cream coloured, slightly flecked breast and dark brown back and wings. They range across much of South Africa but are in decline due to multiple threats, including habitat loss. A variety of prey includes game birds, baboons, and even small antelope. Often seen roosting on electricity pylons, on which they also nest occasionally. They prefer open habitats such as grassland and savannah, but have been recorded breeding in the Overberg and in the Rùens specifically.





### LANNER FALCON.

*Falco biarmicus*

A medium-sized raptor with a rufous coloured crown on its head and a distinctive yellow eye, darker back (slate-grey in adults) and lighter coloured breast and underparts. Being a pursuit-hunter, it preys primarily on birds, but also hunts bats and small reptiles. A partial migrant species in South Africa, moving from the central areas where it breeds towards the south-west during the winter months.



### JACKAL BUZZARD.

*Buteo rufofuscus*

An easily recognised buzzard, with a large stocky appearance, often seen perching on telephone poles along the road. Its charcoal-black coloured back and wings contrast with a rich brown-rufous coloured breast. Viewed from underneath, the wings show a distinctive black around the shoulders, with white across the middle of the wings, and a black trailing edge. A common resident in the Overberg region which breeds during the winter months, with juvenile birds evident from October onwards. Preys primarily on small mammals including hares and rodents, as well as birds, reptiles and frogs. Near-endemic to SA.

### COMMON (STEPPE) BUZZARD.

*Buteo buteo*

A common migrant, which arrives from Europe in large numbers usually during September and remains in the region until March/April. As with the Jackal Buzzard, this species has a stocky appearance and is often seen perching on telephone poles. This bird shows remarkable variation in colouration, but is predominantly buffy-brown in colour, normally with a distinct lighter bib and streaking on the breast, with a yellow bill and dark eye. They frequent agricultural areas where they prey predominantly on insects, reptiles and small rodents.



### YELLOW-BILLED KITE.

*Milvus aegyptius*

A medium-sized raptor, overall brown in colour, with a distinctive shallow-forked tail, resembling a kite, and a bright yellow bill. They often scavenge carcasses or animal road-kill. This species migrates within Africa, moving south after breeding, and arriving in the Overberg region from September before heading north again around March. It is not considered threatened and may have possibly increased its numbers in South Africa, due to the expansion of the road network and increased opportunities for scavenging. Some individuals do breed in SA, preferring alien trees (Pine and Eucalyptus) to build their nests.





### BLACK-SHOULDERED KITE.

*Elanus caeruleus*

This small raptor can often be seen hovering in the air as it scans the ground below for prey. It appears mostly white with black wing tips, small black shoulder patches and a grey back. It is a common resident in South Africa, preying almost exclusively on Striped Mice and occasionally other small rodents, birds, reptiles and insects. This species prefers Grassland and Fynbos habitats, particularly transformed fynbos-agricultural lands. It is not a threatened species, and has in fact benefited from additional nest sites in alien trees, and the transformation of land. However populations fluctuate locally and are probably closely tied to those of the Striped Mouse.



### SPOTTED EAGLE-OWL.

*Bubo africanus*

The most common large owl across much of South Africa, with a very distinctive “whoow whoot” call. They appear mostly grey or brown, with a lighter brown on the breast with barring and grey blotches on the chest, and large conspicuous ‘ears’ (these are not really ears, but merely feathers; birds have holes in the sides of their heads for ears). This species is comfortable with human habitation, and may be seen over fields or near homesteads. They prey on a wide range of small mammals, birds, reptiles and insects. Spotted Eagle-owls are not threatened and provide a useful pest control function for the farmer.

### BARN OWL.

*Tyto alba*

Another widespread owl commonly associated with man-made structures, hence their name. They are often seen roosting on, and even nesting in buildings. The bright white patch around the eye is distinctive with golden-brown wings and back, and cream coloured underparts which are spotted with black. They feed on small rodents primarily, as well as birds, other small mammals and reptiles and are therefore also very useful for controlling pests around the farm. This species also has a very distinctive and eerie-sounding screech-like call.



### BLUE CRANE. NT

*Anthropoides paradiseus*

South Africa's National Bird and probably the most charismatic and striking bird of the region, well known to farmers. This is a large bird, standing up to 1m in height, with an overall blue-grey colour, a white patch on the top of its head and long black tail feathers which can extend almost to the ground. They prefer open grassland, and have colonised much of the wheat-belt over the past decades, where they eat seeds, roots, bulbs, shoots and insects. They are a threatened species due to their habitat loss in their natural range (e.g. grassland and Karoo veld) and their thriving population in the Overberg is critical to this species' survival! Endemic to SA.





### DENHAM'S BUSTARD. VU

*Neotis denhami*

A very large bird, standing up to 1m tall and often easily spotted as it walks through the Renosterveld or cultivated fields, where the males are often seen puffing up their otherwise concealed white neck and breast feathers, in a courtship 'balloon' display. These displays may last up to an hour! The large, heavy body and shape are fairly distinctive. It appears brown on its back and feathers with black and white spots on the wings, rufous red on the back of its neck and grey on the front of its neck, with a white underbelly. It walks through the veld feeding on insects, frogs, lizards and sometimes plant shoots.



### SOUTHERN BLACK KORHAAN. VU

*Afrotis afra*

Another large, terrestrial bird, similar in shape to Denham's Bustard, but considerably smaller. The dark black belly and neck, and white cheek spot are distinctive in the male. The upperparts in both sexes are barred black and brown, with the tips of the wings black in flight. They prefer the intact natural habitats of the Renosterveld, Fynbos and Succulent Karoo. They feed on insects, reptiles and also plant material, while they walk through the veld. These birds occur nowhere else in the world but the Southern Cape and are considered threatened. Recent data have shown that their numbers are declining and this species requires focused conservation efforts. Conserving natural habitats is the best tool we have for ensuring the future of this species. Endemic to SA.

### KAROO KORHAAN. NT

*Eupodotis vigorsii*

This species resembles the Southern Black Korhaan in size and shape. However it mostly appears grey-brown in colour, with the black chin and black eye contrasting the rest of the body. It prefers shrubland to grassland habitat, thus occurring in the natural Renosterveld habitats of the Overberg, but also making use of transformed lands. This species also feeds on small reptiles, insects and plant matter which it finds as it walks through the more open habitats. Endemic to SA.



### CAPE SPURFOWL.

*Pternistis capensis*

The most common gamebird of the Western Cape, occurring widely across fynbos and Renosterveld habitats, this species is endemic to the Province. They are slightly smaller than Guinea fowl, with a mostly brown colour, combined with delicate white patterns. Their orange bills and bright orange legs are also distinctive. They eat plant matter including bulbs, shoots and seeds and are often seen foraging on the edges of veld and croplands in small groups. Like most gamebirds, they feed mostly on insects in spring and summer, which is particularly important for rearing chicks. A field study on gamebirds in the Overberg's Rûens revealed that this species occurs in higher numbers in the grassiest Renosterveld remnants, and they are also very dependent on watercourses in the Rûens for roosting at night (to hide from predators). Endemic to SA.





### GREY-WINGED FRANCOLIN.

*Scleroptila afra*

Another gamebird found in the Overberg, the 'Greywing' is smaller than the Cape Spurfowl. This beautiful bird is incredibly well-camouflaged in the veld, but on closer inspection it has a remarkably intricate patterning. It has a buffy-brown colour with white streaks along the feathers, and a distinctive brown-orange ear and neck patch. Greywing prefer grassy Renosterveld slopes in the Rùens, where they forage for plant material such as tiny bulbs and corms, while also feeding on insects, particularly in spring and summer. Endemic to SA.



### MALACHITE SUNBIRD.

*Nectarinia famosa*

A bright, iridescent green bird, with a long dark tail and long, curved black bill. A fairly common sunbird species in the region, with the bright, shiny green plumage and shape making it difficult to confuse with any other bird. They are common in flowering Fynbos, gardens or Renosterveld habitats and feed primarily on the nectar of flowers, but will also eat spiders and insects to supplement their diet, particularly when rearing young.



Jackal Buzzard.





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# INSECTS

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### BARRED EGGARLET.

*Bombycomorpha bifascia*

The Barred Eggarlet feeds on the leaves of Taaibos (*Searsia pallens*). The larvae are covered in white, orange and black hairs that protect them against predators. These larvae may totally defoliate the entire bush. Mature caterpillars move to the ground where they ingest soil which they mix with silk to build hard, brown cocoons. As with most Lasiocampidae species, they do not feed as adults and their sole purpose is to find a mate and reproduce, living on the nutrients they obtained during the larval stage. Adult are light grey with darker bands on their wings. Longevity is about a week.



### AFRICAN SILKWORM.

*Gonometa postica*

*Gonometa postica* is sporadically found feeding on Acacia karoo trees. It spins silken cocoons on the stems of the tree. In certain parts of Africa, these cocoons are collected in the veld to produce wild silk. This silk is stronger than the more common mulberry silk and is more expensive. The cocoons are used by San people to make leg rattles by placing small stones in the empty sells.

### ZIG-ZAG EMPEROR MOTH.

*Imbrasia tyrreha*

The Zig-Zag Emperor Moth is the largest moth in the area. Larvae emerge in large numbers in late summer and in some years can defoliate most Acacia karoo trees in a given stand of trees. This defoliation does not kill the trees and they re-sprout with new leaves within a few weeks after the larvae have vacated the trees and pupated in the soil. The pupae provide food for ground birds like the Cape Spurfowl and Helmeted Guineafowl, as well as for the Small Grey Mongoose, which dig them out from beneath the trees. They are related to Mopani worms and are also eaten in some cultures.



### LONG-TONGUED FLIES.

*Prosoeca longipennis*

Renosterveld contains some plants with long-tubed flowers which require specialised pollinators for reproduction (e.g. *Cyrtanthus leptosiphon* (Amaryllidaceae), *Tritonia* (Iridaceae) Pelargonium, etc.). Unlike the bird-pollinated flowers, which are red and unscented, these flowers are light in colour and sometimes produce a scent. These flowers are typically pollinated by *Prosoeca longipennis*, a long-tongued fly species. It is feared that this fly may have become extinct in some areas and that the rare flowers it pollinated may follow its demise. The very long proboscis (up to 7cm long) is not rolled up as in the ones found in moths and butterflies.





## MILKWEED GRASSHOPPERS.

*Pyrgomorphidae family*

The four species in this group are all brightly coloured, slow moving and are not good flyers. They open their brightly coloured, patterned wings when threatened. Young usually have different markings to the adults and can move around in large groups. Adults are usually solitary. These grasshoppers contain a poison that they obtain from feeding on milkweeds. *Dictyophorus spumans* is the slowest moving (and most poisonous) of them all.



## LONGHORN BEETLES.

*Cerambycidae family*

These beetles can be identified by their long antennae. Diurnal species can be found on trees in the hottest time of day, when they feed and breed. They are usually much brighter in colour than their nocturnal counterparts. The larger ones found in the Renosterveld are usually black with red, white or/and orange markings. Smaller species found on some flowers can be a metallic green or blue colour. The nocturnal species are brown and usually hairy. The larva of Longhorn beetles are known as wood borers and can be found inside living or dead wood. The larvae of Oscillated Longhorns usually feed on Sweet Thorn wood and can take up to two years to mature. Milkwood trees are also sometimes used by the large larva of a nocturnal species.

## TERMITES.

*Order Isoptera*

These interesting and important animals are related to cockroaches (not bees and ants) and are commonly found in Renosterveld. The two main types found are those constructing above-ground 'anthills' (*Trinervitermes spp.*) and the ones that form large underground nests (*Microhodotermes viator*). The underground nests form visible spots in the veld known as Heuweltjies. Vegetation on these Heuweltjies is usually different from the surrounding veld as a result of nutrient enrichment (dung) and disturbance caused by the termites. Bat-eared Foxes and other small predators (including some birds of prey) also often feed on them.



## MONKEY BEETLES.

*Scarabaeidae family*

These small and sometimes very colourful beetles are closely related to dung beetles. They can usually be found feeding on daisy flowers with only their back ends sticking out. They also occur on many other plants, such as wild peas (legumes). They play an important ecological role, as many daisies need them for pollination. Some daisies even have markings that mimic female monkey beetles to attract males to pollinate them.





### ANTLIONS.

*Palpares spp.*

The larvae of these beautiful insects are well-known and they produce pitfall traps in loose soil that traps small insects. The adults are sometimes confused with dragonflies. They fly at night and are attracted to lights, a habit uncommon in dragonflies. The wings of the larger species are sometimes decorated with black and yellow markings.



### SAW-BACKED AND STONE GRASSHOPPERS.

*Pamphagidae family*

These grasshoppers are difficult to see in the veld as they are well-camouflaged in order to blend in with their surroundings. Some are the same colour as the substrate they live on and others may be patterned and covered with growths to resemble the plants in their environment. They are usually wingless, but males of some species do have wings.

### CHERRY-SPOT MOTH.

*Diaphone eumela*

The brightly coloured caterpillars of these moths are usually found feeding on wild onions such as 'Slymstokke' / 'Soldier in a Box' (*Albuca maxima*) and 'Chincherinchee' (*Ornithogalum* species). They can grow to over 5cm before they dig into the substrate to turn into pupae. The moths emerge during the wet season and are also brightly coloured. The bright colours of both the caterpillars and the moths may indicate that they are distasteful or even poisonous.



### COCKTAIL ANTS.

*Crematogaster spp.*

The nests of these ants are commonly found in thorny bushes in Renosterveld. They are light-weight (like thick cardboard) and made out of chewed-up plant material. When disturbed, lots of small black ants come teaming out of the nest. They hold their abdomens into the air and release formic acid with a distinctive smell. They inflict a painful bite and are quick to attack the source of disturbance.





### CARPENTER BEES.

*Anthophoridae family*

These bees vary in size from the honey-bee-sized *Amegilla* species, to the large yellow and black Carpenter Bee, *Xylocopa caffra*. They are all solitary bees and nest in the hollowed-out flower stems of Aloes; alternatively they make their own nests in dry wood. *X. caffra* is commonly seen pollinating large wild pea flowers as well as the flowers of September bushes (*Polygala* species). Some Renosterveld plants are not pollinated by honey bees, but in fact by bees in the genus *Amegilla*. It is also known as one of the few insects to pollinate *Haworthia*.



### SYLPH BUTTERFLY.

*Tsitana tulbagha*

This small Skipper Butterfly was found to be the pollinator of the rare and recently-described *Hesperantha kiaratayloriae*. This Critically Endangered Iris is currently only known from one locality and it may well have no other populations. The caterpillars of the little skipper feed on a grass species, as is common for the rest of the *Tsitana* genus.

### ROBBER FLY.

*Asilidae family*

These medium to large, long-bodied flies are regularly seen sitting on rocks in the veld. They are predatory and hunt other flies and insects. Copulating pairs are sometimes seen flying around. Larvae feed on detritus and some may also be predatory. Some species mimic, and prey on, Carpenter bees. These flies do not bite, nor do they spread any disease: they in fact help to control other potentially harmful insects.



### STRIPED TOKTOKKIE.

*Psammodes striatus*

This large rounded beetle is well-known. It has a smooth black body with red-brown lines. Males can be identified by the yellow felt-like patch on the abdomen. Its name is derived from the way the adults knock on the ground to attract mates. Toktokkies are related to mealworms, (*Tenebrio molitor*) and have similar larva that can be found beneath rocks. All life stages feed on plant and animal material.





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# REPTILES

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### SOUTHERN ROCK AGAMA.

*Agama atra*

These large lizards can be found living on rocks in the veld, or even on farm buildings. They are related to chameleons and the males are capable of changing from a suite of bright colours to the colour of the substrate that they inhabit. The male usually has a bright blue head that he uses to communicate with other individuals. Agamas appear sluggish, but can move very quickly. They do have sharp teeth and will bite when mishandled. Some people believe that their bites are deadly.



### OCELLATED THICK-TOED GECKO.

*Pachydactylus geitjje*

The Ocellated Thick-toed Gecko is the only gecko species that is found under rocks in the area. It is a small, slow-moving species with a dark body covered in lighter spots. They lose their tails very easily and the new tails are usually fatter and of a different colour to the original. They lay two hard-shelled eggs a few times a year and are sexually mature after one year. They are preyed upon by juvenile snakes and even Baboon Spiders and scorpions.

### KLEIN KAROO DWARF CHAMELEON.

*Bradypodion guttural*

This medium to large (15cm) chameleon is widespread in the drier parts of the Western Cape. It can be common in certain areas, but is seldom seen as its grey and green patterned camouflage is very effective. They can sometimes be found during the day on fences. Like other dwarf chameleons the Klein Karoo Dwarf also gives live birth to up to 15 small young. People sometimes collect them as pets; this is illegal.



### CAPE GIRDLED LIZARD.

*Cordylus cordylis*

Girdled lizards are commonly found in cracks between shale rocks in Renosterveld. They are covered in spiny scales that help them wedge tightly in-between the rocks, away from potential predators. The colour varies between populations, from almost a canary yellow through to reddish-brown to almost black. They can lose their tails, if caught by them. Up to four relatively large young are born in the summer months.





### CAPE COBRA.

*Naja nivea*

Another well-known snake found in the Western Cape. Colours can vary from bright yellow to brown to almost black. Juveniles can be identified by black band around the hood. These fast and agile snakes can be up to 1.7 m long. They usually try to flee when danger approaches, but if cornered they spread a wide hood and may strike. Their venom is considered to have the same strength as that of a Black Mamba, which it is related to, but it is injected in far lower doses. It is also known to contain the most neurotoxic venom of all African cobras. Bites are considered extremely serious and victims should be transported to hospital as quickly as possible.



### BOOMSLANG.

*Dispholidus typus*

This fast, tree-living snake can vary a lot in colouration, even within sexes. Some are a dirty green, while others are black with a yellowish belly. They can be up to 2m long. Venom is injected by back fangs; and this species uses its strong venom to catch unaware birds and chameleons perched in trees. Birds often spot them and make a fuss when they see them in the treetops. Venom is strongly haemotoxic and a bite is considered a highly serious medical emergency, but bites are not common as the snakes are generally reluctant to bite.

### SPOTTED (RHOMBIC) SKAAPSTEKER.

*Psammodromus rufus*

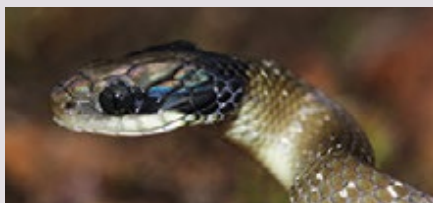
This agile and beautifully patterned snake is always a rewarding find in the veld. Many years ago, a farmer (incorrectly) blamed it for killing its sheep, hence the common name. Spotted Skaapstekers are back-fanged snakes in the Grass snake family. Their venom is essentially harmless to sheep and people and is used to catch small vertebrates.



### RED-LIPPED HERALD SNAKE.

*Crotaphopeltis hotamboeia*

This is usually an olive-grey snake, with a dark head and reddish lips, up to 75cm long. It is a back-fanged snake that feeds primarily on frogs. The Red-lipped Herald Snake has become common in the Eastern Rûens over the past decade or so. The apparent increase in the Painted Reed Frog, upon which these snakes prey, may be the cause of this increase. Although these little snakes act aggressively and flatten their heads when cornered, they are not particularly venomous. A mild headache is the worst symptom recorded from a bite. They are very easy to identify and should be left alone if disturbed.







### **PUFF ADDER.**

*Bites arietans*

This snake hardly needs any description, as most farmers would have encountered them in the veld or near their homesteads. Adult snakes are usually between 60cm and 1m long (or larger). The colour can vary from a dirty grey to a bright yellow with an almost red head. Puff Adders give live birth to as many as 30 or 40 babies. This species is responsible for the most venomous snake-bite incidences in the Western Cape. This could be due to the fact that they don't move off like other snakes do when humans approach.



### **PARROT-BEAKED PADLOPER.**

*Homopus arealatus*

This is one of the world's smallest tortoises. Females are usually larger than males and are more brightly coloured. They lay clutches of 1-4 eggs in winter to late summer. Eggs can hatch within 90 days, but can take up to 300 days. It has been recorded that Padlopers can live up to 30 years in captivity, but they probably live far shorter lives in the wild as they have many predators. Domestic or feral dogs are considered a threat to Padlopers and crows also forage on these small tortoises. It is unethical and illegal to collect tortoises as pets, no matter how tempting this might be. It is also of grave concern that our tortoises are being smuggled out of the country to supply Asian markets (as food and medicine).

### **LEOPARD TORTOISE.**

*Stigmochelys pardalis*

This tortoise is widespread in South Africa, but is only found in the more eastern parts of the Overberg. They can be up to 70cm long and weigh up to 40 kg, but most are between 30-45cm and weigh between 8 and 12 kg. Females usually grow larger than the males. The eggs are laid in several clutches between October and May and can contain between 6 and 18 ping-pong-ball sized eggs. It can take more than a year for the eggs to hatch and the hatchlings weigh only about 35g. Very few hatchlings make it to adulthood, as they are easy prey, particularly for aerial predators.



### **ANGULATE TORTOISE.**

*Chersina angulata*

This medium-sized tortoise is one of the most common species found in the Overberg. They vary in colour from almost uniform yellow to almost black. Some individuals have a red colouring to their underside, hence the Afrikaans name Rooipensie ('red belly'). Males are larger than females and, as with all tortoises, have an indented underside to assist them with mounting the female. One or two eggs are laid in a nest. Hatchlings and young are commonly eaten by crows and other predators.





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# SPIDERS AND SCORPIONS

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### BABOON SPIDERS. R

*Harpactira atra* and *H. caferiana*

These are the largest spiders found in South Africa. They are related to the tarantulas and bird-eating spiders from other parts of the world. Baboon Spiders either live in silk-lined tunnels in natural veld that they dig themselves, or in old mole rat tunnels. Younger individuals can be found beneath rocks and debris. Females are much larger than males and can live for several years. Males are sometimes eaten by the female after mating. Females tend to hunt around their tunnels and do not wander, as the males do. They usually ambush invertebrates such as crickets and grasshoppers, but will also eat small vertebrates like pygmy mice, lizards and geckos. They are venomous, but not dangerously so.



### RAIN SPIDER.

*Palystes species*

This well-known house-dwelling spider is commonly mistaken for a Baboon Spider, although they are not related. They actively hunt at night and hide in the day. Females construct a large silk and leaf nest inside bushes. These spiders should be left alone when found in houses as they help control pests in the house. They will deliver a painful bite when rabbed, but are not considered venomous.

### COMMUNITY NEST SPIDERS.

*Stegodyphus dumicola*

Community Nest Spiders live in messy, debris-filled nests that contain many individuals. The females are lighter in colour and larger than the male and are usually more abundant in the nests, which can be almost as large as a football. Small prey is caught individually but larger prey, such as grasshoppers, are subdued by a group of individuals. These spiders are related to the larger and solitary Velvet Spiders and none are considered dangerous to man.



### ORB WEB SPIDERS.

*Araneidae family*

These colourful and interestingly-shaped spiders spin large typical webs between plants. Some of these webs are so strong that they can ensnare small birds. The males are usually much smaller than the females and can be a different shape. Some species only construct webs at night and break them down again in the morning. Some species have strangely-shaped abdomens that help with camouflage in the day. Some mimic bird droppings or dead branches. These species are not at all harmful to man.





### THICK-TAILED SCORPION.

*Parabuthus capensis*

Thick tailed scorpions are usually found beneath rocks in the veld or around sheds. They are active at night and it is therefore always advisable to wear closed shoes when walking around outside at night. They do sometimes enter homes. Although this species is not as venomous as other members in its genus, it can be fatal for young children and elderly people and one should get to hospital as soon as possible if one is stung.



### BARK SCORPION.

*Uroplectes lineatus*

These small scorpions are usually light brown with a dark mark near the tip of the thick tail. They can be found living beneath rocks, but are more common under loose bark. This is the most common species found in houses and is responsible for the most stings. Although not deadly, the sting is very painful. It is always a good idea to get to hospital if stung by any scorpion as it may be juvenile of the thick-tailed scorpion and that may be very serious.

### BURROWING SCORPION.

*Opisthophthalmus latimanus*

These scorpions have large pincers and not as thick a tail as the other species. They live in burrows which they dig themselves and they only come out at night. They are rarely encountered in homes, but may sometimes wander into them where they may come into contact with man. Their stings are not deadly, but are very painful and it is always important to get to a hospital, just in case you have not identified them correctly.



### ROMAN SPIDER.

*Solifugae*

These fast-moving relatives of spiders are commonly seen running around in the veld. They are usually brownish with darker markings and are very hairy. They do not possess fangs or the poison found in true spiders. They do, however, have strong jaws that are used to catch insects and can bite when caught/disturbed. They should not be killed if encountered in homes, as they hunt for pests such as like roaches and crickets.





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# AMPHIBIANS

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### PAINTED REED FROG.

*Hyperolius marmoratus*

This small frog has become common in the eastern Rûens over the past decade. Different colour forms and patterns occur in different parts of the country. The colour forms in the Overberg are greyish with yellow spots, or a brown colour. These beautiful patterns are usually only displayed at night. During the day they are usually bright white (with red legs and toes) and can most often be seen sitting in the open. They are also sometimes found living in arum lilies and may be confused with a rarer and bigger species, the Arum Lily Leaf frog (*H. horstockii*).



### SAND RAIN FROG.

*Breviceps rosei*

These small, slow moving frogs are more often heard than seen. Rain frogs have rounded bodies with short legs that can't be used for jumping. They spend most of their lives in holes beneath ground. They only come above ground after good rains, in order to mate. Males have a distinctive call. Some farmers consider its calling as an indication that it will rain. This frog is called Janblom by some and is endemic to the Fynbos Biome.

### RAUCOUS TOAD.

*Amietophrynus rangeri*

Raucous Toads are well-known, large toads with rough skins. They are usually light brown with darker patterns on the back and with granular, whitish bellies. Some toads can become used to living around homes and even come and sleep or hibernate indoors. They are prone to drowning in swimming pools and other man-made containers. For this reason, one should always leave a stone or a piece of floating wood in a water holder, as this enables the toads to climb out. They can live for up to 20 years or more. They do not cause warts; nor do they bite.



### CAPE RIVER FROG.

*Amietia fuscigula*

River frogs are large frogs found near permanent water bodies, such as rivers, dams and vleis. They can vary from a light brownish colour to olive green. Their backs are usually marked with darker stripes and spots. They can be heard calling from the reed beds at night and will sit still at the water's edge for a while when approached. The very large tadpoles seen in dams and other freshwater bodies usually belong to this species.





# PLANTS

The Red Data Status for plants is taken from the South African National Biodiversity Institute's Red Data List:

**CE** = Critically Endangered

**EN** = Endangered

**VU** = Vulnerable

**NT** = Near-threatened

*Freylinia undulata*



### **OEDERA SQUARROSA.**

*(Vierkantperdekaroo)*

This erect (up to 1m) aromatic shrub is a member of the Daisy family (Asteraceae). It has sharp tipped leaves and yellow flowers in spring and summer. It is naturally found on stony or clay slopes and can become dominant in old fields and veld. It is not palatable to game and stock.



### **PRINTZIA POLIFOLIA.**

A tall, erect shrub with grey, woolly leaves up to 1m tall. Resprouts and seeds after fire. Flowers are mauve to purple and it flowers in spring. Occurs only on south-facing slopes and on the edges of watercourses in Renosterveld, but is widespread from the Bokkeveld Mountains to Port Elizabeth. Only young plants are browsed by game and stock.

### **FREYLINIA UNDULATA.**

Erect shrub up to 2m tall widely found in Renosterveld that resprouts after fire. Flowers are blue/purple to almost white and are pollinated by butterflies, bees and sunbirds. Freylinias makes beautiful garden plants and are worth growing.



### **RELHANIA GARNOTII.** VU

This shrublet can be up to 50 cm high and has tiny leaves, yellow daisy flower and flowers from Jul to Oct. It is an indicator of the presence of silcrete in Renosterveld. Leafs contains an aromatic oil.







### LEUCADENDRON CORIACEUM. EN

Low growing (to 60cm) resprouting shrub with many slender snake-like stems. Male and female flowers are small (17mm male, 8mm female) and are found on different plants. Flowers are said to have a yeast or honey scent and appear just in September. Plants grow in gravelly flats between Napier and Riversdale.



### SEARSIA (RHUS) PALLENS.

(*Bleekkoeniebos*)

Taaibos is a familiar shrub to most farmers and grows up to 3m tall. Male and female plants are separate and the fleshy fruit resembles small mangos, to which it is related. Its fruit attracts a lot of birds and the flowers are known to attract an array of insects. It is common in watercourses and older Renosterveld and is a precursor to the formation of thicket in Renosterveld.

### NOTOBUBON STRIATUM. NT

A sprawling shrublet with yellow, fennel-like flowers, which can grow up to 40cm tall. It belongs to the carrot family (*Apiaceae*). This species is re-listed and occurs from Bredasdorp to Albertinia. Plant flowers from Oct to Feb and are pollinated by wasps. Some species in this genus are used to treat bladder and kidney problems. One species, commonly known as Blister Bush, contains sap that forms blisters on the skin (*N. galbanum*).



### ELYTROPAPPUS RHINOCEROTIS.

(*Renosterbos*)

Renosterbos is a greyish blue, fine-leaved shrub, which can grow up to 1.8m tall and does not resprout after fire. The flowers are tiny brown daisies. Historically, young shoots were used to treat chest and stomach complaints. It can become dominant in old fields and veld and is not restricted to Renosterveld. It may also be found growing in certain types of Karoo and Fynbos vegetation and thus its presence is not necessarily indicative of Renosterveld. Some game and stock do browse it, but it is generally avoided.





### **WAHLENBERGIA TENELLA.**

This species is an erect or sprawling shrublet up to 80cm with blue or white, star-like flowers. The leaves are strongly recurved. It flowers from Nov to May and occurs from Mamre to the Eastern Cape.



### **HELICHRYSUM PETIOLARE.**

*(Kooigoed)*

Messy, grey leaved shrub up to 1m that does not resprout after fire. Flowering occurs in summer and it mostly grows on moist slopes in Renosterveld (i.e. south-facing slopes). This member of the Daisy family was used by the early settlers to fill mattresses and it was believed that it kept bugs and insects away. The smoke from dry branches was used as a fume to kill indoor pests. This plant is also commonly used as traditional medicine. It is widely grown in gardens.

### **HERMANNIA FLAMMULA**

*(Poprosie)*

This is a small shrub up to 60cm tall. The tiny red, twisted flowers are what give this genus its common name in Afrikaans, Poprosie, meaning Doll's Rose. It flowers in spring, does not resprout after fire, and is highly palatable to livestock.



### **HERMANNIA DIVERSTIPULATA.**

Shrub up to 50cm tall, grey-green leaves, flowers are yellow, orange or red. Flowers in spring and is most abundant after fire. It occurs from Malmesbury to Uniondale. It is palatable to both stock and game and the fully-grown plant is an indicator of well-managed veld.





### PELARGONIUM MYRRHIFOLIUM.

(*Fynblaarmalva*)

A sprawling shrublet that resprouts after fire. Unlike several other Pelargoniums, it is not strongly scented when crushed. Flowers vary from white to light purple and are marked with red-purple lines. They flower in spring and summer and can be locally abundant, particularly after a fire. It is eaten by Grey Rhebok and Klipspringer.



### PELARGONIUM TRISTE.

(*Kaneeltjie*)

Belongs to the group known as the 'geophytic pelargoniums', meaning that it has a large underground storage root and behaves like a bulb, losing its leaves in the dry season. Flowers give off a cinnamon scent in the evening and are pollinated by moths. The tubers were eaten as a delicacy by some tribes. Tubers are also rich in tannins and are used to tan leather a reddish-brown colour in Namaqualand.

### MICROLOMA SAGITTATUM.

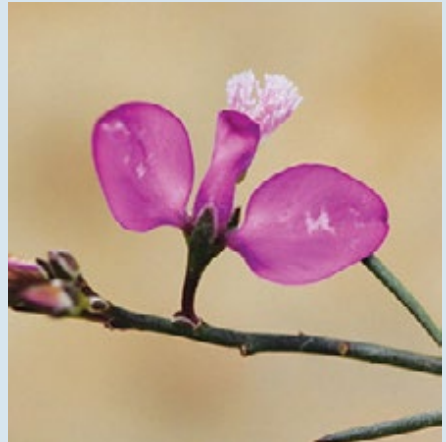
(*Bokhoringtjie*)

A non-parasitic climber up to 1m tall, which uses other plants as support. It is highly palatable and the fruits are also edible in small quantities (it is a member of the the Milkweed family). Adult plants can thus be seen as an indicator of well-managed veld. The dark pink flowers produce tiny packets of pollen which latch onto the tongues of their sunbird pollinators, in order for cross-pollination to take place.



### POLYGALA GARCINII.

A small scrublet, with almost leafless branches, that is up to 40 cm tall. It has pinkish, pea like flowers like those found on Septemberbos (*P.myrtifolia*). It resprouts after fire and flowers in summer. It is browsed by game and livestock.





**BOBARTIA LONGICYMA.** NT

(*Besembiesie*)

Evergreen cylindrical leaves, resembling a sedge, up to z,8 m tall. Tall flowering stem with clusters of yellow star shaped flowers from Aug. to Nov. This is a member of the Iris family (Iridaceae) commonly confused with dekriet (Restionaceae). It is widespread on sandy flats and lower slopes.



**BOOPHONE DISTICHA.**

(*Gifbol*) *Declining*

A partly exposed, large bulb with a fan of grey-green wavy leaves. The pink flower head is about 25 cm tall and appears from Nov. to Jan. when the leaves have died back. Flowering is followed by a 'candelabra' seed head. Usually flowers more prolifically after a fire. Reddish-pink flowers are pollinated by sunbirds. Used as muthi but most parts of the plant are highly poisonous (as are most Amaryllids) and there are records of both humans and stock dying after ingesting it. It was used in the past as an arrow poison.

**BRUNSVIGIA ORIENTALIS.**

(*Candelabra flower*)

Five+ large leaves lie flat on the ground and dry off before the large head of red flowers, about 45 cm tall, appears from Feb. to Apr. It is followed by a large 'candelabra' seed head. Flowers are pollinated by sunbirds. The fleshy, short-lived seeds resemble peas. They are released when the dry seed head breaks off and tumble across the veld.



**CROSSYNE GUTTATA.**

(*Parasol Lily*)

The large flat leaves have bristles on the edges, and dry off before the 30+ cm head of maroon to pink flowers, 30+ cm tall, appear from Feb. to Apr. The mature seedhead breaks off and releases the fleshy pea-like seeds as it tumbles in the veld. This species is widespread on flats and hills.





### HAEMANTHUS SANGUINEUS.

*(Veldskoenblaar, April Fool)*

Usually has two large round and leathery leaves with reddish margins. The 30 cm tall red 'paintbrush' flower (on a plain stem) appears from Jan. to March. Flowers are visited by sunbirds and the Mountain Pride butterfly, *Aeropetes tulbaghia*. Fruit is a red berry with dark fleshy seeds. Widespread on clay or sandy soils. Occasionally eaten by tortoises, which then spread the seed in their dung.



### NERINE HUMILIS.

*(Nerina)*

Strap-like leaves that are usually dry at flowering time from Feb. to June. Sometimes new leaves emerge first, if flowering is late. Pink flowers on a 20-30 cm stem. Some forms have longer styles and are pollinated by long-tongued flies. It is widespread in a variety of rocky habitats.

### WACHENDORFIA PANICULATA.

*(Rooikanol)*

Red underground tubers, and a fan of (usually) hairy, pleated leaves up to 40 cm long with a branched stem of yellow flowers with dark markings. Occurs mostly in sandy and gravel soils, widespread. Flowering time is from Sept. to Oct.



### ALBUCA SUAVEOLENS.

*(Bonttjienk)*

The 2-3 narrow leaves are often dry at flowering time in Sept. to Oct. The yellow flowers with a green stripe on a stalk up to 40 cm tall occur on dry, rocky slopes and sandy flats in the northern Overberg. Albuca's are closely related to the 'chinks' (*Ornithogalum* species) and are also known to be poisonous. Leaves are sometimes eaten by the brightly coloured caterpillars of the Cherry Spot Moth.





### **EUCOMIS REGIA.**

*(Pineapple Lily)*

Several broad flat leaves form a rosette on the ground. The 10-15 cm flower stalk is topped with a green leafy crown covering the green flowers. Widespread, on cooler south-facing clay slopes, flowering Aug. to Sept., and pollinated by mice.

### **LACHENALIA ORCHIOIDES SUBSP ORCHIOIDES.**

*(Viooltjie)*

Usually two spotted leaves and a spotted stem. Flowers up the stem of 6-20 cm are greenish yellow, flowering Aug. to Oct. Widespread in stony soils. Can be confused with similar *L. lutea* (shorter flowers) in the western Overberg, and *L. algoensis* (longer flowers, July to Aug.) in the south-eastern Overberg.



### **LACHENALIA CONTAMINATA.** NT

This bulb forms a tuft of several grass-like leaves. Flowers up the stem of 6-20 cm are small and bell-shaped, white with brownish markings. It is widespread in damp places and flowers from Sept. to Oct.

### **LACHENALIA UNIFOLIA.**

*(Blowvioletjie)*

Single leaf, striped green and maroon in lower half, clasping the 8-30 cm flowering stem, with blue to yellow or pinkish flowers on pedicels of 4-15 mm. It is widespread and flowers from Aug to Oct.





### **ORNITHOGALUM DUBIUM.**

*(Yellow Chinchinchee)*

This 'chink' has 3-5 leaves that are often dry at flowering time from Sept. to Nov. The 8-15 star-like flowers are usually bright orange or yellow, occasionally white, up to 20 cm high. This species is not as tall as the well-known white chinks (*O. thyrsoides*). Ornithogalums are widespread and are known to be poisonous to stock.



### **BABIANA PATULA.**

*(Bobbeaantjie) Declining*

This bulb has a few upright hairy, pleated leaves, up to 10 cm. Scented flowers appear on short stalks in Aug. to Sept. and vary in colour, mainly blue/purple and yellow. It is widespread on clay flats and lower slopes. The bulbs of some Babianas are often relished by baboons.

### **BABIANA PURPUREA.**

*(Bobbeaantjie)*

Leaves are upright, hairy, narrow and pleated and are shorter than the 10-15 cm long flowering stems. The pink to purple flowers with dark pollen appear in Aug. to Sept. Occurs on clay flats and slopes from Robertson to Bredasdorp.



### **FERRARIA CRISPA.**

*(Krulletjie, Spinnekopblom)*

Many leaves overlapping and clasping the much-branched stem. The flowers appear sporadically from Aug. to Oct., last a day, smell of mould (to attract the fly pollinators), and have brown and yellow mottled colours. Found on sandstone or granite rocks, and near the coast in sandy places.





**FREESIA CARYOPHYLLACEA.** NT

*(Kammeljie)*

Leaves often flat on the ground, sometimes 10 cm high. The flowers appear from April to June on a horizontal stem, cream and yellow, strongly scented; in clay and limestone soils between Villiersdorp, Bredasdorp and Swellendam. This is one of the ancestors of Freesias found in gardens today.



**GEISSORHIZA OVATA.**

This species has 1-2 small oval leaves on the ground, and one clasping the 6-15 mm stem with 2-4 pale pink star shaped flowers, with dark pink below. It is widespread on sandstone slopes and flats, flowering well after fire, Aug to Oct.

**GLADIOLUS FLORIBUNDUS.**

This species has erect, sword-shaped leaves, with thickened margins, 20-40 cm high. A horizontal flowering stem with up to 8 cream to pale pink flowers with a dark strip on each tepal, the lower three tepals smaller than the upper three. Its flowers are pollinated by long-tongued flies. It is widespread on clay, sandy or limestone flats and slopes, flowering Sept to Nov.



**GLADIOLUS LILIACEUS.**

*(Large Brown Afrikaner, Ribbokblom)*

This gladiolus has narrow linear leaves with thickened margins and midrib, the lowest leaf being the longest. Flowering stem up to 70 cm with reddish brown to beige flowers, turning mauve in the evening and strongly scented like carnations and cloves. It is pollinated by long-tongued moths. Widespread on clay slopes, flowering Aug to Nov.







### HESPERANTHA FALCATA.

(*Bontrokkie, Aandblom*)

The 3-5 sword-shaped leaves are often slightly curved. The flowering stem is 25-30 cm tall with 3-8 scented white flowers, brownish on the underside, opening in the late afternoon. It is widespread on sandstone and shale slopes and coastal flats, July to Oct. There is a yellow flowered form in the Overberg, from Caledon to Bredasdorp and eastwards, that opens at midday and is unscented.



### IXIA MICRANDRA.

(*Kalossie*)

Narrow leaves 1.5mm wide, and slender stem up to 50 cm topped with 2-6 pink flowers, about 20 mm wide, from July to Sept. It is widespread, rocky sandstone slopes and flats.

### MORAEA GAWLERI.

(*Fynuintjie*)

1-2 long, trailing leaves, usually crinkled margins. Wiry flowering stem is branched, up to 45 cm tall, yellow or brownish flowers, which last from late morning to late afternoon. Widespread in sandy or clay slopes, from July to Oct.



## NOTE!

Bulbs should not be picked! If you insist on collecting a few, never pick stems with leaves on them, as this usually results in whole bulb dying. Naturally, one should also not remove the entire bulb from the veld. If you want to take them home to enjoy them, rather collect some seed and grow them!

### MORAEA TRIPETALA.

(*Blou-uintjie*)

One long, narrow trailing leaf, with a flowering stem up to 45 cm. The pale blue to violet flowers last several days, and have three large tepals bearded in the centre and bent downwards. Widespread in rocky and clay soils, flowering in flushes from Aug to Sept.





### ROMULEA ROSEA.

(*Froetang, Knikkertjie*)

Between 3-6 very narrow stiff leaves, usually up to 15 cm, stemless with pink to purple flowers (occasionally white) with a yellow centre, from July to Oct. Very widespread on sandy and clay slopes and flats. The seed capsule or fruit is edible. Romuleas come in a wide range of colours and sizes.



### WATSONIA LACCATA.

This small Watsonia has 4-5 sword-shaped leaves about half as long as the flowering spike up to 50 cm. The many flowers are pink, purple or pale orange, appearing from Sept. to Nov. Grows on lower stony slopes from Kleinmond to Knysna. There is a natural hybrid with the red tubular flowered species, *W. aletriodes*.

### DISA BRACTEATA.

(*Orchid*)

This relative of the red Western Province emblem *Disa uniflora*, has several leaves with sharp tips clasping the flowering stem, which has many small green and maroon flowers, closely packed. It is widespread on flats and mountains, especially in disturbed ground, flowering Sept to Nov.



### HOLOTHRIX SCHLECHTERIANA.

This orchid has two hairless, oval-shaped leaves on the ground. Many flowers closely packed on a thin, velvety stem. The flowers are greenish-yellow, with thin thread-like lobes, appearing Oct. to Feb. Widespread.





### SATYRIUM ERECTUM.

*(Pienk-treuxwa)*

This orchid has two broad leaves pressed to the ground. The many pink (sometimes white), scented flowers are closely packed on a stem 20-40 cm tall, appearing occasionally in clay and sandy soils on lower mountain slopes and flats, Sept. to Oct. This species is widespread from Namaqualand to Baviaanskloof.



### GETHYLLIS VILLOSA.

*(Kukumakranka)*

Flowers after dropping its leaves, during the driest time of the year and produces an edible fruit with a tropical fruit-like odour, which was used in the old days to cure stomach ailments and to flavour brandy. Compounds extracted from the plant have exhibited anti-inflammatory, antibacterial, antiviral, antitumour and pesticide characteristics. The common name is derived from the Khoi-San name.

### AMPHITHALEA VIOLACEA.

A stiff, densely-branched shrublet with small flat grey silky leaves. The mauve and purple flowers are produced in spring. It is locally common on silcrete and quartz patches. It is commonly grazed by game and stock.



### ASPALATHUS QUARTZICOLA. VU

A spreading mat-like plant with small tubular hairless leaves, white pea flowers with pink tips and hairless fruits. It is thought that this species is slow-growing. This species is restricted to flat areas on white quartz and silcrete patches in Eastern Rûens Shale Renosterveld. Flowering in Aug. to Sep. Flowers are pollinated by honey bees. Game and stock do graze it and sheep may damage or kill the plants.





### ASPALATHUS SPINOSA.

This shrub has stiff, spiny branches with tubular leaflets that resprout after fire. 1 or 2 yellow pea flowers arise from the base of the spines. Flowering occurs from Aug. to Mar. It is common across the region and occurs in lowland Fynbos and Renosterveld. Rooibos tea (*A.linearis*) belongs to this genus.



### ASPALATHUS SUBMISSA.

Low rounded shrublet with thin tubular leaves and small pale to dark pink flowers (most *Aspalathus* species have yellow flowers). Spring and summer flowering. Commonly found across the region. Often growing with *Aspalathus spinosa* and sometimes confused with *A. nigra*, a taller species with purple or white flowers. It is heavily grazed by stock and game.

### ASPALATHUS ALPESTRIS.

A spiny leaved, sprawling shrub up to 1m tall, belonging to the pea family. The yellow flowers are solitary or up to 6 in a sparse flower-head. It resprouts after fire and flowers throughout the year. Occurs from the Bokkeveld Mountains to Uniondale and can be found in Renosterveld and Fynbos.



### INDIGOFERA HETEROPHYLLA.

A sprawling and scrambling low shrub with leaves with 3 leaflets, bright pink pea flowers in long spikes and drooping tubular pods. It flowers from May to Feb and does not resprout after fire. This species is common across the region. The leaves of some members of this genus are used to produce the dye, indigo. Some species are also used medicinally.





### PODALYRIA MYRTILLIFOLIA.

Erect woody shrubs to 2 m tall with flat silvery leaves, large pale pink pea flowers, and swollen fruits. Common on shale substrates across the region, often in disturbed areas. Flowering is mainly from July to October. It sometimes resprouts after fire. Its sweet, scented flowers attract carpenter bees (*Xylocopa caffra*) which pollinate it.



### POLHILLIA PALLENS. VU

This is a colonial shrub (up to 1.5m) with soft silvery, semi-closed leaves and yellow pea flowers. It flowers irregularly between April and October, depending on rainfall. Previously widespread but becoming rarer and known mainly from S and SW slopes and watercourses in Eastern Rûens Shale Renosterveld (Bredasdorp to Potberg).

### THEMEDA TRIANDRA.

This tufted grass occurs through Africa, Asia and Australia. One of the most palatable indigenous grasses in southern Africa, this species essentially only occurs on south-facing slopes and watercourses in the Renosterveld of the winter rainfall area, while it becomes more frequent on north-facing slopes in the summer-rainfall regions.



### CYMBOPOGON MARGINATUS.

(*Turpentine Grass, Motwortel*)

Tufted grass up to 80cm high. The aromatic (like turpentine) blue-grey leaves are linear and 3-6mm wide. The flower spikes resemble those found in *Themeda triandra* (they often grow together) but it has hairy flowers. It flowers from Oct. to May and is widespread on rocky lower slopes. Turpentine Grass belongs to the same genus as Lemongrass (*C. citratus*) and also contains a variety of aromatic compounds. These compounds make it less palatable but it is still grazed readily by livestock in the Rûens. Its roots were used in the past to repel insects in cupboards, hence the name Motwortel (Moth Root).





### EHRHARTA CALYCINA.

(Rooigras, Polgras)

This is a perennial (sometimes annual), tuft-forming grass, up to 70cm high. Leaves are sometimes have undulated margins. Flowers are widely spaced and hanging and are usually purple later in the season. Widespread, it grows in flats and slopes, and is highly palatable to game and livestock and is planted in some parts of Australia as fodder.



### MERXMUELLERA.

(*Tenaxia*) stricta (Bokbaardgras, Cape Wire Grass)

Perennial tuft-forming grass with feathery flower plumes up to 80cm. Flowering time is from Sept to Dec. Leaves are tough and linear and seldom grazed by cattle. Sheep may graze it, particularly immediately after fire. It is a widespread but endemic grass that occurs on the middle and upper slopes in the southern parts of South Africa. It is a climax species and can be dominant in old Renosterveld.

### PENTASCHISTIS.

(*Pentameris*) eriostoma

This perennial grass forms dense tussock up to 90cm high. The basal leaves are ridged and usually rolled. Flowering occurs from Sept to Nov. This grass grows from Namaqualand to the Eastern Cape on clay and sandstone flats and slopes. This grass is commonly confused with Merxmuellera but the latter species doesn't have rolled leaf blades. Stock seldom graze it.



### NEMESIA BARBATA.

(Bloubaardbekkie)

This annual herb that can grow up to 30 cm bares blue and white snapdragon-type flowers. The leaves are opposite, about 20mm long and 10 mm wide, with toothed margins. These small, spring-flowering (Aug to Oct.) plants are found on loamy or clay soils in Fynbos and Renosterveld flats and slopes. They occur from Kamiesberg to Riversdale.





### **ZALUZIANSKYA DIVARICATA.**

A hairy, annual herb with bicoloured (yellow and red), star-shaped flowers that grows to 25 cm high. They flower from July to Oct and are found on stony or gravelly slopes from the Pakhuis Mountains to Albertinia in the southern Cape.

### **DIASCIA SPP.**

An annual herb, flowers contain two spurs and produce an oil collected by solitary bees (Genus Rediviva). Some species are grown in gardens.



### **ADROMISCHUS TRIFLORUS.**

Small leaf succulent, related to Plakkies (Crassula). Leaves are a rounded paddle shape, grey with reddish brown spots. Flowers are on a long stem; star shaped and shades of pink. Flowering time is in summer. It grows in cracks on rocks, usually in the shade. It is widespread and can be found on north-facing sandstone and shale slopes.



### **ZALUZIANSKYA VILLOSA.**

*(Drumsticks)*

This species are similar to the previous species. It differs in the fact that it grows slightly larger (to 30 cm), is hairier and has white to mauve flowers with a yellow or red star in the middle. It grows in sandy places on flats and slopes. Flowering time is from June to Oct. Most species are grazed by stock and game.



### TRICHODIADEMA SPP.

This is a low growing vygie with an underground storage root. Flowers are usually light purple. This genus is easy to identify by the presence of a star-shaped crown of bristles at the tips of the leaves. Roots have been used as a yeast source in the past. Plants are regularly grazed by game and stock.



### GIBBAEUM HAAGLENII. EN

Low growing, grey-leaved vygie that only grows on quartz patches in the eastern Overberg. Leaves are arranged in pairs and increase as the plant gets older. Flowers are purple and occur in late spring. This genus is popular among succulent collectors and is threatened by illegal trade and collection. Many species are listed as Endangered.

### HAWORTHIA MIRABILIS. EN

This small relative (less than 10cm) of the Aloe is widespread in the Overberg. It can grow as a solitary individual, or form clumps of plants, depending on the substrate or plant form. It is usually found wedged in between shale rocks or under bushes. Some forms are more common than others and some may have become extinct in the wild as a result of illegal collection.



### ALOE BREVIFOLIA. VU

Small grey-leaved aloe endemic to the Southern Overberg only rarely seen in the veld. The typical form forms multi-headed clumps with up to 20 small heads. The rare 'depressa' form forms smaller clumps with larger heads, but the species can vary a lot. The sunbird-pollinated flowers range in colour from orange to red to yellow. Unlike other aloes in the Overberg, this species flowers in summer. It is widely grown all over the world but not common in the wild.







### **HAWORTHIA MARGINATA.**

This *Haworthia* resembles a small, smooth-grey leaved Aloe with pointed leaves. Some plants may have white spots or stripes. It usually doesn't form clumps and grows beneath shrubs. Flowers are white and carried on branched stems. This species is very rare and several of the known populations have been impacted by collectors.



*Polhillia brevicalyx* is listed as Critically Endangered and the total known population is about 100 individual plants within radius of less than 10 km

# PARTNERS ON THIS BOOKLET

This booklet was made possible by a partnership project between the Overberg Crane Group, BirdLife South Africa, the Botanical Society, WWF, SAB, Sijnn Winery and the Overberg Lowlands Conservation Trust.



## THE OVERBERG LOWLANDS CONSERVATION TRUST

is a Non-Profit Organisation dedicated to saving Renosterveld and other threatened lowland habitats in the Overberg wheat belt. By working with our partners in both the NGO and government sectors, we are working towards establishing relationships with farmers who understand the importance of conserving and managing remnants of natural vegetation – the life blood of the wheat belt, and the reservoirs for insuring the future of biodiversity and ecosystem well-being into the future. The OLCT was established in April 2012. It is an NPO dedicated solely to the conservation of the Overberg lowlands and in particular its Renosterveld habitats. The Trust is governed by a small Board of Trustees and the Chair of this board, Dirk van Papendorp, is a commercial farmer in the region. The OLCT is managed by Odette Curtis, an ecologist with a passion for Renosterveld conservation and over 10 years of experience in working with Overberg farmers. Overberg landowners who are interested in learning more about their Renosterveld and what they can do to improve its management can contact the OLCT.

### Contact:

[www.overbergrenosterveld.org.za](http://www.overbergrenosterveld.org.za)

[info@overbergrenosterveld.org.za](mailto:info@overbergrenosterveld.org.za)

083 551 3341



## BIRDLIFE SA

The mission of BirdLife South Africa is to promote the enjoyment, conservation, study and understanding of wild birds and their habitats. This mission is achieved through a number of strategic conservation programmes focused on conserving species and habitats, ensuring ecological sustainability and empowering people. The Important Bird and Biodiversity Areas Programme is one of the focal programmes within BirdLife South Africa and is implemented by a team of Regional Conservation Managers in provinces across the country. The Overberg wheat-belt is one such Important Bird and Biodiversity Area (IBA), and forms part of a global network of sites which have been identified as the core set of areas required to conserve global bird diversity. The Overberg IBA supports threatened species such as the Blue Crane, Black Harrier and Secretarybird, to name a few. BirdLife South Africa's Western Cape Regional Conservation Programme is partnering with different organisations at different IBAs across the province, and undertaking projects including biodiversity stewardship with local landowners, habitat rehabilitation for waterbirds on farm dams, academic research projects to help inform reserve management and education initiatives aimed at raising awareness of birds and bird conservation.

### Contact:

[www.birdlife.org.za](http://www.birdlife.org.za)

[Dale.wright@birdlife.org.za](mailto:Dale.wright@birdlife.org.za)



## **BOTANICAL SOCIETY OF SOUTH AFRICA**

Mission: "To win the hearts, minds and material support of individuals and organisations, wherever they may be, for the conservation, cultivation, study, and wise use of the indigenous flora and vegetation of southern Africa, for the benefit and sharing of all."

The Botanical Society of South Africa (BotSoc) is one of the largest and oldest non-profit, non-governmental, member-based organisations in our country, established in 1913. The main foci of the BotSoc are conservation, environmental education and membership. The Society is supported by its 20 000 + members spread across the country and the world, who enable the Society to have a national footprint in partnering with and supporting initiatives and projects which speak to its mission. BotSoc operates in strong partnership with the South African National Biodiversity Institute (SANBI) and have a long standing and cemented in a memorandum of agreement partnership with them, together championing biodiversity conservation and education.

The BotSoc Head Office is situated in Kirstenbosch National Botanical Garden, Cape Town, with volunteer branches extended across the country. Of particular interest with regards to Renosterveld conservation support, note our Southern Overberg and Kogelberg branches in these regions.

### **Contact:**

[www.botanicalsociety.org.za](http://www.botanicalsociety.org.za)

info@botanicalsociety.org.za

021 797 2090



## **OVERBERG CRANE GROUP**

A group of concerned landowners together with Cape Nature formed the OCG in

1992, after devastating incidents of poisoning had swept the Overberg. The significance of these losses was realised when it was determined that half of the entire Blue Crane population was situated in the Overberg. With the help of many experts and the community, a conservation programme was drawn up in 1993 and implemented by the OCG. Sponsorship was obtained, a fieldworker was employed and proactive management, awareness, education and research was implemented, resulting in a dramatic reversal of the population decline. The OCG has now broadened its scope by including all threatened bird species in its mandate and has since assisted with vulture, bustard and secretary bird interventions. No longer able to keep a field worker, the volunteer group handles the basic tasks with Cape Nature's assistance. To be more effective, the OCG seeks to form alliances with any group with similar overall objectives.

### **Contact:**

[www.bluecrane.org.za](http://www.bluecrane.org.za)

mandjaldalton@omail.co.za

082 695 9835



## **SAB/WWF BETTER BARLEY**

Better Barley Better Beer, in partnership with the World Wildlife Fund of South Africa (WWF-SA).

Through structured engagement and advisory support, Better Barley Better Beer is aimed at empowering barley farmers to understand and implement sustainable farming practices. Farmers will also be supported in engaging biodiversity stewardship to protect and restore ecosystems. The Better Barley Better Beer Guidelines, developed in collaboration with the

WWF-SA and SAB Agriculturists, as well as local barley farmers, drives the implementation of the programme by each producer.

The guidelines provide farmers with criteria, indicators and verifiers to measure how sustainably they are farming. Key indicators contained in the guidelines allow farmers to self-asses their performance using a checklist provided. They are also able to easily identify strengths and weaknesses and develop action plans to correct deficiencies.

“The guidelines are designed to empower the barley farmer to make the right decisions today to ensure the sustainable production of local barley into the future,” says Thinus van Schoor, General Manager SAB Maltings.

Better Barley Better Beer allows SAB to build on its strategic business objective to help grow the local barley industry and secure its future growth and sustainability. This is in line with South Africa’s strategic plan for sustainable agriculture and the Department of Agriculture’s policy for sustainable development.

**Contact:**  
[www.sab.co.za](http://www.sab.co.za) and [www.wwf.org.za](http://www.wwf.org.za)  
Jan.Coetzee@za.sabmiller.com  
028 2124 3283

**WINERY**

**SIJNN** Located on the Breede River at Malgas. Sijnn is partnering with the OLC, has contributed towards this booklet and is working to protect the Silcrete Renosterveld that occurs alongside the bush vines on the farm. The winery is open on Saturdays for tastings and by appointment.

**Contact:**  
[www.sijnn.co.za](http://www.sijnn.co.za)

**OTHER USEFUL CONTACT DETAILS**



**BGCMA**

For all enquiries relating to water use, licensing and river/watercourse management, please contact the Breedegouritz Catchment Management Agency (BGCMA). The BGCMA is the lead agent for the water resource management within the Breedegouritz Water Management Area. BGCMA plays a key role in planning, protecting, developing, conserving, managing and controlling water resources.

**Contact:**  
[www.breedegouritzcma.co.za](http://www.breedegouritzcma.co.za)  
info@breedegouritzcma.co.za,  
023 346 8000



**ABI**

The Agulhas Biodiversity Initiative (ABI) is a landscape initiative that serves as the conservation coordination hub of the Overberg region of South Africa. ABI is the meeting place for those involved in, or interested in, conserving this biodiversity hotspot. From private landowners, to government departments, to conservation organisations - ABI serves as their meeting point, where key conservation issues are tackled.

**Contact:**  
[www.agulhasbiodiversity.co.za](http://www.agulhasbiodiversity.co.za)  
info@agulhasbiodiversity.co.za  
028 425 2218



For queries relating to a stewardship, as well as all permitting requirements.

**Contact:**  
[www.capenature.co.za](http://www.capenature.co.za)  
Email for Stewardship: isteyn@capenature.co.za,  
Hermanus office: 028 314 0062,  
Reporting fires in Overberg: 028 425 1690



## CREW

The Custodians of Rare and Endangered Wildflowers (CREW) programme involves volunteers from the public in the monitoring and conservation of rare and threatened plants. They are always seeking additional volunteers and you do not have to be an expert to contribute.

**Contact:**

[www.sanbi.org](http://www.sanbi.org)

021 799 8800



## LANDCARE

**Contact:**

[www.daff.gov.za](http://www.daff.gov.za)

Bredasdorp: 028 424 1430,

Swellendam: 028 514 1196 / 028 514 3249



## DEPARTMENT OF ENVIRONMENTAL AFFAIRS

**Contact:** For queries relating to ploughing and development permissions, etc.

[www.westerncape.gov.za](http://www.westerncape.gov.za)

enquiries.eadp@westerncape.gov.za

021 483 4091



## GREATER OVERBERG FIRE PROTECTION ASSOCIATION (FPA)

As a landowner, it is critical that you join your local FPA. For enquiries around membership, burning permits and firebreaks, please contact the Greater Overberg FPA.

**Contact:**

[www.overbergfpa.co.za](http://www.overbergfpa.co.za)

info@overbergfpa.co.za

028 425 1690 (ext. 216)

## PHOTOGRAPH CREDITS

All photos outside of ID guide: Odette Curtis.

### MAMMALS

Cliff & Suretha Dorse: Grysbok, African Wild Cat, Scrub Hare, Four-striped Grass Mouse.

Cameron McMaster: Aardvark

Christy Bragg: Porcupine

Trevor Hardaker: Bat-eared Fox, Cape Fox.

Heather D'Alton: Caracal.

Sharon Brink: Grey Rhebok.

Heyne Brink: Small Grey Mongoose.

Overberg Lowlands Conservation Trust camera traps: Water Mongoose, Aardwolf.

Peter Chadwick: Yellow Mongoose, Black-shouldered Kite.

Jannie Groenewald: Striped Polecat, Large-spotted Genet, Pygmy Mouse.

Odette Curtis: Grey Duiker, Steenbok, Bontebok, Large Grey Mongoose, Honey Badger, Shrew, Elephant Shrew

### BIRDS

Sharon Brink: Lanner Falcon, Denham's Bustard.

Heyne Brink: Blue Crane, Malachite Sunbird.

Jesse Walton: Yellow-billed Kite.

Anton Odendal: Barn Owl, Southern Black Korhaan, Grey-winged Francolin.

Louis Groenewald: Black Harrier

MC Botha: Cape Vulture

Carin Malan: Martial Eagle, Jackal Buzzard, Southern Black Korhaan.

Odette Curtis: Secretarybird, Steppe Buzzard, Spotted Eagle-Owl, Karoo Korhaan, Cape Spurfowl.

## INSECTS

Jannie Groenewald: Barred Eggjarlet, African Silkworm, Zig-Zag Emperor Moth, Milkweed Grasshopper, Longhorn Beetle, Termite, Monkey Beetle, Saw-backed Grasshopper, Cocktail Ant, Robber Fly, Striped Toktokkie.

Odette Curtis: Carpenter Bee, Sylph Butterfly, Cherry Spot Moth (adult), Antlion, Long-tongued Fly.

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## REPTILES

Odette Curtis: Klein Karoo Dwarf Chameleon, Spotted Skaapsteeker, Leopard Tortoise, Burrowing Scorpion.

Jannie Groenewald: Puffadder, Angulate Tortoise, Parrot-beaked Tortoise

Cliff & Suretha Dorse: Red-lipped Herald Snake, Ocellated Thick-toed Gecko, Cape Cobra, Boomslang, Cape Girdled Lizard, Southern Rock Agama.

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## SPIDERS & SCORPIONS

Jannie Groenewald: Baboon Spider, Rain Spider, Orb Web Spider, Thick-tailed Scorpion, Bark Scorpion

Handre Basson: Community Nest Spider, Red Roman Spider.

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## AMPHIBIANS

Jannie Groenewald: Painted Reed Frog, Cape River Frog

Odette Curtis: Raucous Toad, Sand Rain Frog.

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## HISTORICAL ANIMAL PAINTINGS

Cape of Good Hope (South Africa) Department van Natuurbewaring. 1.973. Soogdiere van Kaapland. 2nd Edition. Department van Natuurbewaring, Kaapse Provinsiale Administrasie.

Potgieter, D. J., du Plessis, P. C., Skaife, S. H. 1971. Animal Life in South Africa. 1st Edition. Nasou.

## PLANTS

Jannie Groenewald: *Searsia pallens*, *Pelargonium myrrhifolium*, *Adromischus triflorus*.

Odette Curtis: *Oedera squarrosa*, *Elytropappus rhinocerotis*, *Freylinia undulata*, *Helichrysum petiolare*, *Leucadendron coriaceum*, *Notobubon striatum*, *Relhania garnotii*, *Walhenbergia tenella*, *polifolia*, *Hermannia flamula*, *H. diverstipulata*, *Pelargonium triste*, *Microloma sagittatum*, *Polygala garcinii*, *Bobartia longicyma*, *Brunsvigia orientalis*, *Crossyne guttata*, *Nerine humilis*, *Wachendorfia paniculata*, *Eucomis regia*, *Ornithogalum dubium*, *Babiana purpurea*, *Ferraria crispa*, *Freesia caryophyllaceae*, *Geissorhiza ovata*, *Gladiolus floribundus*, *G. liliaceus*, *Hesperantha fulcata*, *Moraea gawleri*, *Moraea tripetala*, *Watsonia lacata*, *Holothrix schlechteriana*, *Amphithalea violaceae*, *Aspalathus quartzicola*, *A. spinosa*, *A. submissa*, *A. alpestris*, *Indigofera heterophylla*, *Podalyria myrtillifolia*, *Polhillia pallens*, *Themeda triandra*, *Cympopogon marginatus*, *Ehrharta calycina*, *Merxmuellera stricta*, *Pentaschistis eriostoma*, *Nemesia barbata*, *Zaluzianskya divaricata*, *Z. villosa*, *Diascia sp.*, *Trichodiadema sp.*, *Gibbaeum haaglenii*, *Haworthia mirabilis*, *Aloe brevifolia*, *H. marginata*.

Cameron McMaster: *Boophone stricta*, *Crossyne guttata*, *Lachenalia contaminate*, *L. orchioides*, *L. unifolia*, *Albuca suaveolens*, *Haemanthus sanguineus*, *Babiana patula*, *Ixia micrandra*, *Romulea rosea*, *sanguineus erectum*, *Gethyllis villosa*.

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## COPY AND CONTENT

Mick D'Alton, Jannie Groenewald, Rhoda McMaster, Dale Wright and Odette Curtis. And thanks to Sheraine van Wyk, Rhoda McMaster and Zoë Poulsen for assisting with editing texts.

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## GRAPHIC DESIGN

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Cape300 Foundation.



**VISIT THE RENOSTERVELD RESERVE AND CENTRE**  
(by appointment only), between Bredasdorp and Swellendam.



**FOR MORE INFORMATION ON OVERBERG  
RENOSTERVELD PLEASE CONTACT**

Dr Odette Curtis  
Director, Overberg Lowlands Conservation Trust

[info@overbergrenosterveld.org.za](mailto:info@overbergrenosterveld.org.za)

[www.overbergrenosterveld.org.za](http://www.overbergrenosterveld.org.za)



[Overberg Lowlands Conservation Trust](#)

For bookings for the Reserve or Centre, please contact:  
[admin@overbergrenosterveld.org.za](mailto:admin@overbergrenosterveld.org.za)

**THANK YOU TO THE FOLLOWING PARTNERS  
FOR THEIR SUPPORT ON THIS PROJECT:**

