2013 was an exciting year for the Custodians of Rare and Endangered Wildflowers (CREW) Programme, as you will read in the pages that follow. The programme has expanded both into new parts of the country and also focused on developing a host of young plant conservationists—an opportunity that has been made available through the Groen Sebenza Programme, a jobs fund initiative of the Department of Environmental Affairs.

CREW has been operating for over 10 years and our volunteers have built up significant knowledge of local plants that they are now able to help us transfer to this new cohort of budding plant conservationists.

2013 also saw the CREW co-ordination team leading the process to develop a National Strategy for Plant Conservation with support from the Botanical Society of South Africa (BotSoc) and the South African National Biodiversity Institute (SANBI). This process involved developing priority actions required for plant conservation in our country that aligns with 16 outcome-oriented targets of the Global Strategy for Plant Conservation (GSPC) of the Convention on Biological Diversity (see www.Plants2020.net). The majority of South Africa’s active botanists and conservationists gathered at this workshop specifically to discuss the GSPC and its implementation nationally. The workshop included stakeholders from national and provincial conservation authorities, taxonomists, NGOs (e.g. the Botanical Society of South Africa), independent botanists, conservationists working on business and biodiversity initiatives, and conservation planners.

The workshop resulted in national level targets being developed for all 16 targets. In addition, milestones were identified for measuring progress with implementation, and commitment from various organisations and individuals to lead on the different targets, were made. The CREW Programme plays a vital part in ensuring that South Africa achieves the following three targets related to the conservation of threatened plants:
• Target 2, a conservation assessment of all known plants.
• Target 5, the conservation of important plant areas.
• Target 7, in situ conservation of threatened plant species.

South Africa’s national strategy will be published in 2014.

After a decade of hard work, CREW celebrated the success of the work of volunteers monitoring and conserving plants, by publishing the book *Plants in Peril—100 of South Africa’s highly threatened plant species and the people protecting them*. Written by the network of volunteers involved in CREW, as well as several professional botanists and horticulturists, this publication profiles the excellent work being done to conserve South Africa’s most threatened plants. The book has four sections, the first includes case studies of highly threatened species, the second is a section focusing on species threatened by use, and the third section looks at hotspots of plant diversity where our CREW volunteers are based that are under threat. In the last section the book features various CREW groups and also focuses on how the network of people required to conserve these species is being grown. Producing this book was a collaborative effort with the majority of CREW groups contributing accounts of threatened species and we would like to thank all of you who put so much time into producing this book. A limited run of 500 copies were printed by BotSoc and are available at SANBI’s Kirstenbosch and Pretoria bookshops. The book is also available in electronic format as an e-book.

The CREW Programme did some major expanding during 2013. Up north, the Limpopo CREW group got going, working hard to survey threatened Euphorbia species around Polokwane, and surveying the Blouberg and Wolkberg mountains that are full of endemics. Limpopo Province has the poorest biodiversity information of all of South Africa’s provinces. It is very under-surveyed and we have few records of threatened plant species. Read more about this new and essential work on page 14. CREW has now taken the bold step of moving our work into deep rural areas of the Eastern Cape. We have set up a base at the Selmar Schönland Herbarium in Grahamstown and under the capable leadership of Vatiswa Zikishe, six para-ecologists (young community members who monitor plants) have been employed. Taking on capacity development of young community members has been challenging but full of rewards, and Vatiswa recounts the road travelled so far on page 6. Also in the Eastern Cape, in the plant biodiversity hotspot of Pondoland, another four para-ecologists are working and being trained to collect herbarium specimens and monitor medicinal plant use by CREW volunteers based in Port Edward. Spreading the knowledge of Pondoland’s unique flora and focusing efforts in the Eastern Cape section of this centre of endemism is a very appropriate way to continue the botanical legacy of Tony Abbott, one of South Africa’s finest botanical amateurs who passed away in 2013 and will be sorely missed by all involved with the CREW Programme. Our para-ecologist project is funded by the Groen Sebenza Programme, and will continue for another two years. We hope that in this time valuable specimens will be gathered from this under-collected part of the country and that the para-ecologists build skills that will allow them to find employment in the biodiversity conservation sector after the programme.

CREW is becoming famous all over the world; other mega-diverse countries, including Brazil and Colombia, are interested in repeating our model. The IUCN Species Sur-
The CREW Cape Floristic Region node

Ismail Ebrahim

A
other amazing year of CREW work passes by and it still feels like the first day of starting the CREW Programme. We have so much to do and the excitement and commitment from the volunteers have just increased over time. As we reflect on ten years of CREW’s existence, we can feel proud of our achievements. We have made a huge impact on the conservation community and won some great battles for the protection of our rich and diverse flora.

One of the highlights was the centenary celebration of Kirstenbosch National Botanical Garden and the Botanical Society of South Africa in 2013. There were many spectacular events to celebrate this momentous milestone. The first was the Kirstenbosch Science Showcase, which saw SANBI pull out all the stops to put on a magnificent display of past and present research programmes. We organised an iSpot Bioblitz in the Kirstenbosch National Botanical Garden as part of the celebration. Our Bioblitz events have been a great way of exposing this wonderful tool and getting new people to join the iSpot family.

In August we were invited to repeat our display at the Cape Floral Kingdom Expo in Bredasdorp. This was a very successful event, showcasing the magnificence of the Cape floral diversity. The expo was attended by a range of stakeholders, including cut flower producers, with various displays of indigenous plant products, conservation projects and a huge labelled specimen exhibit. The event also gave our new Groen Sebenza intern an opportunity to see what the CREW Programme is all about and meet some of the volunteers involved in the project.

After the event we went off to find a population of Gladiolus overbergensis (Vulnerable), which was on display at the expo. I was very excited to see this species for the first time. Gladiolus overbergensis usually only appears after fire. The area we found them in was cleared for a new protea orchard and the plants were coming up between the newly planted seedlings. The farmer confirmed that a few years ago there were many plants in the natural veld just above the orchard and fortunately he doesn’t have any development plans for that area. We also found a small population of Aristea teretifolia (Endangered) which was a nice surprise.

Volunteers at the Bioblitz held at the Kirstenbosch National Botanical Garden.
Our C-team focus for 2013 was targeting some of the recently burnt areas in the Cederberg and supporting the new CREW groups. Our first mission to the Cederberg was to find *Sparaxis roxburghii*. This species is Red Listed as Critically Endangered and is currently known from one locality. Our search for this species has not been successful so we were very keen to verify the existence of the population. Unfortunately, we searched for hours but could not find the population. Applications for agricultural expansion in the area have been submitted, so we will be keeping a close eye on the area and this year we will return to find this species. The highlight of the trip was seeing the most stunning *Romulea viridibracteata* (Rare), which is only known from Pakhuis Pass.

We had very strange weather last year. Many of the planned field trips were cancelled and when we did manage to get out in the field, most of the days turned cold, wet and miserable. Nevertheless, we kept our spirits up and enjoyed the veld despite the inclement weather. One of the most exciting trips was to see new populations of *Moraea vuvuzela* (Endangered) and *Sparaxis maculosa* (Critically Endangered) found by Anso Le Roux from Worcester.

We were fortunate to get additional capacity in the team through the SANBI Groen Sebenza Programme. Our interns are Anri Marais, Dewidine van der Colff, Karin Herman and Marius Lombard (see their profiles for more information). Our focus was on training and capacitating interns to identify plants, monitor rare and threatened plants, engage communities and conduct environmental education activities. This took up a lot of our time but it is very rewarding to share this knowledge with our interns and they have been fantastic in taking up the challenge of becoming involved in conserving threatened plants. We had numerous training courses, not only for our interns, but also including Groen Sebenza interns from other areas. This has made a real impact and helped build partnerships between CREW and other conservation bodies. In addition, many interns joined us in the field for more practical training and field work experience. Building capacity is hard work, but seeing the growth of an individual is very rewarding. It is incredibly inspiring and I wish all our interns the best for the future. They must keep up the great work as they continue on their journeys of discovery and growth.

News from the CREW KwaZulu-Natal node

Suvarna Parbhoo

2013 has been a busy yet successful field season with several exciting finds—over 70 field trips took place and 105 sites were surveyed, with 77 threatened plants recorded.

The KwaZulu-Natal Node is fortunate in that we have a team of three this field-season. National Research Foundation (NRF) intern, Khumbu Zulu and Groen Sebenza intern, Hlengiwe Mtshali have both done exceptionally well in assisting with planning, meeting and fieldtrip preparations. Hlengiwe’s sharp eyes in the field have allowed us to find two new sites of *Hyobanche fullerii* (Critically Endangered) on the KwaZulu-Natal south coast dune vegetation. Khumbu’s insights with communities gave us an advantage when visiting these areas.

The CREW All Over group conducted eight field trips during the past season. The first field trip for the year was definitely an excellent start to the 2013 season. We visited a tiny reserve at Durban harbour, the busiest port in South Africa, in search of the orchid *Zuexine africana* (Critically Endangered) and found several plants along the footpath of this derelict reserve. A collaborative trip to Utrecht with the KwaZulu-Natal Herbarium and Millennium Seedbank Programme colleagues in search of *Polygala praticola* (Data Deficient) yielded carpets of our target species. It is unbelievable to think that this _en masse_ flowering plant is Data Deficient—hopefully the genus has an interested specialist working on a revision.

Volunteers from Dundee have joined the CREW network this year. Although the enthusiastic group of five’s ‘playfield’ is a vast area of
transformed lands, they conducted two field trips in search of orchids. Both trips yielded null-records of the target species but these determined CREWites pushed on and will continue with their searches over the next few years. We are glad to report that the CREW Umvoti group has been resurrected for this season, after group champion Sue Swan’s ill health the past few seasons kept her out of the field. We are fortunate in that Lynda Drögemöller has taken over championing this group. The group planned five fieldtrips—their successes were varied, from failing to relocate Asclepias woodii (Vulnerable), to finding an incredible ancient population of the cycad Encephalartos natalensis (Near Threatened).

Our annual summer-rainfall workshop, held at Eshowe, was once again well attended with a good mix of CREW volunteers and students from the University of KwaZulu-Natal’s Westville campus, University of Zululand and University of Limpopo. The BotSoc KwaZulu-Natal inland branch had organised an entertaining quiz on Saturday evening and we hope to establish this as a tradition for workshops in years to come. For the first time, we had a geologist, Prof Mike Watkeys, giving us some insight on how to classify soil types and rock substrates and he has agreed to join us at the next workshop to share more information on this fascinating topic. Seloba Chuene and Alvin Mapatha, two students from the University of Limpopo, have written about their experience at the workshop (see their contributions on page 40).

We held two identification courses this year: the genus Kniphofia presented by Syd Ramdhani, and identifying plant families with a particular focus on Asteraceae presented by Marinda Koekemoer. We were introduced to the newly published Guide to plant families of southern Africa. The book is designed to introduce non-scientists to the largest plant families in southern Africa in an attractive, easily understood manner.

The CREW KwaZulu-Natal Universities project involving a Red List lecture and field trip to a site with threatened species continued its success into its fourth year. Theo Mostert, lecturer at the University of Zululand, recounts their practical field experience on page 37. University of KwaZulu-Natal’s Pietermaritzburg campus students conducted their survey at Doreen Clark Nature Reserve. Data collected for both field trips is useful to the KwaZulu-Natal provincial
Establishing the CREW Programme in the Eastern Cape, particularly the Albany region, has been in the pipeline since 2012 but was hampered by a lack of funds. Towards the end of 2012, the Development Bank of Southern Africa presented a green jobs fund opportunity, widely known as Groen Sebenza, to SANBI and this allowed the realisation of our dream of piloting the CREW Programme in the Eastern Cape. I call it Groen-CREW, and it is indeed a green CREW at this stage.

The Groen-CREW Eastern Cape Node aims to collect biological data on all organisms (but focusing mostly on plants), to gather indigenous knowledge, and to raise awareness about biodiversity conservation through environmental education and community outreach programmes. To attain this, we have collaborated with Rhodes University’s Inkucbeko Nendalo (meaning ‘Culture and Nature’ in isiXhosa), led by Tony Dold and his wife Michelle Cocks. Tony and Michelle have been conducting research for more than 10 years, focusing on the former Ciskei areas where Xhosa people live. They recognised that overexploitation of natural resources threatens not only biodiversity but also indigenous knowledge and ultimately South Africa’s natural heritage. Their knowledge and expertise make them valued partners for us at CREW.

To achieve the aims of the project, we chose the villages of Pirie Mission and Ngqiniisa within the Cacadu District Municipality and employed six matriculants, four of whom are based in the villages and two in Grahamstown. Pirie Mission is situated inland, a few kilometers from King William’s Town and has a vast indigenous forest, which is unfortunately being extensively harvested for medicinal and other cultural uses. Ngqiniisa lies between Hamburg or Port Alfred and East London and is a very special area with a variety of ecosystems, ranging from forest to marine. It is also very rich in natural resources. Both villages have potential for biocultural research.

June 2013 marked the beginning of the project. There was no existing CREW Programme in this part of the world and it was my first experience of managing a project, and in particular one of this nature. Furthermore, Groen Sebenza itself is a pilot project. The initial phase of the project was quite rough. I hadn’t received some of the para-ecologists’ contracts, they were panicking and about to give up on the project, and I had to motivate them while persuading Groen Sebenza officials to send the contracts. Eventually the contracts arrived, and were subsequently signed and sealed, but I had no guidelines as to how to proceed. The only resources I had were my laptop, 3G card and my brain.

After giving it some thought, I devised a questionnaire for each village in order to find out what environmental issues they were dealing with, whether they were aware of the causes and consequences of the issues, and what they value as a community. Responses to the first task led to a series of activities being planned for each village. The responses revealed the uniqueness of each village regarding how they interact with the natural environment, their understanding of environmental issues and their values. For example, Pirie Mission is faced with poverty issues, which lead to crime and degraded natural resources as a result of hunting and over-harvesting of medicinal plants to generate income for their households. Ngqiniisa on the other hand is very dependent on natural resources to meet the needs of their livestock as well as their livelihood. They experience problems such as bush encroachment, which is caused by overgrazing, and over-exploitation of medicinal plants by people from other villages. The responses from these two villages may seem different but the bottom line is that both communities are faced with environmental issues. One of the aims of the project is to raise awareness of these issues and workshop some of them with the communities to find solutions or to improve the situation.

The core aim of CREW in the Eastern Cape is to collect and document plant diversity. In July we had our first workshop on how to collect...
The para-ecologists learned about the history of the herbarium, why it exists and what it can be used for, and they were trained to do the same things as the early botanists and explorers that visited this area. These are crucial skills for accurately documenting and monitoring our flora, as specimens are useful for conservation science and they have various other purposes in other related fields of study. Plant collection is not as simple as it seems, particularly when you did not do natural science or biology at school and lack basic knowledge of the terminology used in botany. After the training, the para-ecologists went back to their villages and started collecting. Tony and I set off for the villages two weeks later and we were both amazed by the results. Some of the para-ecologists had even gone to the lengths of researching the plant names on the internet, despite living in deep rural areas where network coverage is very poor. From assessing their specimens, we realised that the lack of basic botany terminology detracted from the quality of their descriptions. Subsequently, Tony presented training in basic terminology and the use of keys to identify specimens. We were amazed to find that within the period of two days, they were able to identify some of the specimens with considerable accuracy.

The following comments were made by the para-ecologists after introducing them to the project and training them in collecting specimens:

“There’s so much more to a flower than just its beauty; I now look at plants differently! I used to hunt animals, and harvest sea food and medicinal plants with the idea that they belong to us, so we can harvest as much of them as we like, but that mindset has now changed. I’m now aware about the impor-
tance of our natural resources, and that we need to protect them for the future generations”, said Mzukisi Beja.

“I’m fascinated by plant morphology, especially the internal structures”, said Khululwa Gxekwa.

“This opportunity has inspired me to dream again”, said Landiso Mila.

“This is an interesting field of study and I’m falling in love with it”, said Siphosethu Moshani.

“This project has changed my mindset; I used to have a problem with DAFF rangers arresting our people in the forest when collecting medicinal plants. I now understand the reason why: it is to stop our indigenous plants from going extinct”, said Someleze Mgcuwa.

“I now have a better understanding of what Nature conservation is all about and that helps with my teaching at schools”, said Mluleki Nkosi.

The choice of working with matriculants was a good one but there were challenges presented by literacy levels and understanding the language of science, botany in particular. However, the para-ecologists’ enthusiasm, courage and eagerness motivates and inspires me in so many ways. It is true that you can have all the resources at your disposal but if you don’t have the right people to carry the vision forward, the project is doomed. So far, we have managed to change their mindsets and won their hearts to conservation as caretakers of the environment. The huge task ahead of us is to keep them motivated, something you’ll hopefully read about in the next issue of the CREW newsletter!

This has been another busy year for the Biodiversity Stewardship Programme in KwaZulu-Natal, with approximately 22 000 hectares of private and communally owned land secured for conservation. Rewarding progress for the BotSoc-CEPF (Critical Ecosystems Partnership Fund) funded project was the eventual signing of the proclamation papers for Red Desert Nature Reserve in Pondoland by the MEC.

This has been an extremely long and frustrating process but we are all delighted that it has finally happened. We have also secured Bosch Berg Nature Reserve near Boston, an extension to the existing Boston View Biodiversity Stewardship Agreement area, and most other sites are progressing well, if slowly.

Since the main purpose of stewardship is to conserve biodiversity, we have initiated a long-term monitoring programme to ascertain the effects of grazing on the plant diversity of a number of stewardship sites and to examine the relation between veld condition and plant diversity. Many hours have been spent on hands and knees in

The Botanical Society Biodiversity Stewardship Project in KwaZulu-Natal

Isabel Johnson

Surveying Boston View plots.
various grasslands collecting ‘eco-scrap’ from 100 m² plots as a prelude to yet more hours of mystery solving in the herbarium. We have also done several veld condition assessments with the Department of Agriculture and we are becoming quite proficient at identifying grass species when not in flower, as well as doing soil classification. I have also been lucky to get to some fascinating places while assisting with site assessments for the stewardship programme at Babanango, Phinda, Upper Pongola, Swartberg, Ozabeni and Ncandu.

In addition, there have been some rewarding CREW-Stewardship outings, including our annual new year visit to Happy Valley at Impendle (now a recognised surveyed flower reserve as part of the Upper Umgeni Stewardship area) where we added several new records to the growing list of over 200 species. It is amazing how every visit at the same time in January still yields surprises and it makes one realise just how inadequate a once-off survey is. The Pondoland CREW group helped me out with assessing the damage caused by illegal bulldozing at the Fairview site on the south coast followed by a quick walk in the grassland where we again found Brachystelma sandersonii (Vulnerable). The Mkham-bathini CREW group and BotSoc members visited Virginia (part of the Ingwehumbe Nature Reserve) in late November with Geoff Nicholls to track down his previous sighting of the Critically Endangered Brachystelma natalensis, a KwaZulu-Natal sandstone sourveld endemic. Sadly the area hadn’t been burnt for a while and we didn’t find any but we now know exactly where to look when it is burnt. We also found many Asclepias praemorsa (another sandstone sourveld endemic) in flower. A visit to Lake Lyndhurst with the Midlands CREW group on a breathtakingly beautiful day in spring revealed thousands of Moraea graminicola subsp. graminicola (Near Threatened) in flower.

The good news is that we have secured CEPF funding for another year so I am looking forward to more exciting stewardship work!

Regional suspects of the Invasive Species Programme:

Help us find them!

Resheene Lalla, with contributions from Bongani Mashele, Dan’sile Cindi, Ernita van Wyk, Haylee Kaplan, Kanyisa Jama & Peter Shisani

The Invasive Species Programme: Early Detection and Rapid Response (ISP: EDRR) based within SANBI and working across all nine provinces, targets invasive species with limited known distributions and aims to prevent further spread. The co-ordination of a national programme of this nature is a complex task and has to consider a multiplicity of issues, including the different dynamics in the provinces, environment, climate, strategies, priorities, stakeholders and leadership.

In order to work effectively at a local level, regional units of the ISP have been set up to allow for localised operations, species prioritisation, and closer interaction and collaboration with local stakeholders, while delivering on national goals and targets.

Over the years the CREW Programme has become one of our key partners. The ISP wishes to acknowledge the support and contributions of CREW staff and volunteers, especially their support in surveillance of ISP target species. The contribution of CREW ‘eyes and ears’ is invaluable to our detection work.

This article highlights one target species from each of the ISP regional units. We hope this will serve to harness and expand the existing partnership between ISP and
CREW and engender increased communication between stakeholders across the country.

If you see any of the plant species described here, please contact the ISP. Contact details of regional units are provided at the end.

**KwaZulu-Natal:**

**Rubus ellipticus** *(yellow Himalayan raspberry)*

Native to Asia, this robust shrub was recently detected for the first time in Hillcrest, KwaZulu-Natal. In contrast to its notorious cousin, the American bramble (*Rubus cuneifolius*), *R. ellipticus* can produce arching branches and attain heights of up to 7 m. Reproduction can occur via seed and root suckers. Leaves are dark green and trifoliolate, with roundish leaflets. Stems and branches of young plants are covered in dense red hairy bristles, which could turn brown with age. Flowers are white, and the raspberry-like fruit turns yellow when mature.

**Eastern Cape:**

**Carduus nutans** *(nodding thistle)*

*Carduus nutans* is a member of the Asteraceae, native to Eurasia. It is a herb with sharp spines that densely cover the stems and leaf margin, which gives the plant its spiny texture. Growing at the top of the stem are large pink or purple flower heads, which usually bend over and ‘nod’ at a 90-degree angle. In South Africa, the species is widespread in Grahamstown, Cradock, Kenton-on-Sea, Port Alfred, Paterson and Addo. It is a prolific seed producer—each flower can produce up to 1200 straw-coloured seeds (Smith & Kok 1984). *Carduus nutans* is an aggressive invader that out-competes native species and has the ability to reduce productivity of pasture and rangeland by chemically inhibiting growth of other plant species (allelopathy).
Western Cape:  
**Melaleuca hypericifolia**  
(hillock bush)

This attractive shrub is native to New South Wales, Australia. In South Africa, it has invaded moist areas of Table Mountain and can be found cultivated in residential gardens in coastal towns of the Western Cape. It is adapted to coastal conditions. Seeds are held in the canopy in woody capsules and released after fire. The species is therefore well suited to becoming established and spreading in coastal zones where the area is naturally fire-prone, and where the habitat is moist enough (Brophy *et al.* 2013). Plants can grow up to 6 m high and the branches have a weeping habit. The leaf arrangement is very distinctive (opposite, 10–40 mm long and 4–10 mm wide) and they smell like camphor when crushed. The flowers are attractive red bottlebrushes.

---

Northern Cape:  
**Tephrocactus articulatus**  
(pine cone cactus)

This popular ornamental plant has a high invasive potential. Similar to other cactus weeds, this species invades by forming large, dense clumps that spread vegetatively and are often difficult to remove. Look out for a small greyish green cactus with segmented cylindrical stems that resemble pine cones (hence the common name). The plants are often spineless but can sometimes have long, white papery spines (Walters *et al.* 2011). Pine cone cactus plants can easily be confused with native *Hoodia* species but the former has small clusters of dark bristles (glochids) on its stems. Plants usually grow in clumps up to 0.5 m tall. The stem segments fall off easily and will usually root wherever they land. This species also produces small winged seeds that spread easily in the wind.
Mpumalanga:
**Cryptostegia grandiflora** (rubber vine)

Cryptostegia grandiflora is native to Madagascar and is known to occur in natural environments in Mpumalanga and Limpopo. This species invades savanna areas, riverbanks and dongas, smothering indigenous species, including large trees, and severely threatens riverine environments by displacing plants and animals. It is poisonous and the sap is an irritant to skin and eyes. It is a scrambling shrub 2–3 m tall or a climber 10 m or more. Branches are smooth with numerous small lenticels. Leaves are dark green, shiny, smooth, egg- or wedge-shaped to tapering at the base, 60–90 × 30–50 mm. Flowers are pale pink to purplish pink. Fruits are in the form of sacs, often more than 100 mm long, splitting in half to release seeds with tufts of hairs 30–40 mm long (Marohasy & Forster 1991).

Limpopo and North-West Province:
**Harrisia balansae** (climbing harrisia)

A small infestation of this cactus was discovered on a farm called Skruinsdrift about 10 km north of Groot Marico. The invader, which is of Argentinian origin, spread from an abandoned farmhouse and has covered an area of less than 20 ha on both sides of the Straatsdrif Road. It has the potential to develop into a serious invader, hence the decision to attempt eradication. Another population has been detected near Modimolle, Limpopo Province where it is invading Mkleuw Farm Lodge and 26 Sussenvale Farm along the R101 Road. It is a succulent cactus with long 3- or 4-angled spiny or cylindrical unbranched stems. Spines are arranged in clusters, usually with one long spine (30 mm long) and several shorter spines (10–20 mm long). Its clambering growth habit allows the stems to climb up trees to heights of 6–9 m (Oakley & Kiesling 2013). Flowers are tubular, pale yellow to white, producing bright red scaly fruits.
Gauteng and Free State:

*Iris pseudacorus* (yellow flag iris)

Native to North Africa, Europe and Asia, this species has become naturalised in Australia, South America, North America and South Africa and is invasive in many temperate parts of the world. In South Africa it is invading wetlands and is a proposed category 1a species in NEMBA. According to the South African Plant Invaders Atlas database, *Iris pseudacorus* was previously recorded from four localities in South Africa. In Gauteng the first record was in 2004 at the Vaal River between Vereeniging and Vanderbijlpark. In Limpopo Province it was recorded at Klein Kariba Pleasure Resort near Bela-Bela in a wetland adjacent to the camping site and it has recently (2010 to 2013) been recorded in Equestria, Pretoria and Howick, KwaZulu-Natal. It is a herbaceous perennial plant, 1.0–1.5 m (or a rare 2.0 m) tall. Leaves are sword-shaped, green to blue-green, erect, flattened with a raised midrib, to 1 m long, with about 10 per ramet (individual member of clone). Rhizomes are pink in colour. Large showy flowers (with a typical iris structure) are yellow with brownish mottled markings on upper surfaces and are produced in spring or early summer. The fruit is a dry capsule 40–70 mm long, with numerous pale brown seeds. This plant may be confused with the indigenous albeit uncommon *Moraea huttonii* that grows in similar habitats. Collaboration with stakeholders such as the Moreletaspruit Invader Task team, Tshwane Municipality, University of Pretoria and local residents has resulted in new populations being reported. Clearing attempts to assess feasibility of management were conducted on isolated populations in Serene Valley during November 2013, resulting in the removal of seven *I. pseudacorus* plants.

The ISP is based within the South African National Biodiversity Institute and is funded by the Department of Environmental Affairs.
Contact Details for ISP Regional Units

<table>
<thead>
<tr>
<th>Regional unit</th>
<th>Contact Person</th>
<th>Email</th>
<th>Tel</th>
</tr>
</thead>
<tbody>
<tr>
<td>KwaZulu-Natal</td>
<td>Reshnee Lalla</td>
<td><a href="mailto:R.Lalla@sanbi.org.za">R.Lalla@sanbi.org.za</a></td>
<td>031 207 6480/2</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>Kanyisa Jama</td>
<td><a href="mailto:K.Jama@sanbi.org.za">K.Jama@sanbi.org.za</a></td>
<td>043 726 7450</td>
</tr>
<tr>
<td>Western Cape</td>
<td>Ernita van Wyk</td>
<td><a href="mailto:Er.vanWyk@sanbi.org.za">Er.vanWyk@sanbi.org.za</a></td>
<td>021 799 8678</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>Travor Xivuri</td>
<td><a href="mailto:T.Xivuri@sanbi.org.za">T.Xivuri@sanbi.org.za</a></td>
<td>021 799 8406</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>Bongani Mashele</td>
<td><a href="mailto:B.Mashele@sanbi.org.za">B.Mashele@sanbi.org.za</a></td>
<td>013 752 6504</td>
</tr>
<tr>
<td>Limpopo and North-West Province</td>
<td>Peter Shisani</td>
<td><a href="mailto:P.Shisani@sanbi.org.za">P.Shisani@sanbi.org.za</a></td>
<td>012 843 5013</td>
</tr>
<tr>
<td>Gauteng and Free State</td>
<td>Dan’sile Cindi</td>
<td><a href="mailto:D.Cindi@sanbi.org.za">D.Cindi@sanbi.org.za</a></td>
<td>012 843 5152</td>
</tr>
</tbody>
</table>

References


News from the Limpopo CREW group

Bronwyn Egan & Sylvie Köhne

The CREW group in Limpopo is a new initiative and members often feel overwhelmed by not knowing where to start. This decision was taken out of our hands by the construction along the R71 between Polokwane and Tzaneen.

We were aware of the possible presence of *Euphorbia clivicola*, a nondescript but Critically Endangered endemic succulent, along the road verge in certain places but we had not surveyed in this area. In February 2013 we were asked to identify some *Euphorbia* species, possibly *E. clivicola*, near the widened road. This was a good place to start but it opened a can of worms in that the plants seem to be somewhere between *E. clivicola* and the much more common *E. schinzi* so we await expert taxonomic input. A follow-up visit confirmed the presence of this confusing species on hills opposite the quarry and an extensive search in the uninhabited area beyond these hills is envisaged.

*Chlorophyrtum radula* is a Critically Endangered species found in grassland remnants such as fire-breaks on some of Komatiland Forests’ land. Our two visits to these areas revealed that the populations are in good condition and that they are not in immediate danger, as long as pine seedlings are cleared regularly, bush-encroachment is kept under control, and the areas are monitored.

In March 2013 we were joined by Domitilla Raimondo and Lize von Staden. This provided the incentive to access the Serela Peak in the Wolkberg in order to gain experience working with the datasheets and to look out for specials in this beautiful area. An important aspect of this outing was that students from the University of Limpopo were able to join us and gain experience in CREW techniques, as well as an appreciation for the beauty and conservation value of the Wolkberg.

*Aster nubimontis* (Endangered) and *Inezia speciosa* (Endangered) were the targets of our trip to the Stylkop area of the Wolkberg in early November. This trip was a good learning opportunity for Alvin Mapatha.
and Seloba Chuene who had fun twisting their tongues around the scientific names of all the flowers we came across. Both species were found with *I. speciosa* in particularly pleasing numbers.

Then in mid-November, the Mothiba tribe, together with the Department of Economic Affairs, Environment and Tourism (LEDET), the Polokwane Municipality and a local botanist, invited CREW to view the remaining populations of *Euphorbia groenewaldii* (Critically Endangered) growing in a small area between Polokwane and Hennenburg. Some objectives were to introduce the community to the importance of the plant, to view the existing populations, and to discuss possible unknown populations with experts in the local community. It was of overriding importance to gain the support of the local leadership (tribal authority) in protecting the plants from illegal development in the area. By the end of the meeting and site visit, the tribal authority had assured us that they would work to prevent development in the area and would show us populations of the plants that had not yet been mapped. We hope that during 2014 we can collaborate with this community on further monitoring and protecting these populations.

CREW Limpopo had an exciting end to our activities with a three-day walk on the Blouberg Mountain near Senwabarwana. Although the rest of the province had had some rain, Blouberg was still extremely dry. We collected *Rapanea melanophloeos* (Declining) and *Warburgia salutaris* (Endangered), both specials on our list. Rare, endemic plants found included *Tylophora coddi* (Rare), *Mystacidium braybonae* (Near Threatened) and *Berkheya radyeri* (Rare). We plan to repeat the trip in February 2014 after the rains have fallen.
Reserve near Sabie and enumerated 153 species. One of the specialties that we found was a colony of the slow-growing Aloe alooides, a dolomite endemic. Its habitat is not threatened since the plant favours outcrops and cliff faces, which are unsuitable for pine plantations. We also found a Habenaria that may be an undescribed species.

In April 2013, Barberton Mountainlands invited PSG to help with the floral aspect of their ‘bioblitz’. We made use of the wonderfully shaded bush camp next to a bubbling stream at the bottom of the valley. Among the notable finds were Senecio triodontiphyllus (Vulnerable) and a new geoxyllic suffrutex species of Ochna that will be described at Kew.

October 2013 saw us exploring the serpentines around Barberton looking for, in particular, Macledium zeyheri subsp. thyrsiflorum (Threatened). We cheered heartily on finding a colony growing among rocks, even though they had finished flowering. This species was previously only known from the Magnesite Mine area near Malelane. Some of the other exciting finds included the beautiful little Ledebouria crumophylla (hitherto known only from the Honeybird Creek area near Barberton), Ozoroa barbertonensis and Gymnosporia sp. nov. (a serpentine endemic with scabrid leaves).

Our last outing of the year, at the beginning of December 2013, was to Heemstede, near Barberton. Among the interesting finds here was one of Sandie Burrows’ new Asparagus species that she is describing, namely A. barbertonicus—a Barberton endemic. The target species was the rare orchid Nervilia kotschyi var. purpurata. A few populations were discovered near a stream in wet soil, but, unfortunately, they were not flowering. While hunting for the orchid, we came across the Vulnerable Brachystelma longifolium and Oxalis davyana. There were quite a few different Hypoxis species growing in the grassland and with Dr Yashica Singh’s help, we hope to identify them soon.

We are looking forward to this year’s PSG/CREW outings searching for rare and endangered plants in Mpumalanga.

Zululand CREW reports on the field trip to Ozabeni
Francois du Randt

The Ozabeni Wilderness Area in Zululand is a host to rare vegetation in its woody grassland, swamp forest and sand forest. On 20 October 2013, members of CREW and the Zululand branch of the Dendrological Society visited the area with the aim of exploring, identifying and monitoring trees and plants in the area. The group constituted Dr Theo Mostert (University of Zululand), Francois and Ronelle du Randt (Dendrological Society), and Suvarna Parbhoo, Joycelyn Sutherland and Jill Sheldon (KwaZulu-Natal CREW Node).

There are two main ecological habitats in Maputaland that need special attention, that is, the Maputaland wooded grassland or palmveld, and the sand forest in its totality. The Ozabeni wooded grassland falls in the Maputaland Palmveld ecological habitat. It is not really a wooded grassland, but it is in fact an underground forest, because so many plants have underground rootstocks and are
classified as geoxylic suffrutes. Examples include *Parinari capensis* var. *incordata*, *Salacia kraussii* and *Elephantorrhiza elephantina*. Having an underground rootstock provides protection from veld fires. These geoxylic suffrutex plants are of considerable conservation importance. From a distance, the real wooded grassland can be distinguished easily from ordinary grassland as it is darker green. The lighter green coloured grasses are found in wetter, probably seasonally waterlogged regions. We drove up to the Mbazwane Drainage Line and saw numerous flowers but unfortunately, we did not have any time to access the swamp forest.

The original intention was to cover both the Maputaland Palmveld and grassland, as well the Mbazwane Drainage Line swamp forest but this was not possible because of time constraints and poor weather conditions. Some roads and management tracks were explored between Sodwana Bay access gate and the northern part of the Mbazwane Drainage Line. The group stayed east of the drainage line and could not find easy access towards the western side. The group quickly realised the conservation importance of the wooded grassland because of its rare and interesting geoxylic suffrutex plants. The Dendrological Society and CREW will compile a complete database of recorded species. It is very important to follow up on this trip, and to do more exploration on both sides of the Mbazwane Drainage Line.

We suggest educating the general public about this fascinating, wooded grassland and the importance of conserving it for future generations.

---

**News from the Midlands CREW group**

**Nikki Brighton**

Midlands CREW has many enthusiastic amateurs with a sprinkling of experts, but everyone keeps learning all the time. Excursions range from exploring old favourites (plants and places), to compiling impressive plant lists with a regular visit to Happy Valley in January for the past 10 years that has produced a list of 222 plants with 32 new plants recorded this year, to finding new treasures in unexpected places, and assisting on sites for the Biodiversity Stewardship Programme.

Eight field trips were planned for the 2013/2014 season, including re-visiting the Edgeware grassland in Boston to search for a specimen of an interesting *Morea* photographed last season but so far unidentified. We were unable to locate it and also missed out on the *Schizoglossum bidens* subsp. *hirtum* (Data Deficient—Insufficient Information) that we were looking for, but we saw *Cycnium racemosum* for the first time on this site, as well as many Asclepiads and dainty *Pelargonium alchemilloides*.

On an excursion to the Highland Sourveld grassland of Lake Lyndhurst, we discovered *Vernonia thodei* near the wetland, a first for most of us. Amongst the dolerite rocks in Impendle Nature Reserve we found *Boweia volubilis* (Vulnerable) and (we think) *Senecio dregeanus* (Vulnerable), both of which caused some excitement.

We are fortunate that there are many regular walks in natural places in the Midlands. We are able to join these for informal botanising without much effort in different seasons. We frustrate the hikers though as we huddle around a tiny, pale splotch in the grass while they want to head up the hill! On one of these walks, a small colony of *Asclepias woodii* (Vulnerable) was
At the top of Edgeware—Peter Warren, Christina Potgieter sporting her BotSoc-CREW collecting bag, and Barbara Clulow observing a plant behind her.

News from the Underberg CREW group

Sharron Berutti

Many of the Red Listed plants occurring in the area covered by the small Underberg CREW team are found in the Wilderness Area of Maloti Drakensberg Transfrontier Park. Unlike many other areas, it is likely that many of these species are simply under-recorded rather than threatened by habitat changes. However, as access is by foot for the vast majority of the park, it is challenging to locate such species, particularly those occurring at higher altitudes. The year has been very successful and records are fully documented with specimens collected.

As we build expertise and knowledge of species, we hope we can find sufficient new populations to bring about the down-listing of several Red Listed species.

New sites were found for the following five orchids in the Maloti Drakensberg Park:

- *Satyrium microrhyncum* (Rare—found at three localities varying in altitude by 600 m).
- *Schizochilus bulbinella* (Rare—two populations, one numbering about 6 000 plants)
- *Disa sankeyi* (Rare—one site)
- *Disa sanguinae* (Rare—one site)

A record of *Disa oreophila* subsp. erecta (Rare) awaits confirmation.

*Asclepias oreophila* (Rare) was found at two sites. The one known...
Making ourselves at home in Gxalingenwa Cave.

Aster confertifolius (Rare).

site for Disa tysonii (Rare) was monitored and a new site recorded. The population of Macowaniana hamata (Rare) on or near the road-side in Sani Pass has survived road-widening operations. Populations of one Sample Red List Index species listed for monitoring, Anemone fansnini (Near Threatened), were mapped and counted. A new population of Protea subvestita (Vulnerable) was located.

On farmlands outside of the Maloti Drakensberg Park, two populations of Disa scullyi (Endangered) were found and a large new population of Nerine pancratoides (Vulnerable) numbering perhaps 3 000 plants was located.

A highlight of the year was a four-day three-night expedition to Gxalingenwa Valley (Cobham Ezemvelo Wildlife Reserve) just south of Sani Pass, overnighting at Gxalingenwa Cave. The team hiked 12.5 km to the cave and Ezemvelo KZN Wildlife kindly provided pack-horses and staff to transport our gear. This was one of the locations visited by Olive Hilliard and Brian (Bill) Burtt, legendary botanists who collected in the southern Drakensberg and named many species. Their detailed collecting work at 30 sites remains the definitive botanical analysis of this region to this day. In the 1980s, they named two species, Aster confertifolius (Rare) and Senecio kalingenwae (Critically Rare), known only from this valley and unrecorded after their description. Senecio kalingenwae was reported from just one site. We found both species—A. confertifolius at six sites (numbering thousands) and S. kalingenwae in three small pockets of highly specialised micro-habitat in close proximity and numbering just over 100 individuals in total. Aspidonepssis cognata (Rare—40 plants) was also located on this trip and this species was located on another CREW outing to the Garden Castle Section of the Maloti Drakensberg Park.

Without the support of Ezemvelo KZN Wildlife, most of this work would not be possible. In particular, we thank Sonja Krueger for her support of the programme and Charl Brummer for organising logistical support for the Gxalingenwa expedition.

During the previous field season, we went on 14 outings to nine localities, many of these being follow-up visits for flowering material to confirm identifications.

In September 2012 we went to the Masonite Estate in Eston where we confirmed a sighting of Hermannia sandersonii (Vulnerable), which is quite a way south of its previously collected range. Moving on to a field with a different aspect, we came across a population of Cyrtanthus obliquus (Declining) probably saved from the resident cattle herd by the fence to stop them getting into the sugarcane. It is quite special to see this plant in KwaZulu-Natal.

In October there was a visit to a farm in Baynesfield next to the Estate that we visited two years before. Plants that should be in the

News from the Mkhambathini CREW group

Alison Young
area are *Gerbera aurantiaca* and *Anemone fanninii* (Near Threatened), neither of which we saw but the grasslands were in excellent condition.

The Pietermaritzburg Industrial Area is being built on the only known locality for *Brachystelma franksiae* subsp. *franksiae* (Vulnerable). The land around these populations is also coming under heavy pressure for housing developments and peri-urban activities. *Euphorbia franksiae* (Vulnerable) also occurs here in large numbers. Both species had been reported in the Camperdown area but old records are very vague about exact localities. In November, we went to a site 5 km east of Pietermaritzburg in the Upper Mpumuleni Conservancy in Ashburton. Unfortunately, historically, this area has been under cattle ranching until at least 50 years ago and there is not too much biodiversity left in the remnants of the grasslands we saw.

The highest point between Pietermaritzburg and Durban is a hill called Ingomankulu, which has been surrounded by farmers who farm sugarcane and vegetables rather than cattle. The plant life shows unique similarity to the Natal Group Sandstone remnants that are more common closer to Durban. In December, we stumbled upon new records of *Senecio exuberans* (Endangered), *Schizoglossum peglerae* (Endangered) and *Zaluzianskya pilosa* (Data Deficient—Taxonomically Problematic). The population of *Eriosema populifolium* subsp. *populifolium* (Endangered) found here was different from the clone at Priscillavale found the year before—the leaves were grey and all were unifoliolate and the open flowers were a paler orange than *Eriosema distintum*.

January 2013 saw us trekking out to find yellow flowering *Aloe linearifolia* (Near Threatened) in the rocky sandstone outcrops on the edge of the Gwahumbe Valley. We also found another site record for *Desmodium gangeticum* (Least Concern) far south of its normal range.

In August 2013 we went for a drive between the N3 and the Umgeni River to the area around Nagle Dam. It had been the site of numerous very old collections but the area is now quite populous and overgrazed by goats and cattle. The uninhabited areas contain dense *Acacia* and *Lantana* thickets.

In November 2013 we teamed up with the inland branch of the Botanical Society to look for *Brachystelma natalense* (Critically Endangered), which had been seen about 20 years previously. It was an unsuccessful outing from that point of view but we found a new locality for *Argyrolobium longifolium* (Vulnerable) which made the trip worthwhile. The grasslands are well cared for in these parts and those patches that were not burned this time will be burned next year, so we will return.

There were several trips in December after quite a bit of late rain. One was to a site in Cato Ridge where we found a single plant of the Vulnerable *Dierama pallidum*. We squeezed in a visit to a local conservancy at World’s View where there was *Merwilla plumbea* (Near Threatened), *Drimia robusta* (Data Deficient—Taxonomically Problematic) and *Boophone disticha* (Declining). *Boophone disticha* is one of the species we have to monitor and we generally find it at most sites but in very low numbers. However, the population at World’s View north of Pietermaritzburg has the oldest and biggest plant bulbs by far compared to the others we have seen, possibly because of the site’s inaccessibility to collectors. On a return visit to a population of *Kniphofia* in the Umkomaas Valley, which was flowering at a completely different time of the year, we confirmed that it was not *Kniphofia albescens* as we originally thought, but a new locality for *Kniphofia arifolia* (Near Threatened).
brevifolia. Then a large rocky fire-break on a farm in the Ingomankulu area revealed a huge population of Argyrolobium longifolium (Vulnerable). Several new localities were found for Woodia verrucosa (Vulnerable) in Eston, Merrivale and Pietermaritzburg. Hypoxis hemerocallidea (Declining) is seen at all sites in our region in small numbers but they are abundant on disturbed sites. They are also abundant in the Cato Ridge grasslands.

Having a rather large area to cover and such a short flowering season means we are still trying to get to as many sites as possible to find the plants on our initial list from four years ago. Many of the target species have become rather secondary to our searches—the species we do actually see on the outings are far more interesting. Historically, our area has been under-collected so we often find range extensions for species. Almost all the good condition grasslands that we visit are so different from each other, even when they are only short distances apart.

News from the Durban CREW group

Jocelyn Sutherland

Due to the late summer rains, grassland inspections were delayed and not as many sites as we had hoped for were visited. On 7 October we visited the grassland at Giba Gorge, an eThekwini priority area, as guests of the eThekweni environmental officers. A lovely variety of grassland species were noted, but no specialities were recorded during this visit. However, monthly visits would be desirable if time permits.

On 18 November we revisited the Monteseel grassland near the water tower, where Brachystelma pulchellum (Near Threatened) was recorded in November 2012. It was pleasing to note that the colony remains intact and increasing.

On the 20th November some of the eThekweni priority grasslands in Kloof were visited. The Klooflands/ Msinsi Road site, which is monitored by Kloof High School and the Kloof Conservancy, was very promising. There were numerous Hypoxis hemerocallidea, Pelargonium luridum in shades from cream to deep pink, and the spectacular Eulophia cucullata. We next visited Monument Park, where they are trying to re-establish a natural grassland. This will take some time as there is still a lot of lawn grass that needs to be removed. However, Hypoxis hemerocallidea, Xysmalobium undulatum and Ornithogalum tenuiflum were establishing nicely.

A return visit to the view site at Krantz Kloof Nature Reserve was made on 11 December to monitor Brachystelma natalense (Critically Endangered). Plants thought to be Brachystelma natalense were found at the correct GPS co-ordinate of the previous observation. However they were not yet in flower and needed to be revisited in 2–4 weeks’ time for confirmation. A very pleasing find was a large (in excess of 100 plants) flourishing colony of Brachystelma pulchellum on the rocky edge of the krantz.

Rose Dix and I did a preliminary visit to Springside Nature Reserve on 8 January. This is quite a special area having both grassland and forest. Boophone disticha and Stangeria eriopus are present in the grassland. A lovely observation was Eulophia parvilabris which has not previously been recorded in this area. I found a single plant there in January 2013. This year seven or eight plants were found, all flourishing and flowering well. More in depth studies need to be done in this reserve.

News from the Pondoland Centre of Endemism CREW group

Graham Grieve

Sadly, the leader of the Pondoland Centre of Endemism (PCE) CREW group, Tony Abbott, passed away in October after complications from heart surgery. While his loss has been sorely felt, the PCE group is committed to continuing with CREW activities.

In February we made a trip to the Ngele area, staying at Forest Side. Here we confirmed the presence of healthy populations of Brachystelma molaventi (Vulnerable) and Struthiola anomala (Vulnerable). They were both found at known locations as well as some new sites. Also in February we discovered a
Pachycarpus at Smedmore in the Umtamvuna Nature Reserve and after discussions with Melissa Glen (Ph.D. student working on the genus *Pachycarpus*), it turned out to be *P. mackenii* (Data Deficient—Insufficient Information) and apparently only the fourth record of this plant. We intend to revisit the area at the appropriate time to collect specimen material.

At different times of the year we walked the newly opened Mzimkulu trail at Port Shepstone, from the golf course to Royston Hall. There is an interesting variety of plants and we now have a list of 268 species (trees comprise one third), including some rare and endangered species. In April we came across a population of the endangered *Begonia homonyma*. Later in the year we found *Rhynchosia hirta* flowering along this trail—a new distribution of this plant as it has previously only been recorded from Mpumalanga and Limpopo provinces.

In May we went to the Mnyameni Falls in Pondoland to record a new locality for the orchid, *Ypsilopus erectus*. This species is uncommon in the PCE area.

A winter trip to Ngele is not always welcome but in August we set off for the mountains to look for a *Greyia* sp., which Auriol Batten illustrated in her *Flowers of Southern Africa* and had questioned whether this might be a new species. We were lucky with the timing and collected suitable flowering material for SANBI scientists to examine.

We visited Ngele again in November and December with Ph.D. students Melissa Glen (University of KwaZulu-Natal) and Pieter Bester (SANBI, Pretoria), to hunt for some target Apocynaceae species. We were extremely fortunate to find several *Xysmalobium rhodanthum* plants in flower. The collected material will be used for the type description, soon to be published. Subsequently we came across two other species thought to be undescribed, one *Asclepias* and a *Xysmalobium*. On another Apocynaceae hunt we helped Ralph Peckover search for *Brachystelma tenellum* (Vulnerable). The type locality has been destroyed, possibly by porcupines, but we were able to take him to another nearby locality where we found a small but healthy population of this obscure *Brachystelma*. Later that same day we were unsuccessful in finding *Brachystelma kerzneri* (Vulnerable) in the grounds of the Wild Coast Sun, its type locality.

We continue to survey and monitor the condition and botanical richness of grasslands in the PCE area, both in reserves and on private land.
News from the CREW A-Team

Graham Grieve

In early March last year, Kate Grieve and I made our first visit to Ntsikeni. Although there were still many flowers, we realised that we had missed the peak flowering season by some weeks. So we were delighted when Suvarna Parbhoo decided to organise a combined Pondoland and A-Team outing to the reserve in January. We spent two nights at Ntsikeni Lodge and this gave us plenty of time to explore different areas of the reserve.

It was clear shortly after we had entered the reserve that there were many more flowering plants than during our last visit, and orchids were particularly obvious. The first big colony we came across was just after the stream crossing—about two thirds of the way to the lodge—where we saw a big group of robust *Disa cooperi*, with *D. stachyoides* and *D. versicolor* punctuating the gaps between them. Once I had managed to tear my all-female group of companions away from this display, we reached the lodge to find one of the cottages we were to occupy being fumigated to get rid of a swarm of bees.

We decided to walk up into the Ntsikeni foothills while the fumigant dissipated. Just outside the lodge we came across a small group of *Disa scullyi* (Endangered), and a little further *D. rhodantha* together with some very yellow *D. chrysochrysa*. Once we started climbing the gentle slopes at the bottom of the mountain, we encountered many *Satyrium longicauda*, ranging in colour from deep pink to pure white. Soon we started finding *Habenaria laevigata*, well camouflaged in the grass, and then *Disa cornuta* and *Pterygodium magnum* became the dominant orchids. There were *Disperis tysonii* as well. Once we reached the sandstone outcrops, we found several *Disa oreophylla* var. *oreophylla* and a solitary *Disperis wealei*. We slowly made our way back as the sun started dipping and the beers started shouting from the lodge, finding *Miraglossum pulchellum* and *Miraglossum ‘super bum’* (local pronunciation) hiding in the grass on the way.

The following morning we tackled a different part of the same slope, and besides the species seen on the previous day, came across some *Disperis cardiophora* and *Holothrix thodei*. In the watercourses we found several *Eucomis comosa* subsp. *striata* with long inflorescences. *Kniphofia laxiflora* was prominent but there were also a few *K. ischopensis* in the watercourses.

It was interesting clambering over the apparently barren rock slides to hear the gurgle of water below. The fringes of these slides are a habitat for small trees and these provide shelter for many other small plants. Not far from one of these we found our first (recently described) *Xysmalobium pedifoetidum*—only recognised as such through our exposure to *X. rhodanthum* at Ngele recently together with Pieter Bester and Melissa Glen, and confirmed by its eponymous very bad smell.

This turned out to be a memorable trip with many interesting finds. A reserve well worth visiting despite the poor condition of the internal roads.
This year was one of the wettest in recent years for the west coast lowland renosterveld. Unfortunately my husband and I missed most of it as we were on a three month tour of East Africa and returned at the end of August, well into one of the best flower seasons ever for the area.

Within the first week of our return, we did a walk in the Renosterveld Reserve in Darling to find the veld carpeted with *Ixia scillaris*, *Gladiolus*, *Romulea*, *Pterygodium*, *Babiana* and all the other early species. The attendance at our walks with flower enthusiasts in Yzerfontein and Darling increased each week as news spread about the wonderful variety of flowers to be seen. We also attracted day visitors from Cape Town.

We were successful in finding many of the target species, such as *Lebeckia plukenetiana* (Endangered) at Tienie Versfeld and in the West Coast Park on our cycle route, and *Babiana rubrocyanea* (Vulnerable) in profusion during September in all the Darling reserves, public and private. There was a wonderful display of *Agathosma thymifolia* (Vulnerable) within the West Coast National Park and on the public open spaces within Yzerfontein, where they were growing together with *A. lanceolata* and *A. imbricata*. The wet conditions extending into October prevented further exploration. We did log additional sites for *Muraltia macropetala* (Vulnerable) within the Darling reserves and on the known sites along the Darling renosterveld hills.

The explosion of building activities within Yzerfontein has dealt a blow to the plants within the village as many have not been relocated. Luckily there are a few green corridors where it is hoped many will be able to establish themselves. *Gladiolus griseus* (Critically Endangered) flowered within one of these green belts and we saw stronger plants than usual, probably due to the extra rain.

After a call from Ismail to find a target species for November, our biggest find for the year was *Aspalathus glabrata* (Critically Endangered). This has been in our sights for a few years. A week later we found more plants at another site within the Groenkloof Reserve at Darling, about 2 km from the first site. These are all waiting for Prof. Charlie Stirton’s on-site confirmation. There are also plants growing within the West Coast Park on the road shoulder in gravel that had been brought in from Darling when the road was built 25 years ago! These I can now easily monitor for seed pods.

Some of our group members have also been involved with helping the Biosphere teams compile site plant lists for development proposals and change of land-use in the greater area. Thank you to Jacques van der Merwe for incorporating our team in these outings.

Although the floral display at the Darling Wildflower Show was one of the best ever, the attendance was lower due to the heavy rains the entire weekend. Under the leadership of Pixie Littlewort, the team at the specimen table collected plants with great care to display some of the rare and very special plants of the Darling area. These always receive plenty of attention.

We thank all at the CREW Cape Floristic Region node for the help and support throughout the year and for keeping us looking for the next rare and endangered plant!
It was such a wonderful year of floral discoveries that it is difficult to highlight one specific trip. It seems that despite all its difficulties, nature still manages to wow us on every field trip.

In March we held an informal workshop, where we discussed our goals for the year. We are blessed with the abundance of places we can visit in our area. During the afternoon we covered some theory (petals, sepals and tepals) and worked with the microscopes. It is always very gratifying to see members discovering the anatomy of plants when they start to dissect them.

We started our field trips in June, with a visit to the Helderberg Nature Reserve. We tried desperately to find *Geissorhiza setacea* but we could have been a little too early. The dam wall had recently been cleared of alien vegetation and we found this area to be a treasure trove of bulbs. We found the lovely *Gladiolus recurvus* (Vulnerable) as well as *Protea burchellii*.

In July we were informed that a site in Somerset West, where several endangered species had occurred, was bulldozed. The owner removed a tree at the back of the plot but in the process destroyed all the surrounding vegetation. After spending hours on the phone trying to get hold of the owner, permission was finally obtained to do a search and rescue. A plot in Sir Lowry’s Pass Village was secured as a destination for the plants and we managed to replant a number of *Babiana angustifolia* (Near Threatened), *Gladiolus recurvus* (Vulnerable) and *G. gracilis*, to mention a few.

In July we also visited a farm called Da Capo on the slopes of the mountain close to Sir Lowry’s Pass. We explored a hill with granite outcrops and found *Serruria kraussii* (Vulnerable). It was still early in the season for the bulbs, so we spent some time on the Proteaceae and Restionaceae families. This is a huge farm and will need further exploration at a later date.

In August 2013 we splashed through pools of water on Harmony Flats, with the Biodiversity Coordinator, Hayley-May Wittridge. This site remains a joy for any plant lover—the more you look, the more you see. We managed to find *Disa tenella* subsp. *tenella* (Endangered), a tiny little orchid with spiralled leaves. We endeavoured to visit Harmony Flats throughout the year, as no records exist for the off-season.

In September we visited the site in Sir Lowry’s Pass Village, which we used for replanting the species recovered from Somerset West. This turned out to be quite a feast for the eye. Species like *Monsonia speciosa* (Endangered) were in abundance and a variety of *Lachenalia* species popped up everywhere. We were so glad that Ismail joined us for the day, as he spotted *Xipotheca lanceolata* (Endangered). This hairy little plant, which was not in flower at the time, would have kept us guessing for days.

The previous week Sarah Ferguson from the farm Suikerbossie informed me that she found *Aristea cantharophila* (Vulnerable) but the...
monkey beetles had a feast and destroyed most of the flowers. As Suikerbosmie was so close, we decided to cross the N2 to see if we could find it. Sarah made a quick search and there they were. Two open flowers, not yet destroyed by those pesky monkey beetles, were sitting there waiting to be admired! This was indeed one of the highlights of the year. We continued spending more time at Suikerbosmie, but as the next cold front approached, it got colder and colder and we decided to call it a day.

We also visited the Vergelegen farm in September. Since the farm started clearing alien vegetation ten years ago, the transformation has been remarkable. This farm is not only beautiful to visit but it keeps on delivering the specials and on this occasion we found Xiphotheca lanceolata (Endangered). Helen Pickering, who has been studying the genus Restio, is quite sure that she found Restio sabulosus (Endangered) in the marshy area above the top dam. As this family is notoriously difficult to identify, we would like to confirm that sighting at a later date.

On compiling our species list for Vergelegen, I found that there were no GPS co-ordinates for the endangered species, so we made a special trip, just to get the co-ordinates and keep our records up to date. On this trip we had to re-locate Leucospermum guenzii. Although I could remember the exact spot, we were surrounded by Proteas growing waist-high. We thought that it was going to be a hopeless task but right on the precipice of a south-facing mountain slope they stood in all their glory—yellow, orange and red flowers—right down to the valley below.

In September Ismail presented an introductory Botany course at the Helderberg Nature Reserve. This was well attended by the Groen Sebenza interns from the Harold Porter National Botanical Garden, as well as some members of the Kogelberg CREW branch. We managed a short walk in the reserve before the rain came pouring down again. It was a most successful day, nevertheless. A warm thank you to Ismail, Zikhona and Anri for making it a great day of discovery.

The diversity of plant life in our area is astounding. Living in such a beautiful, diverse area is a blessing. We have no doubt that we will continue to find those specials in the surrounding mountains or maybe even on our doorsteps! So much to do—so little time!

---

News from the Outramps CREW group

Di Turner

It is almost unbelievable that we’ve reached the end of yet another field season. What a year it has been—evident in 260 site sheets, 40 specials monitored that were new to the group in 2013, two new species found, winning the WESSA regional awards, winning of a National Kudu award from SANParks, Biodiversity Educational weekend with Glenwood House, HAT (High Altitude Team) created, and 12 825 observations posted on iSpot.

And the cherry on the top is some wonderful news from Prof. Charles Stirton that a new Aspalathus found in Matjiesvlei by Brian (the boy), is being called Aspalathus outrampsii.

Here follows some of the field trip highlights.

4 April: Phoenix rising out of the ashes

‘Phoenix rising out of the ashes’ was an apt description of the sight that met our eyes as we reached the burn on Thursday, 4 April. Earlier in the week, an e-mail from Dr Anne Lise Vlok alerted us to the fact that Cyrtanthus debilis (Rare) was flowering. It only flowers immediately after a burn. This was likely to be the last chance to see it in my lifetime and it was one chance I was not going to miss.

Koos and Bob from CapeNature at Ruitersbos were waiting for us with their new-looking Landcruiser bakkie. The first treat was seeing Gladiolus roseovenosus (Critically Endangered) in flower. Our next port of call was on the back slopes of Paardeberg, where Koos showed us Xiphotheca phylicoides (Critically Endangered). It was only about 150 mm high. Threats to its existence are invasive alien plants and expanding plantations.

We then drove along the Haelkraal Road heading west and turned off on to the Bonniestadle Road. As the going got tougher, we dumped the Buchu Bus and then did a bit of mountain/rock-climbing in the Landcruiser. Koos finally stopped, having assured me that they normally drove to the top, “Maar julle is te bang.” We piled out of the back and slogged to the edge of the burn. Unbelievably, the black and scorched land was covered with the exquisite pink flowers of Cyrtanthus elatus. It was simply too beautiful for words. What a sight and what a day for the aunties and one young man!

11 November: Mission accomplished

Prof. Charles Stirton asked us to look for an Otholobium species that was first seen by Jan Vlok in the
Fouriesberg area in the northern Outeniqua Mountains. His request was prompted by Nick Helme, who said, “the Outramps love a challenge”. Well, we do, but this was quite a tall order.

Most of the Outramps are on the geriatric and decrepit side but we do indeed love a challenge. At an obscenely early hour, the aunties and one boy set off for Fouriesberg in the Paardebont area west of Safraanrivier. The farmer, Cornel Fourie, gave us his usual warm welcome. We parked the Buchu Bus and set off on foot on the track that criss-cross the river about five times. At the start, we were very careful and tried to keep our feet dry. By the time we got to the last crossing, it seemed easier to simply walk through the river, boots and all. Jan had given us a map and Charles had sent a description that talked about a prostrate plant with pustules and no petals. Armed with this, we picked a likely south-facing slope to explore. It was rough going and very steep. There were plenty of pricklies like Metalasia acuta, Aspalathus hirta and Aspalathus sceptrum-aureum. Asparagus striatus lay in wait for the unwary. It wasn’t long before we were bleeding freely from numerous scratches and cuts.

More than halfway up the slope, we saw Leucadendron teretifolium (Near Threatened), which is never common. At the foot of this attractive strawberry cone bush, was a dark green mat about 150 mm high. Close examination yielded trifoliate leaves, pustules, but no flowers. We took some photographs and collected a specimen and the plant’s identity was confirmed by Prof. Stirton. With our mission accomplished, the excitement was intense leaving us with a wonderful feeling.

25 November: Where was the champagne?

Our annual trip to the Langerberg was a great success this year. The Outramps ‘HAT’ (High Altitude Team) was gloriously successful and this promises wonderful things for the future. We left George early in the morning for Riversdale and Garcia Pass. A short walk up the jeep track east of Rooiwaterspruit took us to the starting point for Erica ixanthera (Vulnerable). Greg, Cheryl, Brian and Megan set off through the thick bush, up a steep slope armed with maps and co-ordinates supplied by Bill. About an hour later, they came back, flushed with success.

The searing heat was radiating off the mountain as we made our way slowly to the Rooiwaterspruit Huts. The place was spotless. All the rubbish had been removed and the huts were painted. The toilet is a very welcome addition. We had a great evening but an early night, in preparation for the big hike the next day.

Brian, Ann, Megan and I started off at 05:00 the next morning, leaving Cheryl and Greg to come a bit later. Near the beginning, light rain began to fall and by the time we reached the Nek at the start of Oom Boet se Pad, the rain was torrential and was being driven by a freezing gale force wind. By this time, Cheryl and Greg had passed us, as we tried to do site sheets in appalling conditions. They dumped their packs at the base of Sleeping Beauty and headed for the top. We reluctantly decided that discretion was the better part of valour and started the long descent down to Ou Tol, bypassing the summit ridge. Near the bottom, Greg and Cheryl caught up with us again. They commented, “the conditions up there were very difficult and dangerous and we didn’t see Erica dysantha,” which was very disappointing. That evening, after supper, Greg
remembered a small specimen that he wanted to identify. I looked at it in disbelief, “but this is Erica dysantha!” The jubilation and celebrations were huge.

Exciting plants on this long day were the stunning Protea grandiceps (Near Threatened), specimens of the very rarely recorded Hippia hutchinsonia (Rare) and H. integrifolia (Rare) for Dr Anthony Magee at Compton Herbarium. Leucospermum mundii (Rare) is alive and well on the eastern side. The stunning Erica blenna var. grandiflora (Data Deficient) was going over and we saw a number of the glorious dark pink Gladiolus crispulatus (Rare).

Next morning at the crack of dawn, HAT (Greg, Cheryl and Brian) took off to Kampscheberg on Kareekop. This is only the second known location of Erica dysantha (Endangered) and it was found there in 2010 by Nick Helme. Greg had this to say, “the walk up Kampscheberg should perhaps be upgraded from ‘doddle’ to ‘bit of a slog’. We popped out on the ridge a short way from the target area and found E. dysantha growing abundantly but only in a narrow altitudinal band of about 1 300 to 1 325 metres.

While Brian did his homework, we cracked the eastern summit and enjoyed splendid views. The Erica will most probably also occur further westwards where the ridge rises again to the western summit.”

Now, as we move into 2014, we have lots to ponder. It is unlikely that we can sustain the intensity of 2013 without straining the group to breaking point. For a start, we will have to reduce the amount of administration that is incurred on field trips. On the positive side, we hope to develop the HAT further and once again explore some new and exciting places in our search for rare and threatened plants.

The field season for the Kogelberg CREWites started slowly in 2013. Our first trip was to the Botrivier area to assist with the CapeNature Stewardship Programme and to sample the farms of keen landowners in the area. The weather didn’t completely play along but we managed to get to the farm Porcupine Hills. This farm was one of the first contract Nature Reserves proclaimed through the Stewardship Programme and due to a change of landowner, we thought that it would be the appropriate place to start.

The most exciting find for the day was a population of Freylinia helmei (Vulnerable), which was first discovered in 2000 by Nick Helme while mapping lowland renosterveld fragments.

Our next trip was to look at a few surviving Leucadendron globosum (Critically Endangered) plants on the shale fynbos of the Elgin Valley. We were alerted to this population by Janeen Nicols, one of the regular CREW C-team volunteers. The species is in serious danger of becoming extinct as it only exists as small scattered subpopulations overrun by alien plants in remnant patches excluded from fire. After recording the location of the plants, we continued to the next site with Mark and Amida. This trip included a seriously hectic and thrilling 4×4 drive along the lower northern slopes of the Kogelberg and southern border area of the Elgin basin to check on Erica cabernetae (Critically Endangered), also known as the cabernet Erica, a tiny shrublet with wine red bell-shaped flowers. The plants occur on open quartzitic gravelly patches that provide a wonderful backdrop for the stunning flowers. Ismail was very excited about seeing the diminutive powderpuff, Sorocephalus tenuifolius (Endangered). In the days of the Protea Atlas Project, volunteers kept count of the species they had seen. This was a species that Ismail hadn’t seen yet, so he was over the moon to tick off another special on his life list! Many thanks to Mark Johns of CapeNature for arranging the adventure.

The next notable trip was to look at the state of Serruria meisneriana (Endangered) on the farm Paardenkloof on the northern lower slopes of the Babilonstoring Mountain. We found many of these stunning plants at their peak flowering. This was another of those exciting moments as it was the first
time that we recorded this species for CREW. Although the area has magnificent fynbos, the plight of our local plants was highlighted by the frightening escalation in Hakea species that can potentially engulf the mountainside. The landowners are doing what they can but the hakeas are winning the battle at the moment. Hopefully they can get more support and stop the invasion of Hakea species.

We look forward to a productive year in 2014 and lots of new populations of threatened plants.

This was the year of unity for the Port Elizabeth CREW group, as we have started working very closely with the Algoa Branch of the Botanical Society, as well as other groups such as WESSA and FoVS—the Friends of Van Stadens Wildflower Reserve.

CREW teamed up with BotSoc in celebrating its centenary, as well as the ten year anniversary of CREW. One centenary project was adopting remnants of threatened vegetation types in Nelson Mandela Bay, combing them for threatened plants and then clearing them of aliens and litter. This was a great success and three remnants were adopted in 2013. Signboards are to be erected on the sites that explain the vegetation type, as well as a short description of CREW and BotSoc. The printing and manufacturing of the signs were kindly paid for through WESSA and the Nelson Mandela Bay Urban Conservation Project (NMBUCP), who also funded caps for our jolly group of volunteers.

Another activity tackled by CREW was the expansion and redesign of our field guide, due to our original two being stolen. Our team spent a couple of hours diligently searching through the books in the Ria Olivier Herbarium at the Botany Department of Nelson Mandela Metropolitan University. Once again, thanks goes to WESSA and the NMBUCP for funding the printing of the guides, which now stands at a whopping 106 pages!

Jenny Eldridge, one of our volunteers as well as a member of the Dendrological Society, gave an enlightening talk on the identification of trees to CREW volunteers and conservation officers as well as other members of Nelson Mandela Bay. This was followed by a walk along the Van Stadens Flower Reserve Forest Trail where we could put our new knowledge into practice.

During the year we continued to search far and wide within the metro, both on CREW trips as well as BotSoc outings and other excursions. On a trip to Hopewell Nature Reserve we were excited to find two Critically Endangered species, Corpuscularia lehmannii and Agathosma gonaquensis. These two species are associated with rocky outcrops in moist fynbos southwest of our metro and have recently lost a lot of habitat to the construction of another mall. The small populations found in Hopewell are the...
News from the Swellendam/Barrydale CREW group

Flora Cameron

The CREW workshop is always a highlight of the year and CREW activities are resumed with great enthusiasm after the talks and news of the other groups’ activities.

At last the long promised survey to establish the real status of Polhillia brevicalyx (Critically Endangered) and Wiborgiella bowieana (Critically Endangered) took place. Organised by the Overberg Lowlands Conservation Trust (in particular, Odette Curtis) it was exciting to be part of the group. The survey was a great success.

A section of the Bontebok National Park has recently been allocated for a ‘plant walk/boardwalk’ for visitors. As we had not previously had the opportunity to see this part of the reserve, we arranged to do a survey of the area. To our amazement we discovered large populations of Protea decurrens (Endangered), Erica filamentosa (Vulnerable) and Diosma fallax (Endangered), each of which was only previously known from one section of the park. Haworthia mirabilis (Rare) plants were found in the same area. In February, we saw populations of Cyrtanthus leptosiphon (Critically Endangered) inside the park and on Kelkiewyn farm to the east.

In April, Muthama Muasya and one of his masters students paid Barrydale a visit to collect soil samples from around our Wiborgia tenuifolia (Near Threatened) plants in renosterveld on a farm west of Barrydale. We have been monitoring this area for two years and knew we had found the plants there. It was really interesting to be in the field with him and to appreciate the importance of the ‘sandolien’ (Dodonea viscosa) transition veld for Fabaceae such as Otholobium species (O. candicans, O. striatum and O. virgatum). Although these are not threatened, they are indicators of nitrogen fixing in this soil. In the same area we waited patiently for the Pelargonium species that we had seen flowering in October 2012 to flower in 2013, and to our great joy it appeared and has been identified for us as the Barrydale form of P. undulatum (Least Concern). There are also populations of Holothrix secunda, Haworthia arachnoidea, and Glottiphyllum depressum and Stapelia hirsuta flowered beautifully for us.

In January 2012 there was a veld fire in the mountains around Swellendam and west of Barrydale. As a result, February and March 2013 provided wonderful displays of orchids in the seeps. The search continued for Pachites appressa (Rare). On 26 December 2013 a population of five plants was found in almost the same place as the previous year, now two years after fire.

The collection of plants of the Langeberg, especially from high altitude such as what Jill Blignaut is doing, continues which means that we got to spend several days in the mountains. This included climbing to the top of 1 O’Clock Peak to collect summer flowering plants and another climb from the north towards the southern slopes tracing the Bruidemg’s Pad from Op die Tradouw to Swellendam.

Several areas around Barrydale are being regularly monitored for the plants that have been seen there. These include Bartholina etheliae, Gibbaem velutinum (Vulnerable), Haworthia magnifica var. maraisii, Wurmbea compacta (Vulnerable), Haworthia mucronata and Pelargonium tricolor to make sure they are not being exposed to threats.

Diosma fallax in full bloom at Bontebok National Park.
The Worcester CREW group officially started with a gathering of twenty people at the Karoo Desert National Botanical Garden in July 2013. Apart from the four SANBI/CREW representatives from Cape Town, this group included 12 members of the Mountain Club of South Africa (MCSA), Worcester Section, 13 members/supporters of the Worcester Bird Club, (nine of whom have attended outings organised by the local Elongatus Dendrological Society), 11 landowners or land managers, two officials from CapeNature and Werner Voigt, Curator of the Karoo Desert National Botanical Garden. Of the locals, six are professional or advanced amateur botanists, the rest being more or less at the beginner level.

Activities in 2013 included attending the 2013 annual CREW workshop, three Bioblitz events, searching for the elusive *Ixia pumilio*, finding a potentially new *Lampranthus* species in the Hex River Mountains, participation in a plant survey with Barry Low on Cornellsberg, discovering an extension of the distribution of *Moraea worcesterensis* (of which the Worcester CREW group is currently still a satellite group) in terms of activity dates and specific targeting of species not already being monitored by staff from Cape Town. The expansion of awareness and local ‘ownership’ of, and co-responsibility for conservation of the region’s unique floristic richness within the local community (schools, farmers, Worcester Tourism, local media and other organisations) is key to CREW’s long term goals. Buy-in by the local municipality is an urgent priority. The current botanical taxonomic expertise of the majority of the local CREW membership is very much at a beginner’s level, which means that we are very reliant on the patient and long-suffering support of the professional and other expert botanists. We do not want to flood iSpot with seemingly idiotic queries—any suggestions and offers of assistance will be greatly appreciated.

In 2011 het Rupert Koopman weer twee plante gekry en in 2012 het CREW baie tyd spandeer en 14 plante opgespoor. In al die genoemde jare was hierdie plante op dieselde plek gevind; ‘n area kleiner as 0.25 ha.
In 2013 het ’n CREW lid, Johan Potgieter, 11 plante ontdek ongeveer 600 m verder vanaf die bestaande lokaliteit. Die hartseer van hierdie ontdekking is dat dit op ’n onbeboude erf is in ’n deel waar daar tans huise gebou word. Ons kan darem rapporteer dat daar in 2013 ’n totaal van 23 plante gesien is.

Nog ’n nuweling in ons area is in 2012 deur John Manning en Peter Goldblatt beskryf, naamlik Silene saldanhensis. Hierdie spesie kom in ’n baie beperkte area voor, waarvan die habitat ook uitsers uniek is. Ons hele area is deurge-soek om nog meer lokaliteitte op te spoor en geluksig het ons nog een lokaliteit van ongeveer 3 ha in grootte gevind.

Peter Goldblatt het ook ’n baie interessante Babiana spesie ontdek wat op die oostelike kant van ’n duin voorkom. Ons het bykans al die duine in die area deurge-soek, maar kon nie meer daarvan opspoor nie. Die taksonome sal nou moet bepaal of dit ’n nuwe spesie is en of dit dalk net ’n variasie is van een van die bestaande spesies.

The Critically Endangered Moraea loubseri.

A possible new species of Babiana found in Jacobsbaai.

**News from the Friends of Tygerberg Hills CREW group**

**Hedi Stummer**

**During the past year Friends of Tygerberg Hills (FOTH) CREW made 46 excursions to 31 sites. We continued our work in the Dassenberg Corridor, revisiting old sites like Mamre, Dassenberg, Kalbaskraal and McGregor, as well as adding new ones to our list like Prashanti and the Chatsworth Commonage.**

Here we got to know the incredibly knowledgeable ‘Ladies of Chatsworth Working for Water’ team, who proudly escorted us to their site with its very special Atlantis Sand Fynbos vegetation. We found 25 Red Listed species growing here in unbelievable abundance. The entire site is crammed with Red Listed plants and the Ladies are doing great work in making it pristine and hopefully with our input of data, keeping it safe from development.

At Klein Dassenberg (250 ha now purchased by the City of Cape Town) we found Pelargonium psammophilum which, as we later found out, has been described but not published yet. We have visited the site only once and found 15 Red Listed species at the time. It really should be interesting in spring!

FOTH CREW assisted at Blaauwberg Nature Reserve by identifying species for seed collection pur-
poses. It is always amazing to see what comes up after the ongoing clearing of invasive alien plants on the area below the Reserve. For example, we found *Geissorhiza humilis* (Vulnerable) coming up bravely amongst a miniature forest of Port Jackson seedlings.

The widening of the N7 is a cause of great concern to nature conservationists, as it impacts on the vegetation along the road, particularly at Baas Aries Fontein (which has 21 Red Listed species) and Kalbaskraal (which has 33 Red Listed species found by FOTH CREW). Baas Aries Fontein has had the alien vegetation removed lately and it is a joy to see the natural veld come back.

Our focus later in the year shifted to sites in the Stellenbosch area. We worked at Jan S. Marais Park in Stellenbosch, on a site in Raithby (on the way to Somerset West) and also at Wemmersvlei (on the way to Franschhoek). This last site proved incredibly interesting and species-rich as it has a wetland as well as Swartland Alluvium Fynbos going up to the bordering hills with Sandstone Fynbos at the top. It is threatened by development from the closely situated Wemmershoek Village and sand is being removed by the bakkie load by opportunistic builders in the area. On a positive note, it is being looked after by a very energetic Ecology Officer, Grechard Petersen. We are assisting in providing the necessary data to protect this unique site, which is home to *Erica alexandri* (Critically Endangered), *E. bakeri* (Critically Endangered) and *Diastella buekii* (Critically Endangered). We have found *Lampranthus schlechteri* (Critically Endangered) and *Arctotis angustifolia* var. *latifolia* (Critically Endangered) and more than 100 species additional to the existing plant list. As we have not yet been there in spring, there should be much more to find.

One of our members, Melda Goets, together with her son Stefan, were involved in saving a site that had been earmarked as a parking lot for a school. With the help of FOTH hacker Sjaak Bok and Prestige College Nature Management students, they have been busy restoring the site. It hosts Swartland Silcrete Renosterveld with Cape Flats Sand Fynbos and is a rare gem in the vicinity of the Tygerberg Hill. A committee will be set up early this year for the management of the site and a Friends group has been started.

One of the highlights of last year was an outing to the Piketberg. We have established a plant list and hope to spend more time there in future, staying over weekends to make it more effective and worthwhile.

Our team consists of a core group of eight people who are dedicated to the conservation of our natural veld, all becoming increasingly knowledgeable as the years pass. They are: Gurli Armbruster, Sandra de Swardt, Veronica Straub, Keith Breetzke, Kay Loubser, Ursula Aldini, Melda Goets and myself. Our excursions are on Fridays and we have a really wide range of possible sites to visit. All are welcome! Our thanks go to the Friends of the Tygerberg Hills for sponsoring our petrol on all these excursions. Many thanks also to the SANBI CREW team and to the scientists who help us with the identification of the plants.
The Fourcade Botanical Group has leapt into their second decade with CREW with great enthusiasm and commitment. We have recorded new populations of eight threatened plant species and 10 species of conservation concern. We have also located one undescribed species. Who knows what will be added to that list when we receive the identifications of our many pressed specimens!

Perhaps one of the most exciting finds was the endangered Hyobanche robusta growing in deep sand. It is Red Listed as Endangered, as there are only five known localities (perhaps six now!) and they are threatened by invading alien acacias and coastal development. Although its habitat looks inhospitable, it needs periodic disturbances to its dune home in order to succeed. Development and alien acacias lead to stabilisation and thus the demise of the plants.

The discovery of a Hermannia species on Hopewell Private Nature Reserve near Port Elizabeth was another very exciting find. We visited the area in October with Ismail Ebrahim and members of the Port Elizabeth CREW group led by Clayton Weatherall-Thomas and while there, came across a Hermannia we hadn’t seen before. David Gwynne-Evans is our man when it comes to Hermannias so we sent him my photo of the little beauty. Although it certainly wouldn’t earn me first prize in a photographic competition, it was clear enough for David to be fairly sure it was Hermannia urceolata, first collected in 1908, but never described. The next step was to return to Hopewell and collect good specimens for David to be sure of the identification. This we did with Clayton’s help on a very windy, wet day and with the co-operation of our St Francis Bay Post Office, David received the specimens in good condition and produced his striking plate.

Our group spent a very happy few days in the Baviaanskloof working on a plant list for the owner of one of the farms and also recording Amphiglossa callunoides (Vulnerable) and Cussonia gamtoosensis (Rare) throughout the kloof.

Our days in the veld with the children are always rewarding as they so enjoy being out there and discovering new things. CREW has opened our eyes and those of the children to so many wonderful things around us. In this small way, we hope to help conserve our special environment.
Contributions of the Overberg Lowlands Conservation Trust to CREW work in the Overberg’s renosterveld

Odette Curtis
Director, Overberg Lowlands Conservation Trust
www.overbergrenosterveld.org.za

Overberg spring surveys

The spring of 2013 was filled with many exciting finds, with new farms opening up for us to survey and more landowners becoming interested in the work we are doing for renosterveld conservation. Along with our American volunteer, Evan Eifler, we surveyed a total of 30 renosterveld patches, 10 of which were completely new sites.

Our surveys resulted in the discovery of several previously unknown populations of special plants, including: Gladiolus vandermerweii (Endangered), Gladiolus abbreiviatius (Vulnerable), Moraea debilis (Endangered), M. tricolor (Endangered), M. melanops (Endangered), Lostononis villosa (Vulnerable), Leucadendron coriaceum (Endangered), Notobubon (previously Peucedanum) striatum (Near Threatened), Aspalathus acanthophylla (Vulnerable), A. rosea (Endangered), Haworthia mirabilis, Ficinia overbergensis (new species, proposed status: Near Threatened), Arista teretifolia (Endangered), Hesperantha fibrosa (Vulnerable) and Hesperantha muirii (Endangered).

This data is all being made available to CREW and we will be contributing to revisions of species accounts, particularly the new species recently described in Curtis, O.E., Stirton, C.H., Muasya, A.M. 2013. A conservation and floristic assessment of poorly known species rich quartz–silcrete outcrops within Rûens Shale Renosterveld (Overberg, Western Cape), with taxonomic descriptions of five new species South African Journal of Botany 87: 99–111.

Polhillia and Wiborgiella surveys at Uitvlugt farm and surrounds

Polhillia brevicalyx and Wiborgiella bowieana (previously known as Lebeckia bowieana) are two of the most threatened species in the Overberg’s lowlands. Until recently, P. brevicalyx was only known from two sites on a single farm (about 20 individuals) and W. bowieana from only three populations (< 50 individuals). These two species occur together on Uitvlugt farm (on the western side of the tar road between Bredasdorp and Swellendam). Because of our serious concern for the survival of these two species, particularly P. brevicalyx, we decided to conduct a survey specifically for them.

In October 2013, the Overberg Lowlands Conservation Trust (OLCT) and CREW volunteers from Cape Town (led by Ismail Ebrahim) and Swellendam (Flora Cameron) joined forces with Uitvlugt’s farm manager, Matthias Streicher, and walked the Freek Botha River course in search of Polhillia brevicalyx and Wiborgiella bowieana populations. The survey was a huge success, and we found over 50 individuals of each species, as well as a new population of Gladiolus vandermerweii (Endangered).

We intend to make this an annual survey to improve our efforts in understanding the real status of these severely threatened species. Please do let us know if you would like to join us on the 2014 survey!

Caledon surveys with new CREW volunteers and iSpotters

After a talk to the Greyton Conservation Society on the OLCT’s work in the Overberg, we accrued some new volunteers: Mike Goulding, Klaus Wehrlin and Stuart Shearer. We had some fantastic surveys on Greyton Commonage lands and the Ertjiesdam area as well as a Bioblitz day on the Klein Swartberg with CREW Cape Town and Tony Rebelo (who gave excel-

Polhillia brevicalyx survey team making sure they get the plant in focus.
lent demonstrations on how to use iSpot). This is very exciting, as the Caledon area has been largely neglected for some time—and there is so much to explore here!

Highlights from these areas include Mike Goulding’s find of the second known population of the new (recently described) Romulea pillosa in the Greyton area (previously discovered by Cameron McMaster near Riviersonderend). Ertjiesdam specials included Leucospermum cordifolium, Leucadendron teretifolium, Notobubon pungens and Drosanthemum flavum. Our Klein Swartberg Bioblitz started at the top of the mountain in the fynbos and ended in the renosterveld at the foothills, where we were lucky enough to see the beautiful Moraea lurida. The day was filled with interesting finds (see http://www.ispot.org.za/taxonomy/term/10876?page=2 for the Bioblitz finds uploaded thus far).

For the past three years I have been conducting research on the genus Leucospermum at the University of Stellenbosch. My microevolutionary studies focus on pollinator shifts between closely related taxa, extreme examples of unique adaptations to pollinators, and the co-existence of species through pollinator partitioning. Following my PhD upgrade, I had the ambitious idea of looking at the big picture to see how influential pollinators have been at driving diversity of the entire pincushion genus.

This gave me the excuse to travel the country and see with my own eyes all the incredible members of Leucospermum. However, tracking down all the taxa in such a short period of time was a daunting task. Although I had collected a number of species in my previous studies, I needed to collect almost 40 taxa in a single field season spanning only four months.

While searching iSpot for localities, I noticed that Di Turner, the fearless leader of the Outramps CREW group, had posted nearly all the pincushion species growing in the triangle between Riversdale, George and Oudtshoorn. I contacted Di and the rest is history. The following species were collected with the help of the Outramps: Leucospermum mundi, L. saxatile, L. winteri, L. erubescens, L. glabrum, L. royenifolium, L. wittebergense, L. hamatum (Rare), L. secundifolium (Rare), L. muiirii (Rare), L. praecox (Vulnerable) and L. pluridens (Vulnerable).

Although each species is spectacular in its own right, finding Leucospermum hamatum was the highlight of the trip. Not only is this species restricted to slopes deep within the Doringrivier Wilderness Area but it displays extraordinary
adaptations for rodent pollination, which was confirmed from live rodent trappings. The excitement of finding this species was indescribable.

Later in the season, I was able to tag along with Ismail Ebrahim and the Cape Town CREW group to survey another rare pincushion, *Leucospermum profugum*, along the Eskom trail in the Piketberg. We saw this interesting species being visited by Malachite sunbirds.

CREW has played an enormous role in facilitating my research and it would have been impossible to complete my studies without them. Although the role of CREW is to monitor and conserve our plant diversity, their role in assisting researchers like me cannot be over-emphasised.

Early one rainy Sunday morning in October 2013, a group of enthusiastic conservation-minded people set out for Ongoye Forest in a battle against the scourge of cycad poaching. Less dramatically speaking, a group of students and personnel from the University of Zululand, together with Suvarna Parbhoo from CREW, armed with maps and GIS data supplied by Sharon Louw from Ezemvelo KZN Wildlife (EKZNW), visited the Ongoye Forest Reserve in order to gather data on the Natal Grass Cycad, *Stangeria eriopus*.

*Stangeria eriopus* is taxonomically unique in that it is the only cycad species within its genus and the only genus within its family (Stangeriaceae). Due to its extensive use in traditional medicine and magic, this geophytic species is under immense pressure from over-harvesting. Many wild populations have been decimated, with an estimated 3 410 lignotubers (totalling 2 380 kg) traded at Durban’s Victoria and Isipingo medicinal plant markets during July of 1992 alone. According to the IUCN Red List, it is considered to be vulnerable to extinction, with 20% of its habitat lost over the last three generations (150 years) and an additional 20% population decline due to harvesting for the traditional medicine market. Between Durban and Hluhluwe many populations have been lost due to sugar cane and *Eucalyptus* plantations. These trends of decline are predicted to persist in the foreseeable future. The proposed N2 highway extension through the Eastern Cape Wild Coast will further threaten many subpopulations.

Traditionally, *Stangeria eriopus* (known as imFingo in isiZulu) is used by the Zulu people as protection against lightning strikes and renders the human body invisible to harmful spirits. Zulu herbalists use it to treat congestion, poisoning, high blood pressure, headaches, flatulence and arthritis. Chemically, the leaves and roots contain the mildly toxic pyrrolizidine, while...
the seeds contain the highly toxic cyanas.

This slow growing and long-lived species is restricted to the grasslands and forests of the eastern coastal belt of southern Africa, ranging from the Bathurst district in the Eastern Cape (33° 30' S), to Kosi Bay in KwaZulu-Natal (27° S), and just across the Mozambique border. Male and female cones of this gymnosperm are carried on separate plants (dioecious) and are wind- and insect-pollinated. Observed differences in growth forms between plants from forest and grassland habitats seem to be environmentally induced, with no clear genetic, hereditary basis for the distinctions.

The aim of the expedition was to supplement the existing data sets of EKZNW. This forms part of a joint project between EKZNW, CREW and the University of Zululand to monitor trends in the Ongoye population of *Stangeria eriopus*. Individual plants were counted and a range of information was captured for each plant, including GPS locality, sex, number of cones, presence (signs) of Leopard Magpie Moths (*Zerenopsis lepida*) and recent veld fires. Although only a small section of the reserve was covered, we hope to add some information on a regular basis and to repeat counts over time in order to capture general trends in the sub-populations. Early detection of significant changes in the population demography will hopefully act as timely warnings to change management and conservation strategies.

The team was initially overwhelmed by the high numbers of *Stangeria* plants. However, we soon noted sharp contrasts in population densities north and south of a dirt road close to the reserve border. Such sharp contrasts may be cause for concern in terms of the population health and should be investigated. Although the road does not seem to act as a physical barrier to plant collectors, it may be seen by the local community as the unofficial northern boundary of the reserve. Should this be the case, it may be an indication of the rapid rate of resource depletion within the ‘neighbouring unprotected’ areas, which in turn will necessitate that the impact of harvesting on the Ongoye subpopulations will have to be addressed urgently. In addition, this road also acts as a firebreak and has an effect on the veld fire regime north and south of it.

The team was extremely fortunate to observe both caterpillar and adult life stages of the Endangered

Conservation in action: BotSoc as partner and supporter of CREW

Catherine Browne (Executive Assistant, Botanical Society of South Africa)

Conservation is one of the key focus areas of the Botanical Society of South Africa. BotSoc’s mission is 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. BotSoc is involved in a variety of critical conservation projects but one we simply can’t do without is CREW.

Over the past year, BotSoc finalised its conservation strategy and fundraising plan for 2014–2017 to raise funds to support conservation initiatives such as its partner programmes of CREW and Groen Sebenza.

Looking at BotSoc and its current conservation involvement:

- A comprehensive conservation strategy was accepted by the BotSoc council in February 2013.
- The National Strategy for Plant Conservation development is underway. Following the IUCN World Conservation conference last year, BotSoc has teamed
up with SANBI to drive the South African strategy, which will link with the Global Strategy for Plant Conservation of the Convention on Biological Diversity.

- In addition, and as an extension of work with the Groen Sebenza jobs fund, BotSoc is developing a jobs fund to create new posts for extension officers who will be equipped to help with crucial conservation projects in cities.

- BotSoc has struck an innovative partnership with WESSA (Wildlife and Environment Society of South Africa) to offer BotSoc members, branches and other interested parties training to understand the processes of Environmental Impact Assessments in order to build much needed capacity in this area.

- As an initial signatory of the CAPE (Cape Action for People and the Environment) Implementation Committee established a decade ago, in June 2012 BotSoc signed up for the second phase of this fundamental project that works to conserve the Fynbos Biome. This is a wonderful partnership to be involved with.

- BotSoc maintains a close working relationship with SANBI to reach the common goals of looking after, understanding and preserving our unique natural heritage.

BotSoc continues to work with CREW to raise funds to support the programme. In 2013 BotSoc sent out a Direct Mail Appeal to members, sharing the story of CREW and the work being done. The fundraising drive was well received and supported and the initiative has brought in over R300 000 for CREW. Thank you again for all donations and support!

Another CREW project that BotSoc supported this year was the production of Plants in Peril. In celebration of CREW’s 10th anniversary and BotSoc’s centenary, CREW launched this publication at the BotSoc centenary fundraising gala dinner in September 2013. This coffee table book profiles 100 highly threatened plants in the country—one for every year of BotSoc’s centenary—with the aim of highlighting the factors threatening their survival and raising awareness of required conservation action. The book also showcases some of the people actively involved in the conservation of South Africa’s floral heritage.

BotSoc supports the Groen Sebenza Programme, a jobs fund partnership with South African government and the Development Bank of Africa, managed by SANBI. There are 40 environmental/biodiversity organisations in partnership with SANBI creating sustainable job opportunities for 800 unemployed graduates and matriculants. BotSoc hosts five interns who are being trained as para-ecologists and who work within the CREW Programme. Over a two and a half year period, these interns will be given skills and training to work in conservation. BotSoc also funded a weeklong para-ecologist training workshop for Groen Sebenza interns in October 2013.

We are proud to say that in partnership with Woolworths, re-usable shopping bags have been designed in support of CREW and are available in stores. The ‘botanical bags’ champion wild flower conservation on a national basis and highlight some of South Africa’s most threatened plants. Made by a community project, the bags feature information on Critically Endangered plants in South Africa and offer methods to help their conservation. We are grateful to Woolworths for this opportunity.

“These lovely bags will be available in selected Woolworths stores and online to purchase and show your support”, said BotSoc Executive Director Zaitoon Rabaney. “We are very excited to be partnering with Woolworths in this venture and hope that the bags will help spread BotSoc’s central message—know, grow and protect South Africa’s flora—ever more widely.”

The bags are a great way to support the efforts of CREW and create further awareness of BotSoc, SANBI and the CREW Programme and the work they do to conserve our country’s unique and precious flora and biodiversity.
Alvin Mapatha and Seloba Chuene are botany students from Limpopo. They enthusiastically embraced the challenge of travelling by public transport from Mankweng to Eshowe to bolster the numbers of Limpopo CREW representatives at the 2013 CREW workshop.

Alvin is a botany intern at the Larry Leach Herbarium, University of Limpopo and in his words, “The CREW Workshop was meaningful because we learned so much, including the use of identification keys, more about the Millennium Seed Bank project, and the work that CREW is doing in different parts of the country. By going through the Kniphofia key, we realised that although we thought taxonomy was difficult, the keys can be the easiest thing. For me, Livhuwani Nkuna’s talk about the Millennium Seed Bank Partnership in South Africa was the most interesting, as I now understand how it can be used as a tool to conserve threatened plants in our country. Seed banking is a simple thing to practise and has many advantages, particularly for ex situ conservation. I really enjoyed the presentation on grasslands by Prof. Van Wyk (University of Pretoria) where we learned so much about grassland diversity and ecology. The most helpful presentation was by Mike Watkeys (University of KwaZulu-Natal) who explained how to interpret and record the geology of an area with respect to the CREW datasheets. This will be very valuable when trying to decide on the soil and rock type in an area. The quiz was a lot of fun and it gave us all the chance to share ideas.”

According to Seloba, who is completing his M.Sc. research on Euphorbia clivicola at the University of Limpopo, the CREW workshop was invaluable. He enthuses, “Personally the highlight of the whole workshop was Prof. Braam van Wyk’s presentation, Grassland Diversity and Ecology. He highlighted the following: a) total approximate grassland diversity (2 945 species), b) the Savanna Biome is the richest in fauna, c) the determinants are temperature, fire and water tables, d) the response of perennials to fire, and e) underground trees (geoxylic suffrutesces) are probably the oldest inhabitants in grasslands (≥ 1 000 years). I felt it was vital and informative, as we (CREW Limpopo) are currently fighting tooth and nail to conserve one of our own pristine grasslands near Haenertsburg. My proposal to present one of the anticipated papers from my Masters project was welcomed. This is excellent news as young researchers from various institutions should be afforded the opportunity to present their projects and valuable comments can be given to them by experts in the field at such workshops. A final point that I learned, one that I shall be incorporating into my project, was the important use of the classical method of cladistics.”

Limpopo CREW members gratefully acknowledge the sponsorship of the Limpopo branch of the Botanical Society of Southern Africa for sponsoring all transport costs and miscellaneous extras for the students. Alvin and Seloba have already applied the skills they gained at the workshop by assisting in the fight to conserve the rare Euphorbia groenewaldii located in a developing rural area in Mankweng, Limpopo.
Groen Sebenza intern: Mahlatse Mogale

I developed my love for nature at a very young age when I used to play in the yard and rode my bicycle through the veld in Polokwane, then still known as Pietersburg.

I studied at the University of Limpopo and obtained my B.Sc. degree in Botany in 2010, and my B.Sc. honours degree in 2011 with a mini dissertation on the medicinal properties of the saponins found in Helinus integrifolius.

I was selected for the Groen Sebenza project in May 2013 and I was appointed by BotSoc to start working for SANBI as an intern at the Pretoria National Botanical Garden. So far I have enjoyed my time at this National Botanical Garden. It is a great opportunity to experience what it is like to be working in nature conservation and to learn new skills. I have already been on a number of field trips around the country, including the Mpumalanga Swadini Resort and Buffelskloof.

Nature Reserve to attend one of the fascinating Plant Specialist Group (PSG) meetings. It has not been all fun and games working in the field and one of the toughest camping trips had to be hiking up the Blouberg Mountain in Bochum, Limpopo.

Groen Sebenza intern: Hlengiwe Mtshali

As a student at the University of the Free State (Qwaqwa campus), my Honours and Masters degree projects dealt with the classification of South African wetlands vegetation. The aims were to determine the extent to which environmental factors can explain patterns in plant species composition, and to establish which plant species serve as environmental indicators in wetlands. This in turn can assist in conservation and management of these natural ecosystems, since they are much more susceptible to alien species invasion with indigenous species consequently becoming more threatened.

Hlengiwe Mtshali at Ntsikeni Nature Reserve.

Early in 2013, when the SANBI Groen Sebenza Programme presented the opportunity for unemployed graduates and matriculants to develop skills in the biodiversity sector, I saw this as a chance for...
me to apply my educational skills in sustaining what is left of our natural resources. I applied for more than 10 vacancies and I was fortunate in that BotSoc/CREW called me for an interview. In June 2013, I was offered an opportunity to join the programme—one of the best things that has ever happened to me. The programme offers great potential for personal growth as well as upgrading and enhancing my skills.

During the past seven months that I have been with CREW, I have compiled identification sheets for threatened KwaZulu-Natal Aloe species, threatened plants in the Dumisa area, and Data Deficient species. Work is both challenging and interesting. The challenging part is finding literature and pictures, then translating plant descriptions from Latin to English.

My highlights since the inception of the internship have been meeting the national CREW team and attending the BotSoc Groen Sebenza para-ecologist training course in the Western Cape. This course was aimed at providing important work-related skills as well as creating a community of Groen Sebenza interns working on similar projects. The course offered experiences beyond work skills and personal development.

Amongst other tasks, those I enjoy most involve joining CREW volunteers in searching for threatened plants. On our two day trip to Zululand in November, we were rewarded with many great plants—including our target species Aloe saundersiae, Acalypha entumenica, Brachystelma modestum, Leucospermum gerrardii and Emplectanthus cordatus—even though the weather conditions were very bad. It was cold, rainy and misty, which made fieldwork very difficult. The second day was not as good as the first day and while we were busy searching for Emplectanthus cordatus, a rare species only known to occur at Dlinza and Entumeni forests, I slipped and sprained my foot. The past months have been filled with excitement and lots of experience as well as some disappointments.

I feel very privileged to be part of CREW and I am excited about the opportunity this provides for me to obtain a fundamental understanding of conservation. I intend to use this opportunity as a stepping stone to integrating conservation in a real way into my daily life, future education and career. I can now safely say that my knowledge about threatened species has increased. Thank you to the Groen Sebenza Programme and sponsoring organisations for this amazing opportunity.

**Groen Sebenza intern: Dewidine van der Colff**

I was born and grew up in Cape Town and currently live in Eersteriver. I attended the University of Stellenbosch and recently completed my M.Sc. degree in Ecology, in collaboration with the University of Pretoria.

My project focused on the biotic (fungal and arthropod) exchanges in forest margins between a native and an invasive tree in the Knysna forest complex. In a previous study, I assessed the effects of fire age on renosterveld species diversity in a small fragment. Currently I am a Groen Sebenza intern in the CREW Programme based at Kirstenbosch National Botanical Garden. I’m excited to be part of this organisation as it captures the true essence of active and proactive conservation.

I was initially introduced to CREW by a fellow aspiring botanist, Anina Heystek, a CREW member from the Friends of the Tygerberg Hills (FOTH) group. Since then I tried to attend as many of their field trips as possible. In 2011 I realised CREW’s worth when I started a project in...
one of the Swartland Shale Renosterveld fragments near Wellington. I needed to identify vast numbers of plants and as a new botany student, the task seemed immense. I invited CREW to the site and they assisted me in the identification of many plant species. The relationships with the landowner and other stakeholders such as CapeNature are still going strong and CREW volunteers still visit the site regularly. Since my first fieldtrip with CREW, I knew somehow, in my development as an ecologist, my path would cross this organisation again. Then the Groen Sebenza Programme was initiated which created this wonderful opportunity to give us, future ecologists/conservationists, the opportunity to practice all that we have been taught and expand our knowledge. I have only been working for a few weeks and I am very impressed with my supervisor and colleague (Ismail Ebrahim and Anri Marais respectively), their dedication to their work and their love for what they do. I’m grateful for this opportunity and look forward to working with the other CREW volunteer groups and to botanise with these wonderful people for the rest of my life.

Groen Sebenza intern: Anri Marais

After matriculating in 2010, I spent a ‘gap year’ gaining experience as a volunteer in my intended field of study, Emergency Medical Care. In 2012, I started my first year at the Cape Peninsula University of Technology (Bellville campus) but I quickly discovered that I was not ready for that, physically as well as emotionally.

So I gave up the course and started looking for something that I actually have a passion for and enjoy doing. That is when I realised that I have always had a genuine passion for nature, the outdoors and animals. Growing up in Riverlands (a small town in the Swartland), I was literally surrounded by nature and Riverlands Nature Reserve is within walking distance of my house.

When I heard about the Groen Sebenza Programme and saw that they were going to employ 800 incubants nationally, I thought I’d definitely give it a chance! An opportunity like this does not come across often, especially when the only formal qualification you have is a matric certificate. Luckily, my application was successful. I went for the interview and was selected to work as a Project Assistant under BotSoc for the CREW Programme.

During the past nine months that I’ve worked here, I have learned so much that it almost seems unreal! Never did I think I would gain so much knowledge and experience in such a short period and I still have a little less than two years left to work as a Groen Sebenza intern.

Working with the members of the CREW team is a very rewarding experience. It involves research, monitoring our country’s most threatened plant species, collecting and pressing specimens, environmental education, data capturing and so much more. An added bonus is that I get to travel and see places I have never even thought of. My highlights so far were seeing species that are extinct in the wild such as Erica verticillata, attending the winter and summer school programmes in Mamre, Worcester and Nieuwoudtville, and learning basic botany. This year started with a bang and field trips to various localities are already being organised. I am very excited to be working on a small project in Mamre where we will be interviewing some of the older residents who were born and grew up in Mamre and are skilled in identifying local indigenous plants for medicinal use. Short video clips will be filmed of them. I am also aiming to published all the information in a small booklet, something I hope to finish before the end of this year.

I am looking forward to proving myself by testing my abilities and working on a small project this year.

Groen Sebenza intern: Karin Herman

I come from Mamre, a small town with fantastic historical sites and a rich natural biodiversity. I have always liked the summer, as I enjoy outdoor life. When I was in primary school, I was part of the adventure club and this was where my love of nature developed.

I always knew I wanted to teach people something important and this opportunity with SANBI is helping me achieve my goal. When I applied for the Groen Sebenza Programme, I had some basic experience relevant to the job description. I did early childhood development and took kids from schools in surrounding areas on LandCare camps to do alien clearing with them and educate them about the environment. I knew that this experience would be beneficial for getting the job.

My highlight for the year was being appointed as a para-ecologist even
though I did not initially know exactly what it involved. I never thought that working with CREW could be so rewarding. The job gave me the opportunity to fly in an aeroplane for the first time when we went to Pretoria for the Groen Sebenza induction. Going out on field trips with CREW volunteers are always exciting because you get to see amazing places and realise why you have to contribute to conserving our beautiful wild flowers in the Fynbos Biome. I’m currently busy with the Eco Club at our school in Mamre but my mission is to register the whole school as an Eco School with WESSA.

Thank you BotSoc, SANBI and CREW for this wonderful opportunity.

Karin Herman learning more about plants.

---

**Groen Sebenza intern:
Marius Lombard**

**Ek** is Marius Lombard van Touwsrivier, ‘n klein dorpie in die Karoo. My liefde vir die natuur het ontstaan deurdat ek in hierdie klein dorpie tussen die berge groot geword het.

Die meeste van my tyd het ek saam met vriende in die berge deurgebring en die natuur geniet. My broer se vriend het my vertel van CREW en dat dit ‘n gulde geleentheid vir my sal wees om deel van die projek te word.

Ek het vir die werk aansoek ge-doen en was kort daarna geskakel en genooi om ‘n onderhoud by te woon. ‘n Paar weke later was ek in kennis gestel dat ek suksesvol was en die werk gekry het. Tans werk ek in Worcester by die Karoo Woestyn Nasionale Botaniese Tuin as deel van die internskap program van CREW.

Deel van my werk is omgewings-opvoeding. Dit behels lesse aan leerlinge oor die omgewing, plante, biodiversiteit, asook algemene inligting oor die omgewing, deurdat ons hulle die tuin in neem. Verder help ek met die versameling van plante en saad en om plantmaterial te pers vir die herbarium. Ek doen verder ook monitering van plante in die tuin en in die natuurlike veld. In die kwekery help ek om die plante nat te gooi en om onkruid tussen hulle uit te trek. Wanneer enigemand in die tuin my nodig het, is ek ook behulpsaam en gretig om te help waar ek kan.

My hoogtepunte sover was om plekke te besoek waar ek nog nooit vantevore was nie en dinge en plante te sien waarvan ek nog nooit eens gehoor het nie. My heel grootste hoogtepunt was om Kirstenbosch Nasionale Botaniese Tuin te besoek.

Ek kan nie wag om te sien wat die jaar vir my inhou nie en sien uit na al die nuwe belewenisse. Ek is ook opgewonde oor nuwe ervaringe as ‘n CREW werker wat sover baie lekker is.
Pondoland has one of the highest number of endemic and also endangered plant species in the world. Emabaleni (an area near the Mtentu River mouth) is one of many places in Pondoland where you can find indigenous plants that are useful and valuable to the people who live there.

These plants are an important component of traditional mpondo medicine and charms, locally known as ‘amayeza’. Not only are the plants used to treat illnesses, they are also used for cultural purposes, such as protection against witchcraft, and in religious ceremonies, rituals and customs.

These plants are well known and in high demand. Because the amaPondo know where to find them, they are harvested all the time. Very few of these species are formally conserved in local nature reserves (Oribi Gorge, Mkhambathi and Umtamvuna nature reserves). The plants that grow outside the protected areas are under tremendous pressure from excessive harvesting as well as overgrazing and too frequent burning of the grasslands.

Harvesting has become the main problem in recent years. In the past, healers would harvest sufficient plants for their needs but now people harvest unsustainable amounts to sell material at the muthi markets. In Emabaleni there used to be many different endemic species but overharvesting has all but decimated their populations. Sadly, the current harvesters are not traditional herbalists, but rather people who believe that they know the uses of these plants and they glean without thinking about the next generation.

Concern about this kind of harvesting is expressed by a traditional healer, Mr Mashona Dlamini from iSigidi village, in the book, *Medicinal and charm plants of Pondoland.* He is quoted as saying, “It is important to note that if we run out of these plants we would not be able to help people. It is wrong to harvest in bags, we should only take enough to treat or help people.”

In most areas of Emabaleni it is evident that overharvesting is a major threat to the survival of the medical and charm plants with many of them having been dug up and trees de-barked. These plants grow mostly in grassland areas, so with overgrazing and frequent burning of grasslands the affected species are struggling to survive.

During the winter months, burning of grasslands is generally uncontrolled and areas like Egobodweni and Emabaleni are always vulnerable to frequent fires. These places are rich in small grassland species such as Igwaqani (*Watsonia densiflora*) and amaqhobo (*Eriosemus subanisophylla*). Some of the popular endemic plants that can be found at Emabaleni are Ibhulu (*Senecio rhyncholaenus*), Umsintsi (*Erythrina caffra*), Umgadankawu (*Albizia adianthifolia*), Umnyamati (*Loxostylis alata*), Iphamba (*Polystachya pubescens*) and Umqwhetayo (*Morella serrata*). However, because these plants are being overharvested, they are now becoming scarce and some of them can no longer be found in the area. Many of the remaining trees have been de-barked, which slows down their growth and may eventually kill them.

Until two years ago, I knew nothing about SANBI, as I have a degree in Applied Communications Management from the University of Fort Hare. In July 2012, Sinegugu Zikulu took a group of us on a hike from Mtentu to Msikaba on the Wild Coast and he taught us a lot about our environment and the challenges we face. This sparked my interest in nature conservation. Because I come from Emabaleni, I am concerned about the situation in our area. I hope that through my involvement in the Groen Sebenza Programme I can raise awareness of the threats to our plants and perhaps assist the community in taking action to conserve them. I also plan to study further in the field of environmental management and conservation.
In October 2013, CREW hosted a week long para-ecology workshop for Groen Sebenza interns. Groen Sebenza is a SANBI initiative that provides much needed work experience to both high school and tertiary education graduates. Eighteen interns from five provinces descended on Kogelberg Farm to learn a host of personal, technical and soft skills to prepare them for the working environment.

This was a wonderful opportunity, as this was first time employment for many of them.

The diverse and enthusiastic group engaged in several activities that would demonstrate their social and interpersonal skills. “The challenging part of this workshop was to actually get over my fear of speaking up, and this has been a great opportunity for me to give my self-confidence a major boost”, said Anri Marais, a Groen Sebenza intern at CREW. Each day of the workshop started with an ‘Oopmaak’ event that reflected on the previous day’s activities, which was either in the form of a drama, dance, musical or other form of entertainment. “What was quite amazing for me was that all in the group were so different to each other, but yet the same” said Marcus from Indigo Development and Change. “We might differ in skin colour, personalities, gender or place, but we all came to learn, and that is what we did.” All activities demonstrated real-life working situations, which posed questions such as, would your friend/colleague jump in if you got stuck and needed help? Would you help a colleague and friend out if they needed assistance? Can you take the lead/initiative in a project? And, can you manage stress and pressure? For instance, in ‘Blind Chicken’ one participant gave two players the same instruction, namely to pose in a chair. The participant, the only one to know the posture, had to instruct the other two players to strike the same pose without being able to see the players. This had hilarious results and demonstrated, in a fun way, how mentors and interns sometimes communicate. “I have learnt so much about communication skills. It has built and improved my self-confidence”, said Sethu from the Eastern Cape.

One of the main reasons for hosting the workshop, according to one of the facilitators, Uté Schmie-del, was to create an opportunity for trainers and trainees to learn from, and understand each other’s challenges, thus learning to work together constructively. A roleplay demonstrating a parent-child relationship dynamic between mentor and intern even affected one of the facilitators. “This workshop has uplifted me from being a child and a...
bossy parent character to an adult professional”, said Vathiswa from CREW.

Interns were also taught valuable writing skills, including how to compile professional letters, e-mails, reports, and popular articles, as well as oral skills to conduct telephonic conversations. Other technical skills that would prepare interns for outdoor activities, field work and office work, included basic computer skills (computer literacy, internet explorer, how to use a tablet and laptop), digital photography, plant identification skills and the use of a GPS. “One outstanding experience I had was when my team and I had to figure out the GPS waypoints—we laughed a lot about it”, said Mzamo from Pondo-land. One of the most challenging technical tasks by far was learning how to facilitate a workshop. Three participants volunteered to act as facilitators, while the rest acted as members of a rural community. The nervous facilitators and agitated community members showed how vitally important it is to not only know your trade (the natural environment), but also your audience. “I learned that being a facilitator is not easy, but I now know how to do it”, said S’bu from Pondoland.

The course ended with all participants receiving certificates for successfully completing and attending the course. The winner for the best performance in a test covering the week’s activities was Anri Marais (CREW) and for the digital photography competition, Mahlatse Mogale (SANBI, Pretoria). The mentors and facilitators were also sincerely thanked for offering their time, genuine interest and attention, and were each given a small token of appreciation. The interns took many lessons away that would help for the rest of their careers. “Being part of such a diverse group from all over South Africa, and the training that made it possible, was great in getting the right tools to be more productive in the workplace”, said Karin from CREW. “I want to thank my facilitators”, said S’bu.

We wish to thank the facilitators of the workshop, Bettina Koelle, Dr Uté Schmiedel, Ismail Ebrahim and Vathiswa Zikishe, BotSoc and Domitilla Raimondo for their support, and the staff at Kogelberg Farm Hostel.

National Research Foundation intern: Khumbu Zulu

The year 2013 with the CREW Programme was very challenging but interesting. When I joined CREW, I believed that I knew my plants (having had plant studies as a major module at university) but I only really got to know them during field trips and spending time in the company of people who know their plants and were willing to teach and enthuse others.

Finding threatened species was the most interesting field experience for me. The find that stands out was *Hyobanche fulleri* (Critically Endangered) where the GPS took us to a new locality instead of the locality we were looking for—this species is now known from three localities!

Compiling CREW identification sheets has taught me various skills—from improving my communication skills to refining my investigative skills. While working on collating information on Data Deficient and Rare species in particular, I had to research plant species name changes, obtain literature from various old journals (at the library and online), obtain herbarium specimens (mostly online), hunt for illustrations with the limited literature available, scrutinise locality information from Bews online and KwaZulu-Natal herbarium cupboards, and obtain permission to use photographs and illustrations from different people. I have also written an article for SANBI’s PlantzAfrica online series about the Endangered orchid *Zeuxine africana* that we found at its only known locality.

After acquiring georeferencing skills, I initiated the CREW KwaZulu-Natal Data Deficient (DD) project and chose to highlight 10 of the 29 DD species in KwaZulu-Natal. Species were selected on the basis of their locality so that the CREW groups could assist in finding them. I prepared a poster of these 10 plant species and presented it at the KwaZulu-Natal conservation symposium. Although we were not very successful in finding the 10

Khumbu Zulu and Hlengiwe Mtshali recording *Hyobanche fulleri* at Umzumbe.
DD species this field season, the project empowered me and gave me a sense of ownership within the CREW KwaZulu-Natal Node.

Having a natural flair for working with rural communities and having a few DD species previously collected in the rural area of Inanda, I initiated contact with the eThekwini Municipality’s stewardship officer to assist us in working with the Inanda community. It is well known that engaging with various stakeholders in the South African landscape is the most effective method for conservation for future generations. We can achieve the goal of threatened species conservation by respecting each other’s cultures, beliefs and way of life. I believe that some pristine areas are found in communal land, land that CREW has not and may not visit, unless we engage with the people living in these areas. Working with local communities to learn and guide their best land use practices is the way forward for CREW in terms of finding new plant species and localities.

Contact details for CREW Group champions
CREW office: crew@sanbi.org.za

Cape Floral Region
CFR office and C-Team—Ismail Ebrahim
i.ebrahim@sanbi.org.za
Cape Peninsula—Janeen Nichols and Margaret Kahle
Janeen: janeennichols@gmail.com
Margaret: akahle@iafrica.com
Darling Flora Group—Helene Preston
prestons@telkommsa.net
Friends of the Tygerberg Hills—Hedi Stummer
estummer@mweb.co.za
George Outramps—Di Turner
di@strawberryhill.co.za
Harmony Flats Working Group—Hayley Witridge
hayley.witridge@capetown.gov.za
Hottentots Holland—Cecilia Wolmarans
ceciliawolmarans@gmail.com
Jacobsbaai—Koos and Elise Claassens
koosclaassens@gmail.com
Kogelberg—Amida Johns
amidajohns@gmail.com
Mamre—Karim Herman
hermanfredna@gmail.com
Napier—Cameron and Rhoda McMaster
cameron@haznet.co.za
Nieuwoudtville (Indigo Development and Change)—Bettina Koelle
bettina@indigo-dc.org
Piketberg—Angela Langton
eaglespride@patat.co.za
Stilbaai—Janet Naude
lezar1@telkommsa.net
Swellendam—Flora Cameron
flora@iafrica.com
Worcester—Tom Jordaan
madeltom@gmail.com

Eastern Cape
Eastern Cape office—Vathiswa Zikishe
v.zikishe@sanbi.org.za
Port Elizabeth—Clayton Weatheralli-Thomas
claytonwt@gmail.com
St Francis/Fourcade Botanical group—Caryl Logie
b.logie@telkommsa.net

KwaZulu-Natal
KwaZulu-Natal office and A-Team—Suvarna Parbhoo
s.parbhoo@sanbi.org.za
Durban—Jocelyn Sutherland
jocelyn26s@gmail.com
Dundee—Lyne Ruudel
lynn@zuluafrikasafaris.com
Midlands—Nikki Brighton
cowfriend@telkommsa.net
Mkhambathini—Alison Young
alisonwolfgangyoung@gmail.com
Nicholson Botanical Group—Kate Grieve
kw.grieve@gmail.com
Umvoti—Lynda Droegmoller
l.drogemoller@futuregtn.co.za
Underberg—Julie Braby
juliebraby@gmail.com
Zululand—Francois du Randt
fdurandt@vodamail.co.za

Mpumalanga
Mpumalanga Plant Specialist Group—Mervyn Lötter
mervyn@intekom.co.za

Limpopo
Limpopo—Bronwyn Egan
Bronwyn.Egan@ul.ac.za