Veld of birds

Situated in the heart of South Africa, Renosterveld is one of the richest botanical habitats in the world. Although this floral kingdom is teeming with endemic wildflowers and spectacular birds, today only 5% remains. *Christie Reed* of the World Land Trust explains how the Overberg Renosterveld Conservation Trust (ORCT) is dedicated to protecting and expanding this extraordinary ecosystem.

At the southernmost tip of the African continent, the smallest of the world's floral kingdoms sprawls across the plains of South Africa's Western Cape province. The Cape Floral Kingdom, also known as the Cape Floristic Region (CFR), is a tapestry of unique and endangered vegetation types and plants. The scenically beautiful area is renowned for its wide-open landscapes and rolling hills, from the rugged Cederberg Mountains to the coastal cliffs of the Cape Peninsula. Despite its comparatively miniscule size, this UNESCO World Heritage Site hosts a flora that is among the most species-rich on the planet, with an estimated 9,000 species of plants, approximately 70% of which are found nowhere else in the world. It is so densely populated with plant species that it rivals the continent-spanning tropical rainforests more commonly associated with exceptional biodiversity.

Around 200 km south-east of Cape Town sits the Overberg Wheatbelt: an expanse characterised by its intensive cultivation of cereal crops such as wheat, barley, canola and oats, as well as its livestock farming. Although the wheatbelt holds great significance to the agricultural industry of the country, it is also a Key Biodiversity Area and an Important Bird Area. What's more, the vast fields of rippling golden wheat stalks hide some of the last remnants of a critically threatened habitat. This little-known and often overlooked vegetation is Renosterveld – a Mediterranean mosaic brimming with geophytes, succulents, orchids, lilies and irises. The veld is home to an astounding number of endemic plants, including the Endangered *Drosanthemum lavisii* and *Hesperantha muirii*. Some are so rare that they occur only on a single hillside.

It is the clay and shale-based soil from which it grows that makes this veld so special. More fertile than the acidic soils of the nearby mountains and coast, it contains the richest concentration of bulb species on the planet. The dense, bushy scrub makes an ideal foraging and nesting place for 150 bird species, such as the endemic Cape Clapper Lark or the Vulnerable Southern Black Korhaan. It also shelters an abundance of mammals, from Aardvarks and Bushpigs to the tiny Cape Rock Sengi.

History of the area

More than 2,000 years ago, when the land was still wild and herds of African Buffalo roamed the plains, Renosterveld carpeted the lowlands of the Western Cape. Erupting into riotous colour each spring, vast swathes of flowered shrubs stretched across the fertile clay soils. In these times, the engineers of the vegetation were the large herbivores which grazed their way across the country, travelling with the seasons. The Khoi Khoi, a pastoral nomadic people who shared the veld with antelope, rhinoceroses and elephants, were the only sign of human presence. The name Renosterveld, derived from Afrikaans, directly translates to 'rhinoceros-field', and is thought to be in reference to the Black Rhinos that would have been found here long ago. The bulbs, roots, leaves and petals of many plants are still used today by traditional herbalists to make medicinal tea, and smudge sticks to banish bad spirits from homes.

A struggling landscape

The landscape we see today is dramatically changed from the true brilliance of Renosterveld. Until 200 years ago, the veld thrived in its cycle of renewal. Flowers bloomed from browsed stalks, and each year flocks of birds returned to their nesting sites. However, upon finding the land, European settlers hunted large game such as Bluebuck antelope to extinction, leaving behind only smaller mammals. The hardy, tangled shrubland that defined the region was ploughed to make way for

Facing page: Renosterveld is the name given to the flora-rich habitat of South Africa's Western Cape province.

foreign arable crops.

Today, it has been decimated by large-scale monoculture farming. The fertile soil that sustains the veld also makes it coveted for commercial cultivation. In the past 50 years, more than 95% of the Overberg region's Renosterveld has been irreversibly converted to croplands. Much of what remains exists as isolated islands, constantly subjected to pesticides, trampling and overgrazing by livestock. Often perched atop small hills, known locally as koppies, the plants are spared only by slopes too steep or rocky to be suitable for ploughing. The surviving Renosterveld is a remnant of South African heritage in an area colonised by western agriculture.

Refuge for birds

The wonders of this resiliently beautiful biome are best experienced in ORCT's Haarwegskloof Nature Reserve, where an incredible 70-80% of the 500-ha reserve is virgin land. Together with the neighbouring Luiperdskop and Plaatjieskraal farms, they make up the largest connected stretch of Eastern Rûens Shale Renosterveld in the world.

More than 500 plant species blanket the reserve. Some, like the pink *Hesperantha kiaratayloriae*, the *Lachenalia barbarae* cape cowslip, or the ebullient *Polhillia curtisiae*, are Critically Endangered and only present in a few select pockets. There is little known about the mechanisms by which Renosterveld is pollinated. However, researcher Dr Anton Pauw observed Southern Double-collared Sunbirds visiting *Microloma sagittatum* to collect nectar. He discovered that the iridescent sunbirds carried pollen on their tongues, depositing it into the flowers' tightly twisted petals with their thin, curved beaks. Across stretches of wheatbelt too vast for insects to traverse, the sunbirds create crucial links between the fragments. However, many other plants rely entirely on specialist insect pollinators to reproduce, and much research is required to understand just how these relationships have been eroded by the fragmentation of habitat.

One of the most exciting aspects of the Haarwegskloof reserve is that it is a stronghold for one of South Africa's rarest birds, the Endangered Black Harrier. With plumage ranging from black to deep brown, these striking raptors are distinguished by a white rump and white crescents on their flight feathers that show in flight. Golden-eyed and slender-legged, these are relatively small harriers with shy, quiet calls. Their slim build is well adapted to efficiently covering long distances, as well as lithely skimming the ground to snatch their prey. Specialising in small mammals, but particularly fond of Four-striped Grass Mouse and Common Quail, Black Harriers follow concentrations of their prey. Recent studies of GPS-tagged individuals show that they are very nomadic outside of the breeding season. The recent break of a six-year drought in the Eastern Cape saw a boom of mice and quail and brought these industrious travellers into the province for the first time in many years to take advantage.

While the greater reserve holds the highest breeding density of any area, fewer than 1,300 mature Black Harriers remain. Joining a familiar narrative of so much rare and threatened wildlife, habitat loss and climate change are driving their decline each year. Vanishing vegetation leaves nests vulnerable to predators, while rising temperatures keep small mammals underground and limit opportunities for catching prey. Some harriers attempt to adapt to higher montane habitats, but their breeding is less successful, and they are forced to turn to smaller birds for prey. Research also shows that the predation of quail, instead of their preferred mice, has been found to impact the carotenoid production responsible for their golden irises, which are an essential mating characteristic.

ALL PICTURES: OVERBERG RENOSTERVELD CONSERVATION TRUST

Black Harrier is one of South Africa's rarest birds of prey, but good numbers of this Endangered species can be found in Western Cape.

Agulhas Long-billed Lark is endemic to Western Cape, inhabiting its namesake Agulhas Plain, where it favours open habitat with short vegetation.

Perfect breeding ground

Migrating westwards to breed after winter, Black Harriers are very particular about their breeding spots. Data gathered from individual GPS trackers has discovered that they often travel hundreds of kilometres, from the Overberg in the Western Cape to either the Free State in the north-east of the country, the Eastern Cape or even Lesotho. The harriers have been observed travelling more than 400 km in just one day to survey whether potential nesting areas may be to their liking. In 2000, the now-director of ORCT searched more than 100 Renosterveld

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Drosanthemum lavisii **is a succulent plant found only in South Africa's southern Cape. Due to habitat loss, it is classified as Endangered.**

Southern Double-collared Sunbird is believed to be a crucial pollinator in this fragmented landscape.

remnants to study the breeding grounds of Black Harriers, under the supervision of harrier guru Dr Rob Simmons. Breeding mostly monogamously, Black Harriers were observed in only the 10 largest patches of remnant Renosterveld.

Some species, such as Agulhas Long-billed Lark and Eastern Clapper Lark, prefer Renosterveld but have adapted to also make use of transformed land for foraging. Denham's Bustard has adapted to the wheatbelt but still relies on the veld for breeding, while other birds, such as Southern Black Korhaan, spend most of their time in the remnant Renosterveld, generally avoiding the wheatfields. But for Black Harriers, nothing else will do. While they often forage in agricultural lands, they will only make their nests in the very best, intact Renosterveld habitat to protect their eggs from predation and, as such, have become a key indicator species for the health of the ecosystem.

Vision for the future

Despite all the adversity, there is growing hope for the floral veld. Since 2012, ORCT has been committed to the understanding and preservation of Renosterveld and all that it represents. As most tracts of veld are now privately owned, the trust's primary mission is to build relationships with landowners and form easements for conservation-based land management. So far, the trust's remarkable dedication has resulted in 21 easements, protecting a total of 4,500 ha of Renosterveld.

The Renosterveld we see today is dramatically different to its original structure. Now, without large herbivores to manage the balance between grasses and shrubs, management focuses on the implementation of controlled burns in this fire-prone system. Much debate exists over the classification of Renosterveld as a grassy shrubland or a shrubby grassland. This would give more indication as to whether burning should take place as frequently as every two years or closer to every 20. However, with no reliable historical records on the region's vegetation, we can never know definitively, and so the debate is unlikely to be resolved. As it stands, burning strategies are adapted to the dryness of each area and depend on the highly variable rainfall. Management is also needed to fend off the invasive Australian acacias and pungent eucalyptus. Since their introduction to South Africa in the 1800s, these trees often dominate endemic ecosystems. Left unchecked, many Fynbos and Renosterveld habitats are at risk of succeeding into non-native forest with the relentless encroachment of alien species.

ORCT director Dr Odette Curtis-Scott, whose research and passion for Renosterveld have spearheaded conservation efforts, believes that the future of the veld lies in connectivity. Despite landowners' misconceptions that conservation will have negative economic impacts, most remnants represent less than 20% of a given farm and are unsuitable for crop planting. Preserving and connecting the patchwork of remnants supports the retention of ecological processes, so critical for the survival of the many native species. A proposed extension to ORCT's Haarwegskloof Nature Reserve will expand into an area ideal for birding, including accommodation and workspaces for visitors, students and researchers. The trust also hopes to develop a corridor southward from the reserve towards De Hoop Nature Reserve, allowing wildlife to gain further footholds across its native landscape.

With support from World Land Trust's flagship Buy an Acre programme, IUCN Netherlands, WWF South Africa and other generous supporters, ORCT is able to engage farmers in realising the value of their native Renosterveld remnants, no matter how small. The farmers who steward their veld through conservation easements have seen new discoveries on their land, such as the Endangered bulb, *Gladiolus vandermerwei*. Some now have guesthouses, encouraging visitors to immerse themselves in the surroundings.

A habitat's small size should not mean it is overlooked; a tiny fragment can hold a wealth of possibilities. The people who understand the Renosterveld and all the history it holds know that its preservation is worth much more than can be measured in terms of the monetary value of more farmland. Their work means that their children and grandchildren will look out across their land and see Black Harriers nesting among vibrant orchids, Grey Rhebok treading through scrub and Aardwolf foraging for termites. ■

Buy an Acre

Supporters of WLT can help ORCT and the Overberg's communities to fulfil their vision. The Buy an Acre programme will ensure the continuity of this irreplaceable ecosystem.
See **worldlandtrust.org/appeals/buy-an-acre/** for further details.