Last year, 2014, has been a bumper year for the CREW programme: our network of volunteers has expanded into the Albany area of the Eastern Cape under the leadership of Vatiswa Zikishe, with a first set of CREW fieldtrips in the region already yielding some interesting data on plant species endemic to the Albany region (see page 5); a new CREW group has been formed for Gauteng and has just started fieldwork in this highly threatened province (see page 38); the Fynbos-based CREW have been incredibly productive with a record number of sites being recorded this past year (see page 7); and the KZN CREW are working hard to build awareness on threatened plants in the province and are doing valuable monitoring and capacity development work, page 3.

After reading all the articles submitted by the various CREW volunteer groups to this newsletter, it is evident that each of our volunteer groups has their own style of doing fieldwork; some do weekly trips, others do monthly fieldtrips. Some cover a very wide area, while others concentrate their monitoring on a few highly threatened sites close to where they live. Overall though what stands out is that as each year goes by, the knowledge of our volunteers grows and more-and-more interesting species are found. Hidden in the pages of this newsletter are numerous discoveries of new plant species, as well so many rediscoveries of plants not seen for decades. It is incredible to see that many of you volunteers are finding so many new threatened and range restricted species that you have not previously recorded and this shows the need for long-term monitoring and the value of involving all of you in monitoring South Africa’s special plants.

I have just completed South Africa’s National Plant Conservation Strategy, and CREW features very strongly in this strategy. CREW fulfils the role of monitoring threatened plants in the field providing the essential knowledge foundation upon which the other conservation activities of the strategy are based.
For example, CREW data is the main source of new information to update the Red List status of all of South Africa’s plants. The accurate population data on threatened plants collected by CREW volunteers have also been used, along with specimen data, to identify the most important areas for expanding South Africa’s protected areas. Lize von Staden, SANBI’s Red List Scientist, has over the past year conducted a systematic biodiversity plan for species that identifies where the best sites are for conserving unprotected species. Her work has already been included in the Western Cape’s Protected Area expansion strategy and sites identified in this analysis are now being used to guide where biodiversity stewardship works happens. The other provinces will also be updating their protected area expansion strategies over the course of the next year, and a national protected area expansion strategy that kicks off this year will also use the results of this analysis. We are hopeful that within the next five years we will manage to achieve formal conservation of 75% of threatened plant species by conserving 30 priority sites. If this is achieved South Africa will become the first country globally to achieve the *in situ* conservation target of the Global Strategy for Plant Conservation.

The CREW programme continues to be deeply committed to capacity development; there was a strong focus in 2014 on developing capacity of Groen Sebenza pioneers (young individuals funded by the national jobs fund to work in biodiversity conservation). Fourteen Groen Sebenza pioneers based across the country worked on inventoring plants and animals, and they also received extensive training that ranged from how to collect certain groups of invertebrates to managing finances. Three of these Groen Sebenza pioneers are university graduates employed via the Botanical Society. These three individuals have had a deep investment in their skills via training on how to conduct Red Listing and we hope soon to have a new cohort of Red List scientists to help with the very big job of keeping plant assessments of South Africa’s rich flora up to date. CREW also hosts one year interns funded by the National Research Foundation. At the end of this newsletter, on pages 42–45, you will find a number of articles written by our interns. For many of them, especially our interns from the Eastern Cape, this is the first time they have written an article to publish, and we are very proud of their development.

In 2014, CREW piloted a new approach to tackling gap areas where we do not have CREW groups functioning and undertook a plant collecting and plant monitoring expedition to the Richtersveld in the Northern Cape. We were very fortunate to have an excellent local expert on the plants, Pieter van Wyk, who works as an ecologist at SANParks. Pieter knew most of the special rare and endemic species we were searching for, so over the 10-day trip we managed to find most of our target plants. Two of our interns who came on this trip were Brittany Arendse and Mahlatse Mogale and they have written about our adventures on page 46. More than 300 endemic plants from this region will now have their assessments updated and made available as part of our next Red List update. Many of these species have become more threatened as a result of overgrazing and trampling by goats. SANBI will work with SANParks to determine how this threat to the unique plant diversity in this region can be removed.
The implementation of the CREW programme is made possible via the partnership between SANBI and the Botanical Society and is dependent on the funding received from the Botanical Society. CREW forms a core part of the Botanical Society’s conservation work; Catherine Brown explains more about this on page 9. I would like to end this article expressing our thanks to all of you, our volunteers, who give so much of your time and spend your own resources to get to distant field sites to monitor plants. We are so grateful to the contribution you are all making to the conservation of South Africa’s unique flora!

News from the CREW Kwa-Zulu Natal node

Suvarna Parbhoo

It is always rewarding to reflect on the activities of another year that has passed and 2014 was a remarkable year of threatened plant hunting. The enthusiasm and commitment from the CREW summer-rainfall network keeps growing.

Our focus for 2014 was to showcase some of KZN’s threatened plants by producing eye-catching posters. The six CREW KZN posters feature the province’s most threatened plants, trees and aloes; Pondoland’s threatened plants; as well as the top five threatened plants from both Durban and the Midlands. Graham Grieve speaks more about the Pondoland poster on page 41.

We were fortunate to have NRF sponsored intern Mbali Mkhize join the CREW team for a year as she took on data management, ensuring that information is captured as it comes in. Read about Mbali’s CREW internship adventure on page 42. This gave us the opportunity to analyse our data and we are delighted to announce that we have found 211 of 473 threatened species known in KZN. In addition, we have recorded 32 Rare species since the CREW KZN node was initiated. A species is categorised as Rare when it meets at least one of four South African criteria for rarity, but is not exposed to any direct or potential threat and does not qualify for a category of threat according to one of the five IUCN criteria.

Mbali has been instrumental in establishing the ‘What’s flowering now?’ series of articles. As the title suggests, these short articles provide a picture and a simple description of a threatened plant in flower in the KZN Midlands and Durban and outlying western areas. The articles are published (and distributed) within the Midlands and the Kloof conservancy networks. Our articles are also published in the Natal Witness newspaper. We are excited to be receiving alerts from the public and being able to visit new, botanically rich properties. We have also been sharing these articles on our Facebook page with the hope that information will be shared as widely as possible. This series of articles is a testimony to the increase in threatened plant awareness and knowledge in the general public.

Our Groen Sebenza pioneer, Hlengiwe Mtshali, is truly an asset to the team. After extensive Red List training and mentoring, Hlengiwe is now focussing on red listing the KZN threatened species, apart from her CREW KZN coordinator role. It is crucial that we collect as much data as possible to enable appropriate Red List statuses of our species. Hence, 2015 will be a more focussed year for data and specimen collection.

Having played a mentoring role over the past few years, I am proud to see the development of the CREW interns. Both Hlengiwe and Mbali took on organising and
provinces in attendance. We were delighted to have a day of identification courses by the world authority on the Iridaceae and Hyacinthaceae families – Dr John Manning. His willingness to share his knowledge throughout the workshop was most amazing. After a day of concentrating on the two plant families, Prof. Steve Johnson eased us into a relaxing evening with his incredible insights into the sex life of plants. Dr Marianne le Roux introduced the CREW summer-rainfall network to the e-flora project and emphasised the need for ‘office’ volunteers to ensure that this project meets its targets. The family Apocynaceae was also unravelled at the workshop by Pieter Bester, who is working on this family as part of his PhD. CREW iSpot addicts were thrilled to have spent the weekend with Tony Rebelo – the guy behind iSpot South Africa. I am sure those who were not on iSpot prior to the workshop have now become addicts to this fantastic portal for nature enthusiasts. The CREW summer-rainfall champions were surprised when rewarded with copies of the Plant Families’ book as a token of appreciation from the Botanical Society of South Africa Executive Director, Zaitoon Rabaney.

The week after the annual workshop saw the CREW KZN team presenting our achievements at the symposium of contemporary conservation practice, organised by Ezemvelo-KZN Wildlife. It was rewarding to have our work presented to a broad audience of research representatives from provincial, national and regional authorities, universities and NGOs.

Finally, the CREW KZN node is excited to have our very own 4x4. Its maiden fieldtrip was a good test that ‘Mr Isuzu’ passed with distinction! We are looking forward to many travels as we begin focussing on the Northern Berg and Maputaland areas in 2015.
Last year was a year of learning, exciting challenges, reflections, new beginnings for some and a journey of discovery for everyone involved in the project. The Eastern Cape para-ecologist project finally reached the smooth sailing phase in 2014.

Reflections towards the end of 2013 brought about a positive change and improved shape to the project. The next page has articles from the para-ecologists to illustrate this learning curve. Although not at the desired pace, the CREW jet has also taken off!

Our para-ecologists started in June 2013, and as expected in any newly established project, things didn’t begin smoothly. Our challenges ranged from administrative matters to issues of literacy levels. Being determined to make the project work, this presented an opportunity for us to reflect on the issues and how best to tackle them. Recommendations on how to structure the project were then made. Implementations and more implementations were introduced in 2014! A variety of courses were held to kick-start the year. Some of the courses built on those done in 2013, for example Basic Botany, whereas other courses were newly introduced, such as Insect Collecting, Snail Collecting, Spiders, Basic Computing, and Biological Control of Alien Vegetation. The purpose was to expose the para-ecologists to other aspects of biodiversity inventory methodology. Although there is still room for improvement, these courses helped to improve their work quality, raised awareness about different aspects of conservation and have helped to open their eyes to other possibilities.

Groen Sebenza is a jobs fund initiative and that means employment for these young men and women is the ultimate goal for all institutions involved in the programme. In light of working towards this goal, we had outings to various conservation activities such as a snake park, Addo Elephant National Park, Cheetahland near Kirkwood and the East London Museum. The motivation was to expose the para-ecologists to diverse conservation fields and to give them the opportunity to meet workers who have followed journeys similar to their own. Although all outings were enjoyable, Addo Elephant National Park was the main highlight. Visiting this park that is located on their doorstep for the first time, enabled the para-ecologists to appreciate the value of the Groen Sebenza programme. There are many people, both young and old, who would love to visit Addo, but some don’t even know that such places exist and not everyone can access them. These outings gave an indication not only of the jobs that are available in the conservation sector, but also led to a change in mind-set, as the para-ecologists thought that these places were for wealthy people only.

Shifting a bit from biodiversity collection, which has been the main focus since the inception of the project, during the second half of 2014, we introduced our para-ecologists to indigenous knowledge research. This is aimed at documenting cultural, historical and indigenous knowledge linked to biodiversity awareness as well as introducing them to research methodologies. The research topics covered are sea-food harvesting, bird-lore and hunting, which includes honey harvesting. The research methodology presented opportunities for both our para-ecologists and their informants to revisit their backgrounds, to unpack issues related to each topic, such as the loss of indigenous knowledge, and to uncover the unique knowledge each village possesses. Being born and bred in the village doesn’t always guarantee that one will be traditionally oriented. Knowledge patterns have been lost with time and other historical processes. Everyone, especially the youth, whether in deep rural villages or not, wants to fit into the modern society. For the project leaders this was an exciting moment. Stories collected by the para-ecologists were indicative of their enthusiasm and passion and have certainly revived pride in their culture. Read a brief summary on

First CREW outing at Botha’s ridge.
each research topic in the para-
ecologists articles.

Implementation of these projects
presented an opportunity for me to
get the CREW programme going.
In October, I conducted our first
CREW meeting with the Graham-
stown Group. This meeting was
followed by the opening outing to
Botha’s Ridge in search for Ag-
athosma bicornuta (Endangered).
Although Botha’s Ridge is one of
the four populations of the species
recognised on the Red List and
where the type specimen was col-
lected in 1865, we unfortunately
were unable to relocate this spe-
cies. In a Veld and Flora article
published in March 2006, Tony
Dold and Terry Trinder-Smith also
reported a failure to relocate this
species at Botha’s Ridge, despite
several thorough searches. Ac-
cording to Tony Dold, a search at
‘Burntkraal’, which lies between
the two known remaining locali-
ties, Botha’s Ridge and Hounslov-
farm, was a desperate attempt, but
to their surprise the plant was suc-
cessfully relocated. Following their
footsteps, I sought permission from
the Grahamstown Military Base,
within which ‘Burntkraal’ is located,
to gain access to the site. Despite a
series of telephone calls accompa-
nied by a letter of motivation, I am
still waiting for response from the
officials authorised to grant access
to the site. However, other avenues
to gain access to the site are also
being investigated.

The field season had already
started when I realised the delay
of the outcomes from the Military
Reserve. I cannot begin to imag-
ine the frustration it would have
created if I was not based at the
Selmar Schonland Herbarium in
Grahamstown. Initiating a project of
this nature in isolation is definitely a
‘no go’ route. Fortunately, I am not
alone! Tony Dold and I undertook
a trip to Port Elizabeth, via Long-
more State Forest near Uitenhage
and to Redhouse. In Humewood,
in the Port Elizabeth metropolitan
area, we relocated Aspalathus re-
curvispina (Critically Endangered);
we were unable to find Lotononis
monophylla (Critically Endangered)
at the Longmore State Forest or

A week after the PE-Redhouse
trip, Robert McKenzie, who is an
Asteraceae specialist, and I went
to Hogsback in search of Macow-
ania revoluta (Data Deficient).
We returned to the site of a previ-
ous collection of M. revoluta from
Hogsback (R.J. McKenzie 2968, 24
September 2012), where a single
plant was seen on the slope above
the Madonna and Child Waterfall,
but unfortunately we did not find
this species. The locality at which
Robert’s 2012 specimen was col-
lected is now heavily infested with
aliens, particularly black wattle
(Acacia mearnsii) and bramble
(Rubus cuneifolius). At the site
there is indigenous vegetation in
an extremely narrow strip between
the forest margin and a forestry
road that runs along the top of the
escarpment east of Hogsback vil-
lage. A thorough search of this strip
might locate additional plants of

Agathosma bicornuta from Burntkraal. Photo: Tony Dold.

Aspalathus recurvispina. Photo: Tony Dold.

Brachystelma schoenlandianum,
which is thought to be extinct in the
wild, at Redhouse. Nevertheless,
we collected lots of specimens that
we hope will include some interest-
ing finds!
M. revoluta, but there is also encroachment of invasive alien plants. Identification of sites remote from disturbance by human settlement and exotic forest plantations on the Amathole Mountain range (for example in the Cata and Mt Thomas/Kubusi areas) and on the Pirie Mountains is needed to search for populations of M. revoluta.

In conclusion, 30 November 2015 marks the end of the Groen Sebenza contract for our para-ecologists. We have done our best to prepare them for the job market and we shall continue to equip them with job readiness skills until they finish the project. This will be a moment of reflection for us and an opportunity to document the lessons learnt.

The project has not been easy but we are truly grateful for the opportunity presented to us and to the para-ecologists. I hope that in 2016 I will be writing about their new journeys beyond Groen Sebenza.

For the Albany CREW node, this is a chance to form an army for threatened species rediscovery!

Mesmerising landscapes, spectacular plants and friendly people were three of the ingredients to a most amazing year of CREW work. Sorry to be a pain about this, but truly, the highlight of the year was our expedition to the Richtersveld.

This area is absolutely amazing and if you have not visited the area I think it is well worth adding to your bucket list. Be careful though, the Richtersveld is a fragile and sensitive wonderland. Many people have the misconception that because this area is extremely hot, arid and remote, it is tough and can withstand a lot of pressure. The balance in these ecosystems is more finely tuned than we think and because of the influx of people, livestock and ruthless mining companies, the Richtersveld is taking strain. The botanical diversity is quite special, despite the harsh weather conditions. The reason for visiting the Richtersveld was to monitor species identified in the Red List Index process and for us to gain an understanding of the threats affecting the plants in the area…and of course to drool over the stunning plants! We emerged from the trip blown away by the beauty of the Richtersveld, but also realising that we had a role to play in making sure this area is conserved.

We had a very busy year and our major fieldwork started early with an Oxalis species hunt in the Nieuwoudtville region. This was very exciting for us because we had never done fieldwork there in...
April/May, so we were keen to see what was flowering. We focussed on the Hantam National Botanical Garden and some of the key flower hotspots in Nieuwoudtville like the Trekpad. Threatened species monitored included Oxalis massoniana var. massoniana (Data Deficient), Oxalis dines (Vulnerable) and Oxalis massoniana var. flavescens (Vulnerable). After two days in Nieuwoudtville collecting data on Oxalis species, we decide to take the 'scenic' route back to Cape Town via the Botterkloof pass. There were numerous annoying stops to look at which is arguably one of the most variable species, Oxalis flava, on the way to Doornbosch, where we were hunting for Oxalis lineolata. This species is only known from the type collection made in 1935 and many previous attempts have been made to relocate the species. Ever hear of that saying: ‘We were at the right place at the right time’? Well we were, and found a small population growing on the clay flats surrounding Doornbosch.

We also stopped on Pakhuis Pass and saw another site endemic, Oxalis oreophila (Critically Rare), which is only known to occur at Pakhuis Pass. It was a fruitful trip indeed, with a decent haul of threatened species and a species rediscovery.

Our spring time C team trips also went down really well. One of the highlights was seeing Moraea atropunctata (Critically Endangered), which is certainly in the top five of most stunning plants I’ve seen. With the help of John Manning, we finally managed to find Sparaxis roxburghii (Critically Endangered), an extremely threatened species known from one site between Citrusdal and Clanwilliam. Our aim was to find more populations, but alas it seems that the habitat it likes has been transformed to citrus orchards. We will continue and broaden our search in the future.

In Stellenbosch a new population of Babiana regia (Critically Endangered) was discovered. This was a bitter sweet discovery as it was found as part of a botanical study in an EIA process. We visited the site with Cape Nature and the developers to do a full assessment of the population. The developers thought we were joking when we told them about how threatened the plants were because the bulk of the plants were on the try line of an unofficial rugby field. Nevertheless, the plants are hanging in there and it still remains an important population. In our experience not many developers are sympathetic to our cause and this one was no different. We arranged for the MSB team to collect seeds just to ensure that we have material in case ‘something’ happens to the plants. As a result of this we looked at adjacent areas as possible receptor sites if some of the plants had to be moved and in the process discovered a wonderful botanical gem. The farm directly west of the development site had similar vegetation and on our two hour walk through the small site we recorded a whopping 17 threatened plant species, including another patch of Babiana regia. This incident has made us think again about Search and Rescue and the role that SANBI and the volunteers play in these types of incidents. We had a workshop in January 2015 to discuss SANBI’s role and although we still have some work to do before having a clear guideline on how to take this forward, the broad consensus is that we cannot encourage Search and Rescue as a means of mitigation against the loss of species and habitats. It has to be the last resort and only if all other means of mitigation have been duly considered. We will have more information and guidance on these processes in due course. Watch this space!

We attended the Cape Floral Kingdom expo in Bredasdorp again and this time we joined forces with Tony Rebelo and iSpot. This was a very successful event and it gave us a good opportunity to showcase our work and build a closer relationship with iSpot.

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Dewidine has been working through the demographic monitoring data that we collect and she is analysing the data for some of the species that we monitor. We are currently looking at the Euryops virgatus data from Nieuwoudtville and will use this case study to refine and improve our monitoring projects. Thus far the process of analysing the data has yielded some interesting results and it has stimulated a renewed interest in plant population dynamics. Dewidine, the Indigo team, and Eugene Marinus from Hantam National Botanical Garden will be fine-tuning the monitoring process and adding more experiments to better our understanding of this species.

Our Groen Sebenza pioneers have been taking full advantage of this opportunity. At the Fynbos Forum 2014 in Knysna, our Groen Sebenza pioneers made us proud by taking top honours at the conference. Dewidine won the best short talk award for her presentation on the role that SANBI and the volunteers play in these types of incidents.

We also went to the Red List training and threatened species field trips at Stellenbosch University, Nelson Mandela Metropolitan University and Cape Peninsula University of Technology. In addition I presented a lecture on monitoring and the challenges we have conducting detailed monitoring of species.

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presentation on the demographic monitoring of *Euryops virgatus*. Anri and Karin won the prestigious Theo Manual Award for their video on some of the medicinal plants in Mamre. They interviewed local medicine man, Bertie Jacoman, to get insight into plants from the veld and their uses for common ailments. To see the video go to: https://www.youtube.com/watch?v=1zb7M10knXk.

There is more exciting work being done in the Eastern Cape by Vathiswa and her team. You can read about their achievements in the newsletter.

We had a brilliant year of exploring new areas and finding very special plants. I have to commend the volunteers for their continued support and undying passion for conserving our very special flora. A memorandum of agreement is also in place between BotSoc and CREW, who have been working together to champion wildflower conservation. The CREW programme offers a great opportunity for citizen science involvement and many BotSoc members are involved as volunteers with the programme, monitoring our country’s floral gems. BotSoc works in conjunction with CREW volunteers to record endangered plant species, which helps BotSoc and SANBI to identify priority areas for conservation projects and also helps local government in their regional planning. Joint marketing and awareness play a large role and BotSoc has assisted in a number of fund-raising initiatives for the CREW programme. Groen Sebenza pioneers employed by BotSoc are working with the CREW teams nationally.

Support for other initiatives, and partnerships currently on the BotSoc conservation agenda are the following:

- Cape Peninsula University of Technology Biodiversity and Conservation Management Department, with a formal memorandum of understanding in place since 2014 and successful operation to date, supporting senior students and particularly facilitating vital fieldwork experience, opportunities and training.

- CEPF (Critical Ecosystem Partnership Fund) project and stewardship in KZN in partnership with KZN-Ezemvelo Wildlife.

- Groen Sebenza Jobs Fund partnership with SA government and the Development Bank of Africa, managed by SANBI.
The Botanical Society Biodiversity Stewardship Project in KwaZulu-Natal

Isabel Johnson

Last year was another busy year for me implementing Biodiversity Stewardship in KZN. Much of 2014 was spent desk-bound, drafting management plans and writing range-land assessment reports for the CEPF(Critical Ecosystem Partnership Fund) BotSoc sites. The proclamation process for the nature reserves has moved slowly, but Red Desert, Nomalanga and Boschberg are very close to being declared.

I have just got back from a third week at Babanango Valley, a truly spectacular area that is home to the Vulnerable Aloe gerstneri. Since we were measuring both grazing and browsing capacities, much time was spent in the evenings identifying tree specimens using David Johnson’s leaf key to Richard Boon’s wonderful edition of Pooley’s Trees of KZN. Many thanks go to David for later helping with names for some of the ‘mystrees’. An added bonus was a new record of the Vulnerable Dracosciadium italae, which extends its known range southwards by quite a bit.

In November a week in Upper Pon-gola had some good botanical finds (in between counting grasses). In the most asclepiad-rich grasslands I’ve ever seen, was new population of Stenostelma sp. nov. (currently being described by Pieter Bester). It was so wonderful to see large numbers of Miraglossum pulchellum and Sisyranthus cf. fanninii.

However, the pinnacle of the year had to be a weekend at Phinda. The resident ecologist, Ross Goode, succeeded in getting some fantastic botanical folk together, including William Bond, Richard Boon, Geoff Nicholls, Elsa Pooley,
Getting the ultimate image of *Ammocharis coranica*.

and Lynne and Winston Trollope. We were hosted royally and spent two utterly fantastic days exploring the amazing vegetation of the Munyawana Reserve (a Biodiversity Stewardship site) under Ross’s very enthusiastic and incredibly knowledgeable guidance. Every few hundred metres everyone jumped out of the vehicles to examine a new plant! Needless to say, conversation was totally vegetation- and plant-orientated and some wonderful debates were had on plant names, grazing lawns and fire regimes.

**Know your enemy… where are the emerging invaders in KZN?**

Reshnee Lalla, with contributions from Menzi Nxumalo & Michael Cheek

The Invasive Species Programme (ISP) is within the same SANBI division as the CREW programme, but targets alien species that are still in the process of establishing as invasive in our country.

Like CREW, the ISP relies on the sharp eyes of enthusiastic individuals who are passionate about the environment to help us assess invasive threats to our biodiversity. Due to the similar nature of our work, CREW and the ISP have a strong working relationship, particularly in KwaZulu-Natal, where we share offices in Durban. Collaborative field visits are a common practice, as are reports of target invasive species we receive from CREW volunteers, for which we are grateful.

Here we discuss some of the ISP target species and their current known populations in KZN. As one can expect with budding invasives, it is unlikely that these reflect the full extent of distribution and for that reason we are particularly interested in reports from new areas. Some of the species also occur in other provinces, so you are encouraged to keep your eye out for these species wherever you may be in the country, and report them to us, even if you are not 100% sure of the identification (invasivespecies@sanbi.org.za or use regional contact details provided at the end). Detection of new populations is crucial for effective evaluation and control of invasive species, but bear in mind that we are still collating data and may not clear the population immediately. However, your information will be valuable in the assessment of threat of the species.

**Species posing a threat to our water systems:**

Currently limited to a single population each, are *Hydrilla verticillata* (Pongola/Jozini), and *Hydrocleys nymphoides* (Howick).

*Sagittaria platyphylla* populations are known from ± 10 localities in the Durban, Kloof and Pietermaritzburg areas, whilst *S. latifolia* is only known to occur in the National Botanical Gardens in Pietermaritzburg, where they are being managed. We are aware of a number of populations of *Iris pseudacorus* (yellow flag iris) in Kloof, Pietermaritzburg and Howick areas.
Species posing a threat to terrestrial areas

Target species that are currently limited to less than three known localities:

We could only confirm one population of *Paspalum quadrifarium* in the Melmoth area and could not locate an old record of this species in the Karkloof region, but we will continue to search. The only naturalised population of *Paulownia tomentosa* (princess tree) that we are aware of, in the Howick area, has since been removed. We are also interested in localities where this species occurs in gardens, as these could become origins of spread. *Mimosa albida* is currently limited to one population alongside the Mkhomazi River in the Highover Wildlife Sanctuary.

Two species of cacti have recently been detected in the province for the first time, in the Zingela area, namely *Opuntia microdasys* and *Peniocereus serpentinus*.

*Rubus ellipticus* (yellow Himalayan raspberry) is a robust cousin of the American bramble (*R. cuneifolius*), and is only known to occur in the Hillcrest area. *Vitex trifolia*, a medium to large coastal shrub with lilac flowers has been detected in the Southbroom and Tongaat areas. *Solidago gigantea* occurs in one locality in the Sani pass region of...
Paulownia tomentosa: Tree ± 7 m tall, with hairy, heart-shaped leaves and delicate, light pink flowers.

Opuntia microdasys: A generally spineless opuntia < 1 m. A horticultural variety with sharp white bristles exists, but only the yellow form occurs in the wild.

Peniocereus serpentinus: A column-like cactus < 4 m, forming dense colonies. Flowers during the night and produces sessile round fruit 4 cm in diameter.

Rubus ellipticus: robust shrub with dense, red hairy bristles on stems and branches, and serrated, roundish-elliptic leaves.

Vitex trifolia: Large, scrambling shrub with soft, hairy trifoliate leaves, with a pale under-surface. Lilac flowers are produced at the end of purplish stems.

Mimosa albida: Thorny shrub that produces pink flower heads. Leaflets, which are distinctive in shape, close upon each other when touched.

Amanzimtoti to Ballito. Furcraea foetida occurs in the Ugu district municipality region on the south coast, but a few scattered populations exist in Durban, Verulam, Shakaskraal, Inanda valley, Molenw/Kloof and Pietermaritzburg. The current known distribution of Diplocyclos palmatus is limited to Kloof and Pietermaritzburg. Hypericum pseudohenryi is invading areas in the KZN Midlands and Drakensberg. Crotalaria agatiflora is limited to a few naturalised populations near Howick.

Target species that are currently known from more than three localities:
Most of the Triplaris americana (ant tree) populations seem to be confined to the coastal region from the Drakensberg, whilst two populations of a second Solidago species (S. altissima) have been detected in the Hilton and Kokstad regions. Pueraria montana (kudzu vine) is currently known from one population in Eshowe and a second population in Cedara.
Pueraria montana: Large trifoliate leaves, with distinctive lobed shape, dense hairs on stems, and elongated pods.

Solidago gigantea: Perennial herb < 2 m, that prefers moist soils. Yellow conical inflorescence often leans to one side. Stems are generally hairless.

Solidago altissima: Perennial herb < 2 m, found in moist or well-drained soils. Yellow, conical inflorescence is ascending. Stems are often hairy.

Crotalaria agatiflora: Large (< 6 m), sprawling, evergreen shrub, with characteristic canary-bird shaped flowers, which are greenish-yellow or lime green in colour.

Triplaris americana: Pyramidal, erect tree (< 15 m), with slender trunk, and dark pink or rust-coloured female flowers.
**Furcraea foetida:** Succulent with light green, sword-shaped leaves, arranged in a whorl on a very short stem. The leaves are arched, and often bend, and rarely have marginal thorns. Green globular bulbils are produced on tall (±8–10 m) florescent flowering stalks.

**Hypericum pseudohenryi:** Shrub with opposite, oblong-ovate green leaves. Large yellow flowers; young fruit reddish turning brown.

**Diplocyclos palmatus:** Climber with palmate leaves with fine hairs and pale under-surfaces. Almost round, striped fruit, turns to red and white when mature.

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Table 1. Names of emerging invasive alien plants (IAPs) highlighted in this article

<table>
<thead>
<tr>
<th>SCIENTIFIC NAME</th>
<th>COMMON NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crotalaria agatiflora</td>
<td>Canary bird bush</td>
</tr>
<tr>
<td>Diplocyclos palmatus</td>
<td>Lollipop climber</td>
</tr>
<tr>
<td>Hydrilla verticillata</td>
<td>Hydrilla</td>
</tr>
<tr>
<td>Furcraea foetida</td>
<td>Mauritius hemp</td>
</tr>
<tr>
<td>Hydrocleys nymphoides</td>
<td>Water poppy</td>
</tr>
<tr>
<td>Hypericum pseudohenryi</td>
<td>Henry’s St John’s wort</td>
</tr>
<tr>
<td>Iris pseudacorus</td>
<td>Yellow flag iris</td>
</tr>
<tr>
<td>Mimosa albida</td>
<td></td>
</tr>
<tr>
<td>Opuntia microdasys</td>
<td>Bunny-ear cactus</td>
</tr>
<tr>
<td>Paulownia tomentosa</td>
<td>Princess tree</td>
</tr>
<tr>
<td>Paspalum quadrifarium</td>
<td>Tussock paspalum</td>
</tr>
<tr>
<td>Peniocereus serpentinus</td>
<td>Serpent cactus</td>
</tr>
<tr>
<td>Pueraria montana</td>
<td>Kudzu vine</td>
</tr>
<tr>
<td>Rubus ellipticus</td>
<td>Yellow Himalayan raspberry</td>
</tr>
<tr>
<td>Triplaris americana</td>
<td>Ant tree</td>
</tr>
<tr>
<td>Solidago altissima</td>
<td>Goldenrod</td>
</tr>
<tr>
<td>Solidago gigantea</td>
<td>Goldenrod</td>
</tr>
<tr>
<td>Sagittaria platyphylla</td>
<td>Delta arrowhead</td>
</tr>
<tr>
<td>Sagittaria latifolia</td>
<td>Broadleaf arrowhead</td>
</tr>
<tr>
<td>Vitex trifolia</td>
<td>Beach vitex</td>
</tr>
</tbody>
</table>
The Invasive Species Programme is based within the South African National Biodiversity Institute and is funded by the Department of Environmental Affairs.

Table 2. Contact details for ISP regional units

<table>
<thead>
<tr>
<th>Regional unit</th>
<th>Contact person</th>
<th>E-mail address</th>
<th>Telephone number/s</th>
</tr>
</thead>
<tbody>
<tr>
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<td>+27 12 843 5152</td>
</tr>
</tbody>
</table>

The Invasive Species Programme is based within the South African National Biodiversity Institute and is funded by the Department of Environmental Affairs.

Indigo Development & Change in collaboration with SANBI CREW organised a fun-filled three-day programme for this year’s summer school, with the highlight being an excursion to Strandfontein along the west coast.

BEEP BEEP! That was the sound of the taxi picking up a few children in the early morning of what was forecasted to be a 37°C day in Nieuwoudtville. With some of the children still wiping the sleep from their eyes, this was not an opportunity that was going to slip through their fingers, judging by the hastiness of the tiny frames. ‘Is jy reg? Is jy reg?’ shouted one of the facilitators through the window of the taxi, with music going full blast in the background, finally slamming the door shut to take us on our two-hour journey to Strandfontein on the west coast.

Sunscreens, hats, shades...oh and let’s not forget about the food! We journeyed onwards to reach our destination with children singing and bouncing to the beat of the music. The moment the taxi came to a standstill, children were climbing over one another to be the first to open the taxi door, ready to explore.

We had conversations covering topics from the rise in the sea level to mussel harvesting and conservation. An old man from Doringbaai also admitted he does his own harvesting every now and then. We played games on the beach and had an interactive lifeguard session, all with twinkling sand and ice cold water running over our feet. Splashing in the sea, we had the

Uit die bossies in die water!

Shannon Parring & Donna Kotze

Learners getting ready to board the taxi to the beach.
Learning and fun going hand-in-hand.

taste of salt in our mouths before we enjoyed lunch prepared with the meat from our local butcher in Nieuwoudtville. With full tummies we went exploring the community of Strandfontein. While walking, one of the boys expressed how lucky he felt to be part of the day.

For us it was a day full of heart-warming emotions, because some of the learners had never had the opportunity to be this close to the beach, in contrast to experiencing nature in Nieuwoudtville. This was another side of nature that the learners could enjoy! With the sun almost setting on the horizon, we were leaving with our hearts filled with beautiful memories from this special day.

Weskus CREW 2014

Koos Claassens

Die blomjaar het baie blowend gelyk want die reën het gereeld gekom en die grond het nat gebly, maar daar het nooit groot genoeg hoeveelhede reën geval om ekstra vog op te bou nie. Die gevolg was dat die blomseisoen korter as normaal was. Nogtans was daar op plekke baie mooi blomme.

Die seisoen was gekenmerk deur die soek van baie skaars spesies. Eerste op die lys was Hessea mathewsii. Tans is ons net bewus van een plek waar dit groei. Onge-lukkig is dit teen Vredenburg dorp en is die druk om daar te ontwik- kel baie hoog. Die ander lokaliteit waar dit in die verlede gekry was, is dus weer besoek, maar sonder enige sukses.

Kenneth Oberlander het ons be-soek om na ons Oxalis spesies te kyk. As voorbereiding vir sy besoek het ons Oxalis spesies gaan soek en toe kry ons Hessea mathewsii met nog een plantjie wat een blom-getaljie het. In 2015 sal ons bepaal hoeveel plante daar is.

Volgende op die lys was Moraea loubseri. Ismail het van die Kaap gekom met ‘n groep van die CREW kantoor en Millenium Seedbank, sowel as Patrick Fraser, Carina Lochner, en die Weskus Biofleer Fosielpark het drie verteenwoordigers gestuur om die veldtog by te woon. ‘n Gebied naby aan die plek waar M. loubseri groei is deur-soek, maar ons was tien dae te laat as gevolg van te min reën en omdat die grond-tipe nie dieselfde is as ander plekke waar die spe-sie groei nie. Dit was nogtans ‘n pragtige stuk sandveld en ‘n hele paar skaars spesies is gekry, onder andere Leucadendron cinereum, Ampithalea ericifolia, Xiphotheca reflexa en Leucospermum hypophyllodendron.

Lampranthus vernalis in volle blom.

Die uitskaars Hessea mathews-ii.
In 2013 Piketberg was identified as a botanical hotspot outside a protected area, based on analyses done by Lize von Staden (Threatened Species Programme – Pretoria).

Even before these analyses, it was clear to many botanists that this place is special. Acocks made his way through Piketberg and botanist Peter Linder spent his childhood there. More recently, the likes of Charles Stirton, John Manning and our favoured environmental consultant, Nick Helme, trot off there ever so often.

The mountain valleys are widely used by farmers for orchards and other agricultural activities, however large sections are still natural and pristine, particularly an area known as ‘Die Plaat’. It is a large area of land owned by the Moravian Church on the top of the mountain. This site is unofficially known as the Moravian Nature Reserve and hopefully will soon become an official conservation area, as part of the Cape Nature Stewardship programme. Taking the lead from the 2013 botanical hotspots analysis, the CREW C team set out in 2014 to increase data collections in this area. The more compelling reason was that a section of the mountain had burned earlier that year. We visited the site as often as possible to identify and track fire ephemeral species. We invited experts such as John Manning, Kenneth Oberlander and Leanne Dreyer to increase our chances of finding specials.

We (Anri Marias, Kenneth, Leanne and myself) had an Oxalis run, stretching from Piketberg to Jacobsbaai on 18 and 19 June 2014. We arrived in Piketberg all excited and ready for action. We met up with our local botanical enthusiast, Angela Langton, and headed for the veld. The weather played along for most of the day, but right after we made a specimen collection of an unknown Oxalis species, the clouds gave in on us and it started to pour. We suspect that the specimen could be Oxalis pallens (Endangered) or the long lost Oxalis fragalis (Critically Endangered – Possibly Extinct).
The identification of this specimen has been a long and arduous process. Keying it out is very difficult and we hope to solve the mystery shortly, though another possibility is that it’s a new species, but we will report on that later. After this collection, we continued along the muddy gravel road towards Goedverwacht, where we recorded a range extension for Oxalis uliginosa (Endangered).

When we (Brittany Arendse and I) returned in November, the veld was much livelier with more flowering plants. This time we had no specialist with us, so spotting those specials was just a little tougher. We worked diligently and followed procedures to collect specimens when we thought we might have something interesting to examine later or to submit to the Compton herbarium. We found Agathosma trichocarpa (Vulnerable) and many, many different Aspalathus species. We identified as many as possible and the really difficult ones were collected and some were posted on iSpot.

The highlight of the Piketberg Mountain for the year must be finding the ever elusive Gladiolus insolens (Vulnerable), with its exhilarating red petals. The rewarding discovery, lurking among the drab-looking shrubs, awaited Wendy Paisley and John Manning who joined Ismail and Gigi on this memorable hunt. Little did they know the day could get even better, with the discovery of a potentially new Tritoniopsis species. John Manning had everybody ecstatic when he didn’t recognise this species. The participants went along with the mere hope of seeing G. insolens, but then left with way more than they bargained for.

The focus of the Piketberg Mountain can only look bright with the enthusiasm and excitement of Kenneth Oberlander on his knees looking at an Oxalis species.
Rondeberg Private Nature Reserve is an old time favourite site for us and this year Carol Duckitt took us on a long walk to find some of the specials, which included *Gladiolus quadrangulus* (Endangered), flowering in profusion. We visited Tienie Versfeld Reserve a few times to find the plants flowering at different times.

We also visited Baarhuis farm in early October, where we found many plants of *Lampranthus coccineus* (Critically Endangered), *Lachenalia purpureo-caerulea* (Critically Endangered), *Geissorhiza darlingensis* (Critically Endangered), and a new red *Indigofera*, which still needs to be identified.

Now that we are officially retired, my husband and I spend a lot of time walking in the open spaces in Langebaan. We discovered two sites that are packed with special plants, the most exciting species being *Lampranthus aureus* (Endangered), a new population of *Wiborghelia dahlgrenii* (Endangered), and in late December, some *Aspalathus recurva* (Vulnerable).

The private reserves on Waylands and Oude Post farms were ablaze with colour from August to October, with many of the specials easily seen by the public when driving along the track. Sheets of *Geissorhiza radians* (Endangered) and *Romulea eximia* (Endangered) never disappoint the visitors.

I have managed to master iSpot and have had a few special identifications done. The highlights are *Indigofera platypoda* (Endangered) from Yzerfontein, where the plant is in grave danger of being dug up soon; *Indigofera langebaanensis* from both Yzerfontein and Langebaan in the coastal Strandveld; *Ruschia diversifolia* in the Renosterveld near Darling; and a single *Oxalis stictocheila* (Endangered) at Tienie Versfeld Reserve.

We thank Ismail and the CREW office for keeping us focused and for all the information readily available when needed.

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*Hessea cinnamomea* at Burgher’s Post farm

The beautiful *Gladiolus quadrangulus.*

*Lampranthus coccineus* veld at Baarhuis farm.
In the past year FOTH CREW managed over 50 outings to 29 different sites ranging from Milnerton, Goodwood and our own Tygerberg, to Durbanville, Blaauwberg, Philadelphia, Wellington, Paarl, Franschoek, Stellenbosch and Brackenfell areas, with occasional trips as far out as Piketberg.

We looked at Sand Plain Fynbos, Dune Strandveld, Swartland Shale Renosterveld, Silcrete Renosterveld, Granite Renosterveld as well as Alluvium Fynbos and Sandstone Fynbos, and it has thus been an interesting year indeed.

Highlights of the Year

Briers Louw Nature Reserve (a reserve for the specific conservation of the geometric tortoises) had four visits from us with astonishing results. Although we have been monitoring this reserve for some years, we are constantly adding more species to the existing plant list as well as discovering more threatened species growing there. Our additions to the list include *Lampranthus reptans* (Near Threatened), *Trianoptilus solitaria* (Critically Endangered), *Lotononis prostrata* (Near Threatened), *Pelargonium asarifolium* (Vulnerable), *Pelargonium chelidonium* (Endangered), *Wachendorfia brachyandra* (Endangered), *Geissorhiza furva* (Endangered), *Moraea mutila* (Vulnerable), *Moraea ogamana* (Critically Endangered), *Isoetes stellenbosiensis* (Near Threatened), *Restio duthieae* (Vulnerable) and *Anthospermum ericifolium* (Endangered). Of the 454 species on the list, 85 are threatened and all are located in an area less than a square kilometre in size. We recently found new species of *Drimia* and *Annesorhiza* there.

Working with the Environmental management branch of the City of Cape Town gave us the opportunity to revisit Schoongezicht Farm (off the N7, near Philadelphia). This farm is being considered for stewardship and the information we have collected on this farm has made an important contribution to raising the conservation profile of this site. We were able to add more than 60 species to the existing plant list, five of which are new to the CREW Blouberg group.

Two visits were made to Joostenbergkloof Farm near Klipheuwel. We added 54 species to the plant list, including seven species of conservation concern: *Athanasia capitata* (Endangered), *Pelargonium viccifolium* (Endangered), *Watsonia strictiflora* (Critically Endangered), *Monopsis variifolia* (Endangered), *Phyllica thunbergiana* (Endangered), *Cliffortia acockii* (Critically Endangered) and *Anthospermum ericifolium* (Endangered). This brings the number of rare and threatened species on that tiny site to 45. This site also has the last surviving population of eight *Protea odorata* plants.

We were fortunate in being able to assist the Ecological Officer at the Stellenbosch Municipality looking at sites in the surrounding area. Working at Mont Rochelle Nature Reserve in Franschhoek, we were lucky to find a possible new species of *Hippia* (Asteraceae). At Papegaaiberg in Stellenbosch, a new species of *Hermannia* was discovered, now named *Hermannia cinerariifolia* for its round leaves. And finally Wemmershoekvlei, with five critically endangered species on the list, has now been secured as a reserve and will be protected for the future.

We visited Durbanville Racecourse to look for *Pterygodium cruciferum* (Endangered) and were happy to see at least a hundred plants in flower. At the same time we noted that the population of *Leucadendron levisanus* had increased from only nine plants in 2004 to about 40 plants in 2014, all flowering and extremely healthy – a great success!

Lastly, we were asked to help identify plants and establish a species list for the new walking trail at Blaauberg Nature Reserve. This instigated renewed interest in the area and members of the Blaauwberg Friends Society joined us on the walks with the result that a new CREW group has been formed under the leadership of FOTH CREW member, Kay Loubser.

As in previous years, a generous amount for petrol money was donated to us by the Friends of Tygerberg Hills. This has helped considerably in reaching further-out localities and is greatly appreciated. Also a round of thanks to the FOTH CREW members Gurli Armbruster, Sandra de Swardt, Melda Goets, Keith Breetzke, Veronica Straub, Ursula Aldini and Kay Loubser for their dedication and commitment in helping to conserve our precious natural vegetation. **VIVA CREW, VIVA!**

---

**CREW Hottentots Holland**

*Cecilia Wolmarans*

Our branch had a wonderful year of successful field trips. In previous years we did not have outings during the hot times of the year, but this year I decided to start our activities early. It also came to light that the floral records for Harmony Flats at this time of year were severely lacking, so this was our first priority. This seemingly grey piece of veld delivered treasures like *Ammocharis longifolia* (Least Concern), *Merciera tetraloba* (Endangered), *Protea scolymocephala* (Vulnerable) and *Lachnaea grandi-flora* (Vulnerable). We contributed two additional species to the official Harmony Flats plantlist.

In February we went to Schapenberg and once again found that records for this time of year were lacking – we added 22 species to our plant list for Schapenberg.
Later in February we went to the Lourensford farm. On this occasion we took the whole day to go right around this beautiful valley, a long distance for enthusiastic amateur botanists. Our first stop was to check on Serruria kraussii (Vulnerable), which was not in flower at this time of year, but I wanted to make sure that the area was not developed. They were there in abundance, but the encroaching pines and bluegums pose a continuous threat to this species. We continued on to Grootnek and explored the cleared slopes towards Helderberg and then moved on along the contours of the mountains. We had lunch in the shady forest with Ilex mites (Declining), Podocarpus latifolius and Halleria lucida trees. I was very pleased to find Agapanthus africanus again. We stopped and explored often – so much so that we found we could only cover half of what we originally planned. By 4:00 that afternoon we were quite tired and decided to do Diepgat and the rest of the north-facing mountains on another day.

We returned to Lourensford in August. This time we only explored the south-facing slopes along the Landdrostkloof area. On this occasion we added an astonishing 45 species to an already comprehensive list of 133 species! The highlight of this day was finding four orchids, none of which was threatened, but orchids are always special.

In March we visited Hans-se-Kop. We entered the area on the Elgin Club side and worked our way towards the mountain. As soon as we left the pine plantations behind, we were astonished at the diversity around us. March is not supposed to be a good time for flowers but there was something to be seen in every nook and cranny. We parked our cars at the viewpoint and walked up to the towers. The views from the top of the mountain were spectacular. On this trip we found Kogelbergia verticillata (Rare), Spatalla prolifera (Endangered), not to mention the special effort Carina made to find Mimetes argenteus (Endangered). Under the microscope Erica jacksoniana (Rare) was revealed. It was a wonderful day topped by finding amazing threatened species.

At the end of 2013 we found an unknown plant at Vergelegen and Carina posted it on iSpot early in 2014. This entry was spotted by the Cape Town Invasive Species Unit and identified as Genista monspessulana (Montpellier broom). We visited the farm with the team in April and I am glad to report that it has been eradicated. On a subsequent visit to the farm in June, another 30 species was added to our list of 236 species for the farm. On this occasion the PR person of the farm joined us and as a result an article on our activities appeared in the local newspaper.

We decided to assist the City of Cape Town's Biodiversity team in compiling a species list for a patch of veld in the Strand area, called Morkel's Cottage. Although it is in close proximity to Harmony Flats, the soil is different and species have been spotted here that do not occur on Harmony Flats. We visited Morkel's Cottage in July, September, October and November. There is clear evidence of harvesting on this property, and I fear that some of the plants could be under threat. We found Moraea angulata (Critically Endangered), Geissorhiza setacea (Endangered), Moraea tricolor (Endangered), lots of babianas, Echiostachys spicatus (Endangered), Lachnaea grandiflora (Vulnerable), Monsonia speciosa (Endangered), to name a few. We will continue to monitor this area.

We also had the opportunity to visit the Rheinmetall site in Somerset West. We are unfamiliar with the sandy soil of this coastal property and we found it quite challenging. There were lots of vygies that can only be identified when they set seed, so there is a lot of follow-up to be done on this site. Neverthe-
less, we did manage to list 66 spe-
cies under these difficult circum-
stances.

Unfortunately it has become quite
dangerous to walk in certain areas.
Recent attacks on Sir Lowry’s Pass
prevented us from exploring the
track up to the wagon tracks. Many
species on our target list occur in
this specific area. We were privi-
leged that the owners of Bezweni
Lodge agreed that we could come
and explore on their farm. Our first
visit in October was not as exci-
ting as expected, but as we do not
know this property well, I am sure
that subsequent visits will expose
secret hideaways. We listed 113
species on our first visit. The best
find was *Serruria kraussi* in full
bloom.

In November I had the opportu-
ity to do a presentation to the local
branch of the Wildlife and Environ-
ment Society on our activities since
2011. The presentation was well
received and we hope to increase
our membership numbers substan-
tially in 2015.

In mid-August the Kogelberg
CREW members had their first
and potentially most exciting of-
official outing.

The specific target was to gather
data on two local endemics of the
Babilonstoring Mountain: *Gnidia
sonderiana* and *Euryops lasiocla-
dus*. *Gnidia sonderiana* is a mem-
ber of the Thymelaeaceae family
and is listed as Endangered, with a
single population recorded from the
western end of Babilonstoring. Our
fact-finding mission found that the
species was relatively common on
both sandstone and shale-derived
soils within the middle extent of this
mountain range. The species was
easily discernible by its bright yel-
low hairy flowers. The other target
species, being a daisy, was a little
more challenging until we reached
the Cederberg Formation shale
band and spotted a possible yellow
flowered suspect. (Yellow seemed
to be the colour for the day!) After
some enthusiastic pulling apart of
a flower head, we decided the fea-
tures fitted the taxonomic descrip-
tion of the Critically Rare *Euryops
lasiocladus*. Our outing was thank-
fully turning out well. Not surpris-
ingly we were also delighted to see
the lovely Endangered *Serruria
meisneriana* coming into flower and
a host other Least Concern Pro-
teaceae species. A very delicate
*Adenandra brachyphylla* lookalike
drew our attention and it was col-
lected for further examination at the
Bolus Herbarium.

Thank you to everybody who par-
ticipated in our activities. CREW
take a lot of dedication, commit-
ment and hard work, and I am
proud to say that our members are
eager to participate.
On a more personal note, I finally got to see a live *Muraltia stokoei* after years of hopeful inspection of all too similar plants. This species is listed as Rare and is only known from a handful of historical localities in the Kleinmond to Caledon area. I also saw the lovely short-tubed flower of what was previously known as the ‘Erica longifolia-complex’, namely *Erica viscaria* subsp. *gallorum*.

Dainty and delicate *Gnidia sonderiana*.

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**News from the Napier CREW**

Rhoda McMaster

This past year has been rather quiet, apart from the contributions from the Overberg Lowlands Conservation Trust with Odette Curtis driving the research.

On the farm Haarwegskloof (where the new Renosterveld Research Centre was opened at a prestigious launch in spring) we saw *Protea decurrens* (Endangered) and *Gladiolus vandermerwei* (Endangered) as well as a number of other most interesting plants, including several different species of *Eriospermum*. The Research Centre at Haarwegskloof welcomes it when CREW members and researchers visit the Renosterveld. There are self-catering facilities for those wanting to spend more than a day there. See www.overbergrenosterveld.co.za.

In December a *Lachenalia* was in flower, possibly *Lachenalia youngii*, many kilometres away from its known distribution in the southern Cape, and flowering later than that population.

Around Napier we saw *Gladiolus overbergensis* (Vulnerable) on a farm off the Sandy’s Glen road. This species only flowers after fire, or as we discovered, after the land has been ploughed for *Protea* orchards. On our visit to the farm Vierfontein, we found *Otholobium thomii* (Endangered) and *Tritoniopsis bicolor* (Vulnerable). Napier Mountain is one of our favourite botanising spots and finding *Erica recurvata* (Critically Endangered), which continues to be an amazing rock-dweller, is always a wonderful sighting. On the Akkedisberg we saw the magnificent *Erica shannonii* (Data Deficient – Taxonomically Problematic) with its long porcelain-like floral tubes.

There are some observations worth noting outside our territory. For example, on the Calvinia–Tanqua road, we saw the lovely yellow *Geissorhiza corrugata* (Rare) and on a road verge near Paternoster, *Lachenalia mathewsii* (Critically Endangered) surviving herbicide that the farmer sprayed on the strip of veld next to his crops. On a farm south of Touws River, it was inter-
esting to see *Tylecodon reticulatus* and *Tylecodon wallichii* growing in the same area, with a natural hybrid flourishing there as well! On the nearby Anysberg Reserve (a hotspot for many rare species) we found *Carissa haematocarpa* (Not evaluated).

We are looking for new volunteers to join the Napier CREW so that a more structured approach can be put in place for 2015.

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**News from Swellendam and Barrydale CREW**

Flora Cameron

The most exciting event of the year for Swellendam was the opening of the Overberg Lowlands Trust Research and Visitor Centre at Haarwegskloof. It is amazing to see Odette’s dream realised and her dedication to saving the Renosterveld recognised.

The Renosterveld around Barrydale is threatened by alien invasive plants and farming practices over the past 300 years that have not been conducive to conservation. This has a major impact on a very important water catchment area of the Langeberg. Work is in progress to form a conservancy in Barrydale and the farms in the valley. Based on the success of the Overberg Lowlands Conservation Trust (OLCT), one of our aims in 2015 is to involve the farmers in surveys to show them the wonderful diversity and value of their veld. The Grootvadersbosch conservancy to the south of the Langeberg has managed to get funding for the development of hiking and biking trails with a view to financing invasive alien clearing and other conservation activities. This is also an example of what can be achieved if the farmers work together.

Recruitment of CREW members was once again attempted through walks with the Barrydale hiking club, Dendrological society of Swellendam and a presentation to the Swellendam Garden Club. Although a lot of interest is shown in seeing the plants of the area, most people are not keen to get involved in knowing and recording them. However, we have one enthusiastic new member from Swellendam, Willemina de Wet, keen to photograph plants around the Marloth hiking trails. These are identified as far as possible from the available handbooks and posted to iSpot. We plan to meet regularly to put the photographic records into usable forms for CREW.

Jill Blignaut continues her high altitude collection from the Langeberg and extended her collecting from Horingberg (January 2014) to Garcia pass (October 2014), including rangers from Grootvadersbosch Reserve. Several rare species were recorded, including *Agathosma umbonata* (Rare). The old year was seen out with a hike to Middelrivierberg and along the Swellendam hiking trail. We hoped to reach Vensterbank, but it was just too hot to make it all the way. We also hoped to find the elusive *Pachites appressa* (Rare) since the area burnt two years ago, but alas it didn’t show itself. We at least saw *Acrolophia capensis* (Least Concern) and *Disa cardinalis* (Rare). A flowering *Cliffortia lanceolata* (Rare) was an exciting find. Jill is being assisted by Tony Rebelo and Ismail to ensure that her collection data are captured in a useful form for future reference. Her records have already proved to be extremely useful to plant collectors.

Peter and Jill on the top of Lemoenshoek peak.
visiting the area, including Professor Charles Stirton.

There are a few areas of arid Renosterveld and transition veld around Barrydale that we monitor regularly. In the process a new site for Bartholina etheliae (Least Concern) was found. It favours Pteronia pallens or Pteronia incana as ‘nurse’ plants and is usually tucked underneath them together with Holothrix secunda (LC). The Drosanthemum display was not as spectacular as last year and the search continues to distinguish Drosanthemum micans (Endangered) from D. speciosum. It seems that natural hybridisation is taking place or they are just variants of the same species. Watch this space!

During our regular Sunday morning walks in May and June we searched in vain for Oxalis anomala (Data Deficient – Insufficient Information) around the Barrydale koppies. We were rewarded by sightings of Veltheimia capensis (Least Concern) flowering beautifully, Syringodea longituba (Not evaluated) in minute cracks in the shale, Trichodiadema burgeri (Vulnerable) and other Oxalis species we need to identify.

Interaction with fellow plant people remains a very crucial part of CREW outings and in the process we were made aware of two plants that are rarely seen. Judd Kirkel, a visiting horticulturist, opened our eyes to Bulbine mesembryanthoides (Least Concern); found growing next to Disa sagittalis in a locality that would otherwise have been overlooked. Healthy populations of Muiria hortenseae (Critically Endangered) together with Gibbaeum heathii were reported by Catherine Arthur, a visiting photographer.

Once again the children (8 to 12 years old) from ‘Net vir Pret’ were taken for an hour-and-a-half walk in the veld close to their school. The emphasis for the year was their Khoisan ancestry, so we could discuss the respect these people had for their environment and the plants that were useful to them for various medicinal or other purposes. Of course it has to be stressed that picking of plants without permission is not allowed!

The ranger on Orange Grove Farm near Robertson approached us to help with rehabilitation of the veld and identification of plants along their proposed hiking trails. The farm is situated at the base of the Langeberg near Arangieskop west of Robertson and the land extends to the top of the range. The rehabilitation involved mainly proteaceous fynbos and Hildegard was able to give advice about species, seed collection and planting. We have not had the time to do the surveys yet.

Hildegard had the opportunity to do a presentation on the need for orchid conservation at the World Orchid Conference held in Sandton, September 2014. This is only the second time that this international conference has come to South Africa. Emphasis was placed on the volunteer work done by CREW, the resulting data collected and the necessity of making the general public aware of the need for orchid conservation in South Africa. It has been found that the general public does not even know what an orchid is, and that they are critical indicators of the biodiversity and general health of the veld. We will endeavour to do similar presentations to the local Vroue Landbouvereniging, farmers’ meetings, garden clubs, etc.

Our New Year resolution is to complete the organising of the data collected to date, and to not regard our outings as finished until the forms have been filled in for CREW.

Muiria hortenseae (Critically Endangered) growing on the quartz fields.

Drosanthemum speciosa.
I always start this article with the statistics and this year it is going to be no different.

The year 2014 was a hugely successful and it is difficult to imagine how we can achieve another year like this:

- 21 107 iSpot observations (Nicky van Berkel has posted a massive 9 881 observations).
- 3 members of the Outramps in the top 5 iSpot globally.
- 450 site sheets on iSpot since the workshop in May 2014.
- 80 special plants new to the Outramps were monitored.
- 3 new species named after members of the group.
- 1 new species named after the Outramps.
- 16 out of 30 priority target species monitored.

In order to achieve these figures, the field trips came thick and fast. I will start with our youngest member Brian du Preez, a.k.a. ‘The Boy’. He was busy with his Saasveld Practical in the Eastern Cape. He worked and explored in Baviaanskloof and did extensive work on the Wild Coast. The startling figure for 80 new specials was in no small measure due to his exploration of this very under-explored area. He catalogued plants, butterflies, birds, invertebrates, mammals, reptiles, lichens, fungi and all things to do with the ocean. He found a couple of new plant species, and some more may emerge as the experts sift through his collections. His iSpot observations now stand at 4 815, which is the third highest total on iSpot globally. He has contributed hugely to a better knowledge of the plants and creatures that inhabit the Eastern Cape.

Back in the southern Cape, the rest of us were also working like beavers. The average age of the Outramps took a dip this year with the addition of Sally Adam; we now stand at an average of 61 years. Weekly field trips were maintained and there were some amazing overnight trips. During spring we cranked up the pace and often did two overnight trips a month. Here are some of the highlights of the amazing expeditions we had in 2014...
I love the indigenous forest and the coastal plains, but the Swartberg takes some beating. And so do the plants. At times there were sheets of watsonias from almost white, through to pale pink, orange, scarlet and magenta.

We had an excellent haul for the day. *Protea montana* (Vulnerable), *Leucadendron dregei* (Endangered), *Berkheya francischi* (Rare), *Otholobium swartbergense* (Rare) and *Psoralea* sp. nov. ‘kougaensis’ (Rare), to mention a few,

In February, Profs Charles Stirton and Muthama Muasya, as well as Abubakar Bello, who is doing his PhD at UCT, arrived at the farm. Ismail Ebrahim, our co-ordinator from CREW, Rupert Koopman from Cape Nature, and the interns Dewidine, Liesl and Anri joined the Outramps for a *snoek* braai at Strawberry Hill. It was a great evening and we enjoyed meeting a whole lot of new people and seeing old friends again. Early the next morning we were off to Camferskloof to check psoraleas, sedges, liparias and otholobiums with our three experts. The promised high temperatures never materialised. For most of the day, we walked in ‘mizzle’, which is our word for a fine misty rain. Fossicking (a meter a minute) is not always to my taste but Friday was different, as we had one wonderful surprise after another. Both Charles and Muthama are so willing to share their knowledge and it turned out to be a really good day for the Outramps.

On Friday we left George at an obscenely early hour to meet Jan and Annelise Vlok along the road from Oudtshoorn to De Rust. Jan was leading a walk as part of the De Rust Eco Festival. We expected a fairly leisurely stroll. Instead, we went at a good pace with occasional plant stops. During the course of the walk, we went through Succulent Karoo, Subtropical Thicket, Renosterveld, Sandolienveld, Fynbos and even some Afromontane Forest. The track itself was fairly precipitous and there were some ‘oohs’ and ‘aahs’ over some of the more difficult terrain. The walk wasn’t very long, but at times it was fairly challenging. Every time that Jan talks plants, I am awestruck. His knowledge is encyclopaedic, his passion is contagious and his stories about the plants are endlessly fascinating. His ability to avoid tricky botanical language when he talks to amateurs is legendary. He must be regarded as one of the foremost modern botanical explorers. Some of the threatened species we recorded included *Babiana karooica* (Vulnerable), *Haworthia bayeri* (Endangered), *Manulea derustiana* (Vulnerable) and many others.

A couple of abortive attempts to find *Pteronia hutchinsoniana* (Rare) sent us off on the Jeep track, heading west across the Rooiberg massif on the 3rd of October. Annelise Vlok had mentioned that she and Jan had seen it there a couple of years ago. It is one of our priority species, allocated to the Outramps by CREW. About 1 km from the Rooiberg Pass, there was the first flicker of excitement. There was much discussion and peer-searching through hand lenses to decide whether we had this elusive plant or not. Disappointingly in the end, we decided that our *Pteronia* was a *Relhania*. It was on the way back, that another *Pteronia*-like plant caught our attention. Once again the hand lenses came out and the discussion raged. The ‘Vlok’-book was hauled out of the pack… ‘Do the smooth leaves have bristly hairs on the margins?’ This is one of the distinguishing features of *Pteronia hutchinsoniana*. Well we thought they did. And later Jan Vlok confirmed that we had found it. A little further on we saw *Agathosma sp.* nov. ‘roodebergensis’ (Rare). Its distinctive leaf structure has hopefully found a niche in my brain. Closer to the gate we were once again stopped dead in our tracks; with the sun shining brightly, a couple of dainty moraeas had opened their petals. The plants were about 25 cm high and had a single furrowed leaf. It fitted (we think) the description of *Moraea exiliflora*, which is listed as Critically Rare.

Last but not least and the highlight for 2014. We found 100 plants in a new colony of *Disa procera* (Critically Endangered), which was previously known from one small population.

### The Fourcade Botanical Group (FBG) never stops searching

**Most of our monitoring is in the vicinity of St Francis Bay and Jeffreys Bay. There is so much development happening in especially the Jeffreys Bay area that Ismail has asked us to record what is there before it all disappears.**

In 2014 we had two particularly good days with visiting CREW groups; one day spent recording at the old dump site, Papiesfontein, near Jeffreys Bay with the Port Elizabeth CREW group, and the other was a wonderful walk in our very special St Francis Fynbos Thicket Mosaic with members of the Worcester group, and of course we recorded the plants there too.

At a quick glance the Papiesfontein dump site is rather bleak, but it is a good example of Coastal Lowland Renosterveld and hiding in it, if one looks carefully, are various threatened plants such as *Gasteria armstrongii* (Critically Endangered),
of which we saw less than 10, and *Lotononis acuminata* (Vulnerable).

Our walk with the Worcester CREW took us through a small, but beautiful, coastal forest and large areas of *Rapanea gilliana* (Endangered), *Agathosma stenopetala* and *Erica chloroloma*, (both Vulnerable). The cherry on the top was the Endangered *Satyrium hallackii* subsp. *hallackii* in the dune wetlands.

In September 2014 we joined the Port Elizabeth CREW to search for *Cyclopia longifolia* (Critically Endangered) and *Cyclopia intermedia* (Declining) and we found small populations of them both.

Another highlight was a quick trip into the Baviaanskloof with Ismail and some of his Cape Town team and the Port Elizabeth group. This kloof is a most special place and one doesn’t have to look too far to find its treasures, such as the Vulnerable *Bowiea volubilis* or the Near Threatened *Tritonia dubia*.

Our visits to the Jeffreys Bay wind farms and Mentor’s Kraal, where we have found various plants of Conservation Concern, have been far more interesting and rewarding than our trips to the disturbed remnants of Renosterveld near the Jeffreys Bay mall and informal settlements.

Our team spent a few days in November on Posfontein-se-Berg and we drew up lengthy plant lists that included five species of Conservation Concern.

Our final CREW excursion of the year was to some of the wetlands on Thyspunt, the site of the proposed Nuclear Power Station.

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**Stop press!**

Our most exciting find took place on 23 January 2015. We went to hunt for *Felicia westae*, last collected by WF Barker 64 years and two months ago and prior to that in 1944 by Fourcade himself. We found just 30 plants in a small seasonal wetland surrounded by mealie fields and dairy farms. What excitement! We couldn’t focus our cameras. The FBG doesn’t sit still. Valda Barratt flew to Cape Town with her pressing, Ismail collected it and within four days of finding it we had the ID confirmed by John Manning!
Our aim was to monitor *Satyrium hallackii* subsp. *hallackii* (Endangered), but we also recorded *Capeochloa cincta* subsp. *sericea* (Vulnerable) *Eulophia speciosa* (Declining) and *Psoralea repens* (Near Threatened). Henni de Beer, Eskom’s Environmental Officer, helped by visiting other wetlands in the dune system on his dune buggy and recording what he found.

Our monthly rambles with adults, demographic monitoring of our CREW logo, *Brunsvigia litoralis* and outings with the children are ongoing.

We are delighted that Chris and Margie Middleton from Barrydale CREW have joined us and they help in so many ways.

CREW has given us a wonderful opportunity to explore beautiful places with like-minded people, and every now and then we come across a plant of particular interest. Hopefully the data we collect will be of use to volunteers in years to come and to others doing research, and will help to conserve wild areas in our country.

Last year was an exciting year in the far eastern corner of the Cape Floristic Region. Following the formalised partnership between CREW and the Botanical Society of South Africa, the Port Elizabeth CREW Group and the Algoa Branch of the Botanical Society underwent a merger of sorts. Even though the core members of these groups comprise the same people, the conceptual merger helped us to streamline our objectives and planning for the year, which resulted in one of our most successful years to date.

One of our major objectives for 2014 was to increase our members’ taxonomic knowledge about the characteristic plant groups found in our area. We started with some of the Eastern Cape’s ubiquitous succulent groups, namely the vygie family, Mesembryanthemaceae (Aizoaceae), and the genera *Crassula* and *Euphorbia*. Mesemb expert, Priscilla Burgoyne, visited us over a weekend in March and hosted a very informative workshop on the taxonomy of the Mesembryanthemaceae (Aizoaceae). She also guided us through the different *Crassula* and *Euphorbia* species found in our area, after which we put our newly acquired knowledge to the test during site visits to Coega and the Baakens Valley. Thank you to WESSA-EP (Wildlife and Environment Society of South Africa – Eastern Province region) and the Nelson Mandela Bay Municipality for providing funding for this workshop via their Critical Ecosystem Partnership Fund (CEPF)-funded Urban Conservation Programme.

Two more objectives for the year were to expand our area of investigation and to interact with our fellow Eastern Cape botanisers, the Fourcade Botanical Group from St Francis, on a more regular basis. To this end, we joined them on a number of site visits outside of our home turf to search for rare and threatened plant species. In April we visited Papiestfontein, the bulb capital of the east, where Caryl Logie led us on a ramble through some of the last remaining patches of Humansdorp Shale Renosterveld. We tracked down the Vulnerable *Lotononis acuminata*, which was putting on a spectacular lemon-yellow floral display in between the grey renosterbos, as well as the Critically Endangered and very cryptic (non-flowering) *Gasteria armstrongii*, which only occurs in the Gamtoos Valley.

We teamed up with the Fourcade Botanical Group again in June when we visited the eastern Baviaanskloof. This time we were joined by Ismail, the CREW Groen Sebenza interns, and Brian du Preez from the Outramps CREW group who was working in the Baviaanskloof Nature Reserve at the time. We travelled westwards through the kloof from Komdomo, snaking our way up along Combrink’s Pass.
until we reached the plateau near Bergplaas. Along the way we encountered many interesting plants, including the Near Threatened *Tritonia dubia* and the Rare *Huernia longii* subsp. *echidnopsioides*. On our way back to Komdomo, Brian and Ismail spotted the Rare *Argyrolobium parviflorum* growing next to the road. Many thanks to Brian for organising this wonderful trip!

During August we visited one of our favourite haunts, Hopewell Nature Reserve, in the hopes of collecting a flowering specimen of the Vulnerable *Senecio hirtifolius*. We had found this species at Hopewell a couple of years before and have since been visiting the site annually, but between the conspiracies of the seasons and herbivorous insects, we had never seen it in flower. Alas, 2014 was not meant to be any different, and we once again arrived at the wrong time, the plants already having flowered a month or so prior to our visit. We did manage to find the Near Threatened *Haworthiopsis fasciata*, as well as other interesting succulents like *Aloe lineata* var. *lineata*, *Euphorbia gorgonis*, *Euphorbia polygona* and *Gasteria nitida*.

To celebrate the arrival of spring in September, we spent a weekend in the Elandsberg and Van Stadens Mountains to the west of Port Elizabeth. Much of the first day was spent in the fynbos around the Sand River Dam, where we found the Critically Endangered *Cyclopia longifolia* growing along the banks of the Sand River. The Fourcade Botanical Group joined us the following day at Longmore where we visited the farm Cypherfontein and explored the remaining fynbos in between the pine plantations. Here we found the Declining *Cyclopia intermedia*, resprouting after a recent fire, and the Vulnerable *Cullumia cirsioides* growing at the bases of rocky outcrops.

October is traditionally our Aspalathus ‘hunting season’, when we try and find previously unrecorded sub-populations of two of our endemic and Critically Endangered Aspalathus species – *A. cliffortiifolia* and *A. recurvispina*. As luck would have it, we managed to track down both of these species at a new location at Noordhoek between Cape Recife and Schoenmakerskop. We also recorded the Vulnerable *Erica glumi-flora*, the Endangered *Rapanea gil-liana* and the Vulnerable *Syncarpha sordescens*. A Sunday afternoon walk along the Coastal Fynbos Trail at Schoenmakerskop by one of our members that same weekend led to the discovery of another locality of *A. cliffortiifolia* – this time a subpopulation in excess of 500 individuals. All in all a good month for Aspalathus!

Our final excursion of the year was a visit to the southeastern foothills of the Groot Winterhoek Mountains in the Groendal Wilderness Area. Our mission was to locate the Vulnerable and very localised endemic *Er-

*Lotononis acuminata* from the Papiestfontein area.

*Erica abelii* from Perdekloof.
ica abelii. After some searching, we located about 40 plants growing in cracks and crevices along quartzite cliffs of the Perdekloof. The almost fluorescent-yellow flowers of this Erica against the pale rock faces made for quite a sight. We collected some DNA material for Dr Ted Oliver to be used in a phylogenetic study of the genus.

Two other highlights for the year were the chance discoveries of the rare local endemic Centella tridentata var. hermannifolia at three separate sites, and a population of the endangered Hyobanche robusta in sand dunes of the Nelson Mandela Metropolitan University Private Nature Reserve.

A big thank you to all our volunteers for their continued support and unwavering enthusiasm for conserving our flora. Thank you also to Ismail and the rest of the CREW team for enabling and assisting our local efforts.

The Pondoland CREW group has had a busy 2014, meeting most Thursdays and taking several trips further afield when special plants or sites beckoned.

Fortunately there are 52 weeks to get to all our favourite haunts; the various parts of the Umtamvuna Nature Reserve featuring high on the list.

Our normal operating range is from the south bank of the Umtamvuna River in the Wild Coast Hotel complex to Vernon Crookes Nature Reserve in the north and Ngele in the West. We did not have particular target species this year and when we did set out to find something, we were not successful – Nymphoides forbesiana and Hyobanche fullerii still have us looking!

Most of our outings involve surveying and monitoring grasslands in this area of rich floral diversity and endemism. We are in the process of compiling plant lists for Mkhambathi and Ongeluksnek nature reserves as well as the Dingeleni camp in the new Mtamvuna reserve in the Eastern Cape. We also record the plants we see on all our outings, which gives a good indication of flowering times and seasonal variation. On these outings we have found undescribed species, for example a Wahlenbergia at Umtamvuna, as well as red-listed plants such as Disa scullyi and D. rhodantha at Ntsikeni. In addition to flowers, there are also special forest species at Umtamvuna (such as Manilkara richardii, Faurea macnoughtonii, Cussonia pondoensis and C. richardii) and Oribi flats, where we found four Strychnos species and a new locality for Pristimera peglerae.

Our earlier visit to Pondoland was followed up by a meeting with the Baleni community and stakeholders in the development of ecotourism in the wild coast, where we gave feedback regarding the viability of a botanical reserve and nursery in the area. We continue to work with the Groen Sebenza interns, providing workshops and identifying specimens.

Co-operation with botanists and other scientists is always an enjoyable experience (and particularly important stimulation for older brains!). Braam van Wyk not only mentors us with our curation of the collection in the HNTA Herbarium, but also got us looking at fruiting phenology of Eriosemopsis subanisophylla and the differences between the tree and rock forms of Rhipsalis baccifera.

Ngele is a rich source of Apocynaceae and we have learned a great deal from our outings with Ashley Nicholas (UKZN), Pieter Bester (SANBI) and Melissa Glen (UKZN). We searched for Erythrococca sp. nov. for Robert Archer at SANBI; Benny Bytebier (UKZN) has come on orchid hunts; and Steve Johnson (UKZN) set up cameras to record moth pollinators of Rangaeris muscicola. Dineo Dibakwane (SANBI) and friends came to record GPS points for seed collection for the Millenium Seed Bank at Kew. We also arranged the Tony Abbott memorial walk along the cliffs from the Umtamvuna Nature Reserve office to Clearwater. It was well attended, but not everybody stopped to look at the flowers, a situation we will try to rectify for next year.
Our first outing for the year, a joint fieldtrip with the CREW Mkhambathini group to Cato Ridge grasslands, yielded a splendid display of our target species – the Endangered Senecio exuberans.

In May we undertook our second Mkhambathini–Durban CREW joint trip to uMgeni Valley to search for the Declining Disperis woodii. To her great delight, Jocelyn found the first of four specimens of this tiny orchid.

Later in May we had our first visit to the Nonoti network, a biodiversity stewardship site just north of Stanger, comprising coastal grassland overlooking the Nonoti River estuary. It appeared to have great potential and further visits were planned. The first of these took place in October, where we were amazed at the variety of plant species in the secondary grassland, including the Vulnerable Brachystelma sandersonii and three species of Eulophia. Time did not allow us to visit the primary grassland and our subsequent visit in December was very disappointing as the primary grasslands was very dry and had been disturbed by illegal bulldozing.

Hearing about the CREW A-team finding the Endangered Zeuxine africana in 2013, we decided to revisit the only known site of this species. We were disappointed to see an extremely dry and overgrown site without any of our target species. We hope that the CREW KZN node will have effective communication with the owners of this site, Transnet, and that this small remnant patch will recover to its natural state.

The CREW Durban group is fortunate to work within the eThekwini Municipality’s priority sites and this year decided to target two of the priority sites. The first is Inanda Mountain, a community-owned site that is earmarked for biodiversity stewardship. Despite the site being heavily grazed, it is rich in species. We were also mindful of the historical collections made in this area by John Medley Wood.

Despite being equipped with GPS co-ordinates for previous sightings of Brachystelma natalense (Critically Endangered) and Brachystelma gerrardii (Endangered), we were unable to relocate the plants in December. However, Peter Taylor who lives adjacent to a known site confirmed that Brachystelma gerrardii is on his property and he has surveyed the population for us.

CREW Mkhambathini

Mkhambathini CREW had a focused year. There were nine, mostly very successful, outings. These are a few highlights:

In March, we went to the remote area of Ismont near Mid-Illovo where Olive Hilliard made some interesting collections in the 1970s. We started by following up on a record of Gerrardanthus tomentosus (Vulnerable). Though unsuccessful, we did find a new locality for Bego­nia homonyma (Endangered).

May saw our group going to Um­geni Valley to look for the elusive Disperis woodii (Declining) where it was last seen in 2004 on a Botanical Society walk. Fortunately, we had many eyes on that trip and one sharp pair found the tiny plant growing in the damp soil in
the shadow of the path cutting. We found 20 plants in total. Some photos will appear in the new orchid book about to be released.

In July, we went to World’s View set above the northern suburbs of Pietermaritzburg to monitor *Moraea hiemalis* (Near Threatened). Although reports from the 1980s suggested there were ‘hundreds of plants’ on the hillside, we only found four. The grassland is now under the custodianship of the newly formed World’s View Conservancy who has taken a keen interest in its preservation and organised for the municipality to have it burned for the first time in many years. The *Moraea* stood out, in a hurry to flower and seed before the rains.

In October, the municipal conservation department took us to Belleview, east of Pietermaritzburg, to look for *Brachystelma franksiae* subsp. *franksiae* (Vulnerable). Our rather dubious highlight was to find a single plant of the Critically Endangered *Asclepias bicuspis*, which we just need to really confirm because it is so out of range and strangely out of habitat. We also found *Disperis woodii* (Vulnerable), *Woodia verruculosa* and *Thunbergia venosa* (Rare) plants.

**2014 Umvoti CREW outings**

Felix Middleton

The small Hermannsburg protected area can be regarded as a pristine habitat for flower identification in late springtime and the number of species on this small patch of grassland is astonishing.

Amongst the more remarkable plants we identified were two species of grass aloe, at least four species of Apocynaceae, several *Eu- lophia*, *Satyrium* and *Disa* orchids, proteas and the Endangered *Gerbera aurantiaca*. The small patch of *Sandersonia aurantiaca* (Declining), which is located just outside of the protected area was not grazed by cattle this season and the bell-shaped flowers were spectacular.

A visit to the Boscombe forestry estate was worth the long walk through the monotonous eucalyptus and pine plantations. There are many small patches of grassland that have not been used for forestry, and we found many plants in one recently burned patch. We observed Apocynaceae species, white and red forms of dwarf
protea, herbaceous hibiscus and several bulbous plants. *Riocreuxia torulosa*, the candle vine, grows along the edges of the grassland.

Although some of the walks of the Blinkwater Trail reserve have been closed to the public, there are still patches of forest surrounded by hilly grassland that are easily accessible. A visit to one of these isolated patches of forest surprised us with a large diversity of shade-loving flowering plants. We identified two species of terrestrial orchids, at least three different *Streptocarpus* and five species of epiphytic orchids, including the minute *Mystacidium flanaganii*. It is a pity that this trail is not as popular as in the past. A part of the indigenous forest was accidentally burned during a controlled burn, and patches of brambles and bracken are encroaching into the grassland as well as limiting access to the trails through the indigenous forest.

We surveyed one of the three known habitats of *Emplectanthus gerrardii* (Rare), one of our target species, in mid-December. John Roff, an enthusiast who has previously explored this site and identified the species here, joined us as guide. At first we only found immature plants among the dense vegetation in this small pocket of indigenous forest in the Karkloof valley. As a result of this, we focused our attention on some spectacular species of *Streptocarpus* and even found some epiphytic orchids in the trees along the river. Only when we emerged from the forested area did we find two *E. gerrardii* in flower.

We revisited the area in early January, at which time many more of the plants were in flower.

**Midlands CREW Summer 2014/2015**

Nikki Brighton

**Sometimes we get really lucky, at others we hardly find anything, occasionally we get stuck in the mud or come across a ‘mystery’ plant. Most often we spend time in the mist.**

In the past we have found that organised fieldtrips are often cancelled due to heavy rain (meaning impassable roads), so we devised a cunning scheme to encourage individuals to keep an eye out for special plants on their ramblings. Every month in Midlands’ social and print media, we publish a Threatened Plant Species to look out for. The results have been great, particularly for the Rare *Brunsvigia undulata* – we identified at least four new populations and have had landowners offer to host CREW fieldtrips, expanding our network of plant enthusiasts. We went to explore one of the populations on Stormy Hill in Boston, finding seven plants in all. We spent the morning doing a plant survey and were excited to find the Data Deficient *Schizoglossum bidens* – we counted at least 10 plants – and a host of other wonderful wildflowers.

With members of the uMvoti CREW, we explored Mt Gilboa in
Karkloof recording 65 species that day including the Watsonia mimic, Disa nervosa. We searched for the Endangered Disa scullyi but they were not yet in flower. In the mist-belt forest, a small intrepid team located the Rare Emplectanthus gerrardii.

We searched for orchids on Mahawu Mountain, but were too early there too. We found Brunsvigia undulata (Rare), not yet in flower, Helichrysum mutabile and Schizoglossum elingue. We came across a pink version that may just be the Rare S.elingue subsp. purpureum collected by Anne Rennie in 1972. A few weeks later we headed up to uMngeni Vlei area where we did find one lone Disa scullyi, it was really small and had almost finished flowering so the identification had to be confirmed back at the BEWS Herbarium. However, the other orchids were spectacular – Disperis cardiophora and Corycium nigrescens; Satyrium trinerve, Satyrium longicauda, Schizochilus zeyheri, Disa rhodantha and one Disa chrysostachya.

An impromptu excursion to Edgeware in Boston to introduce CREW staff to the area resulted in heaps of fabulous finds – 12 plants of Schizoglossum bidens subsp. hirtum and one Asclepias bicuspis (Critically Endangered) too! One simply never knows. On Bea-

On 4 December one of our CREW volunteers, Ansell Matcher, headed off on a 25 km round trip to re-photograph two plants on our target list (one being Critically Endangered) recorded last season. Although neither species was in flower, Ansell found a new population of the Rare Aster conferifolius. Sometimes it pays not too get a good photo the first time!

Our first trip of the New Year was very rewarding. Again we set of

Underberg CREW field trips 2014/2015

Julie Braby, Underberg CREW Co-ordinator

After a very, very dry winter here in Underberg, we were really looking forward to the spring rains and flowers.

We had to wait a little longer than usual, but we have been rewarded with great flowers this season.

Our first outing of the season was to monitor a population of Anemone fanninii on the Sani Pass Road. We were a little early and when we went back 10 days later there were plenty of plants in flower. In November we headed for some altitude at Garden Castle Nature Reserve in search of the Rare Erica albospicata. We came across a small population of this beautiful plant, but are still waiting for confirmation from the herbarium. We went back a week later to the same spot, as we had walked past so many different ericas that we could not identify and realised the importance of collecting.
to reach an altitude of 2 000 m in search of *Athanasia grandiceps* (Rare). After a good climb we were rewarded with approximately 500 plants. It was in a very specific area in a mountainous gulley amongst strewn rocks.

One of our highlights was a trip to Sehlabathebe National Park in Lesotho with our CREW KZN node manager, Suvarna Parbhoo, and intern Hlengiwe Mtshali from whom we learnt a great deal on the importance of correct plant collecting, pressing and data collection.

The newly formed Gauteng CREW group held their first outing on Saturday 24 January 2015!

The day started with an early meeting in northwestern Gauteng (near Lanseria Airport) at a known locality of the Vulnerable *Melolobium subspicatum*. This species is restricted to Gauteng and Northwest provinces and is only known from a few localities.

The area was surveyed to show the participants what the plant looked like and then to determine the extent of the population. The group was then organised into a line so that we could sweep the population and count how many individuals there were. This was repeated on the eastern side of the population, which is bisected by the main road linking Randburg and Hartebeespoort Dam.

After both subpopulations had been counted we headed a few kilometres up the road to pay a visit to the Vulnerable *Xerophyta adendorffii*. This was just out of interest and no
surveying was done on these two populations. At the same locality we also found *Huernia transvaalensis*; although listed as Least Concern, it is always a treat to find in flower.

By the time we had finished our field visits the heat was intense and everyone, especially the younger CREWzers, were feeling hungry and hot. We headed to nearby lodge Cradle Cove to have a braai and a refreshing dip in the pool. Conversations about plants and threatened species extended for most of the afternoon amid boere-wors rolls and much thrashing and splashing in the pool. A great day was had by all and brief discussions about the next outing revolved around a rare orchid, which is largely restricted to Gauteng and currently only known from one remaining locality.

The new *Callilepis normae*, which was discovered during a PSG outing to Mount Anderson game ranch.

a new *Callilepis* species, which was described a few months later as *C. normae* (after the owner’s wife). We compiled a plant list of around 318 species that weekend.

In March we visited one of the Mpumalanga Tourism and Parks Authority’s reserves, Verloren Valei. Situated at over 2 000 m in altitude, this reserve contains many specials although it has not been well collected in the past. Herbarium specimens were gathered and a plant list compiled. Some of the specials included *Aloe modesta* (Vulnerable), *Gladiolus ferrugineus* (endemic) and *Eucomis vandermerwei* (Vulnerable).

In April a very small group went to Nelsberg Nature Reserve, which is a forestry reserve and not well known at all. Unfortunately, we were rained out, but we did get to see a few plants before abandoning the outing.

In May we travelled to a unique patch of Zululand Thornveld that just enters Mpumalanga at Mananga. Some of the highlights included *Aneilema zebrinum* (first record for Mpumalanga), *Allophyllus decipiens*, *Euphorbia grandicornis* and *Gardenia cornuta*.

In October the PSG explored some of the wooded grasslands of Ntsininini near Waterval Onder with Graham Grieve. Although the season was rather late with few flowering

The PSG has concentrated on some of the botanically rich, yet unexplored areas of the province. This is an alternative approach to focusing on target species, and in many instances more rewarding.

Being unable to locate a Data Deficient species can be quite disheartening, so our expeditions over the past year were mainly to new or poorly known protected areas, areas of endemism or very unusual vegetation types.

Our February 2014 outing was in to the Mount Anderson Nature Reserve, owned by Mike Rattray. These grasslands were magnificent and we were treated to wonderful views and some exciting plants. The highlights included *Disa clavicornis* (Endangered), *Helichrysum summo-montanum* (Endangered), *Alepidea cordifolia* (Vulnerable) and

The Mpumalanga Plant Specialist Group (PSG)

Mervyn Lotter

The new *Callilepis normae* was discovered during a PSG outing to Mount Anderson game ranch.
plants, we were treated to *Adenia wilmsii* (Endangered).

Finally, after so many years of driving through this area, the PSG managed to spend a weekend botanising in Chrissiesmeer. Some of the highlights included *Khadia carolinensis* (Vulnerable), *Brachystelma foetidum*, *Polygala gracilenta* and *Kniphofia porphyrantha*.

Several exciting trips are planned for 2015, with a focus on unexplored or exciting areas.

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**CREW Limpopo update**

Sylvie Khöne & Bronwyn Egan

*Our first trip was to the Blouberg Mountain in February 2014. We were washed out by a flood, but in spite of this several orchids were spotted and there were thousands of *Habenaria galpinii* where we camped.*

A month later we ventured back up Blouberg in better weather conditions to visit the summit and the northwestern plateau. Some of the plants seen were *Satyrium longicauda*, *Zoutpansbergia caerulea* (endemic), *Cineraria hederifolia* (endemic, Rare), *Rabdosiella leemannii* (Rare), *Limosella inflata*, *Ancylobotrys capensis*, *Ceropegia sp.*, *Gloriosa superba* and *Gladiolus permeabilis*.

In April 2014 we teamed up with Barbara Turpin, from the Plant Specialist Group (PSG) in Mpumalanga, and Domitilla Raimondo and Mahlatse Mogale, both from SANBI, for a first visit to the Leolo Mountains in Sekhukhuneland. Roads, cattle and human settlements have made their mark on the vegetation of this area, but...
considering the looming presence of the mines in the valley below the mountain, the trip was still a botanical success. Interesting plants included *Cyphia corylifolia* (Data Deficient – Insufficient Information); *Gladiolus sekukuniensis* (Vulnerable) and *Jamesbrittenia macrantha* (endemic, Near Threatened). In addition, an unknown *Helichrysum* sp. was added to the list.

Our much anticipated trip to Venda took place from 1 to 6 December. We stayed at Tshulu Camp on the banks of the Mutele River. We arrived before the rains and therefore many plants were not yet flowering. The trees in the area were, however, spectacular and all the baobabs were in flower. The trip did not yield many specials, although we did discover *Drimia altissima* (Declining) along a dusty road towards the campsite. As the area surrounding the campsite was severely overgrazed, we focussed on learning the local trees and once we ventured towards the surrounding hills, the grazing pressure lessened and we enjoyed the beautiful flowers of *Holarrhena pubescens* and *Tabernaemontana elegans*. A favourite was the wooden banana (*Entandrophragma caudatum*) with its curious fruit. A fascinating aspect of the trip was learning from local experts about the uses of all the trees we came across and their Tshivenda names.

Pondoland CREW recently launched a CD showcasing 134 endemic and special plants of the Pondoland Centre of Endemism.

The project to promote these plants was initiated by the late Tony Abbott, the well-known Pondoland botanical specialist. The resultant CD was compiled by Graham Grieve and the Pondoland CREW group. Copies can be obtained from the Botanical Society in Durban (Sandra at botsoc-kzn@gmail.com), the CREW programme KZN node (Suvarna at s.parbhoo@sanbi.org.za) or at the SANBI bookstore in Pretoria (bookshop@sanbi.org.za).

Pondoland is one of our important centres of plant diversity and endemism. Extending along the coastal region of KwaZulu-Natal from Port Shepstone to Port St Johns in the Eastern Cape, the centre is demarcated by the underlying Msikaba Formation sandstone, which gives rise to unique vegetation. The Pondoland Centre has 30 species of woody endemics, including at least six monotypic genera (*Dahlgrenodendron, Eriosemopsis, Jubaeop-
sis, Pseudosalacia, Pseudoscrolopia and Rhynchocalyx). There are also many rare and endemic species in the grasslands, forests and among rocky outcrops. For further information about plants of this region or access to the herbarium, contact: PCEherbarium@gmail.com.

The CD contains an Adobe Acrobat file for use on personal computers. The information is structured to facilitate easy access via the index and search function. Each species is covered on a separate page, which includes photographs and a brief species description. Providing the information in this way allows the reader to enlarge the images for greater detail, a feature not possible with a printed document.

Highlights of my internship with the CREW programme

Mballi Mkhize

Having completed my degree in botany and biochemistry at the University of Zululand, I decided to volunteer at the Durban Botanical Garden and the KwaZulu-Natal (KZN) herbarium to gain experience and become marketable in the biodiversity sector.

After a year and half of volunteering, my dream came true as I was successful in obtaining a one-year internship funded by the National Research Foundation (NRF) with the CREW programme: KZN node. The experience and exposure to different aspects of plant conservation has made me more positive about the person I have become.

The highlights of my internship are the CREW field trips, which have increased my plant knowledge tremendously. The fieldtrips that stand out for me were to the Nonoti network biodiversity stewardship site and seeing the effects of urbanisation on the secondary grasslands; the Weenen Nature Reserve where we found two threatened Baleria species; and Edgeware Mountain in Boston (KZN Midlands) where we found five threatened species. I am grateful to the CREW programme for the courses and workshops that were organised to ensure that interns obtain various skills and are motivated to perform better and grow in our careers. Travelling to different provinces and towns that I have never been to previously has given me an opportunity to meet, network and discuss plant conservation with amazing people. The lowlight of my internship is the short time frame – I have learnt so much and have taken on every opportunity to practise what I have learnt. On a personal note, being an NRF intern has afforded me the opportunity to obtain my driver’s license.

Being with the CREW programme has been a high point in my life. I am thankful to have gained the knowledge and to have faced challenges too. I most certainly will use this knowledge always and will treasure the memories I have made with the CREW programme.
I was born and raised in the Eastern Cape. After matriculating in 2003, I couldn’t further my studies for financial reasons, but I did a few short courses to increase my employment potential.

I did get a job as a security officer, but knowing my strengths and abilities, I realised that I was in a box. I needed something more challenging than that. I am grateful to Groen Sebenza, because now I work as a para-ecologist—something I didn’t know existed.

My first love for nature
I grew up helping my aunt, who is a Sangoma, harvesting medicinal plants. I was also hunting birds and animals, harvesting honey and eating sea food. I knew a lot of plants and their local names, especially medicinal plants, but I did not know that they have scientific names. I was using natural resources the way I wanted to because I didn’t know that nature needs to be conserved. After I became involved in this project things have changed, because now I am the one who is raising awareness in my community about how to look after nature and the environment.

My duties as a para-ecologist
I am currently doing the following tasks: collecting, pressing and identifying plants to family and sometimes to genus level; collecting, pinning and identifying insects to order level; collecting, preserving and identifying spiders to sub-order level; and capturing all specimen data. In June last year I started working on a mini-research project on hunting and honey harvesting. Although I’m working on all of these, I’m very passionate about plants. I knew a lot about plants and their uses, but there is a lot of interesting information that I only encountered through the project and I want to learn more about them.

My Groen Sebenza learning highlights
The Groen Sebenza National Induction held in Boksburg was the highlight so far. It was amazing to see the number of people being given the same opportunity as I have, and that made me realise how important this opportunity is—that I must grab it with both hands and do something important with it. Attending the career guidance workshop that was held in Durban was very important to me, because I came back understanding myself, what my abilities are and how to get what I want in life.

My learning challenges
The main challenge I had to face was to accept the new subject, which is nature conservation. As I have already mentioned, I used to use natural resources carelessly and now the Groen Sebenza opportunity is teaching me to raise awareness about the sustainable use of these resources in my community. Another challenge for me was the use of terminology. I knew plants by their local names and didn’t know that they have scientific names, but I thank my mentor, Miss Vathiswa Zikishe, who has been a great help in my learning journey.

What Groen Sebenza means to me?
At first I saw this project as an opportunity to earn some money. I didn’t know that it would be a learning journey that will make me employable one day. Thank you Groen Sebenza for the opportunity and the knowledge that you have given me. I’m looking forward to learning more from Groen Sebenza projects this year and increasing my skills.

‘My Name is Landiso Mila’

I was born and grew up in King William’s Town and currently live in Pirie Mission.

I matriculated in 2011 from Imishiza Senior Secondary School and then in 2012 I had a gap year. I knew nothing about nature until I got the opportunity of being involved in the Groen Sebenza Programme in June 2013.

Being a Groen Sebenza pioneer, I have gained experience in collecting various organisms (plants, insects, spiders, snails, ferns and trees). Other skills that I have gained are to create and give a PowerPoint presentation, write monthly reports, and also research skills. I am currently doing a mini-research project on bird-lore. Doing this project is very exciting and challenging at the same time. I interviewed elderly people, asking them about their knowledge of birds, the isiXhosa name for each bird, its meaning and any cultural significance. I also asked...
them about idioms related to these birds. Being a respectful and active youngster in my community paid off when I did this research as people did not hesitate to give information, and they were very happy to see a young person interested in indigenous knowledge. I knew nothing about birds before, but now I do!

I enjoy working at Pirie Mission because there are various habitats, such as forest, grassland and wetland. Being able to collect specimens from different places in the field has made my work more interesting.

My highlights so far have been to know and understand the importance of nature and learning the scientific names of organisms. The most interesting thing was travelling to different places that I have never even thought to visit. I have already been involved in field trips around the country – to Mthentu near Bizana, Addo National Park, and my highlight was being in Cape Town at the Kogelberg farm. This trip was the most important one for me as I learnt about personal and technical skills to prepare for the working environment.

Most of the challenges I have encountered have been solved, but I must say at the beginning it was not easy. I struggled with the terminology used in botany and in science generally; collecting specimens was sometimes difficult, as the veld was dry; and I’m currently working on my public speaking as well as writing skills.

I am very lucky to be part of the Groen Sebenza Programme because they selected me even though the only qualification I have is Matric. I am excited about this opportunity because it provides me with an understanding of conservation. Thank you Groen Sebenza for the amazing opportunity in my life!

From a village called Ngqinisa, located at Chalumna, about 60 km from East London.

I went to school in this village until I decided to change my subjects in Grade 10 because I wanted to do something that involved nature, and changing subjects meant changing schools. It was not an easy thing to do, but I had to follow my dream. After finishing high school, I heard about the Groen Sebenza project. I was very happy because I knew that it was meant for me.

Being part of the Groen Sebenza project is a life changing experience that I am grateful for. My duties in the project are collecting and pressing plant specimens, collecting insects, pinning and basic identification, collecting spiders and sorting them to order level. Recently I have been conducting a mini-research project on sea food harvesting in the village. During my research I learnt that there is a stigma attached to this activity, as some people think seafood is only for the poor, but my research showed that is actually not the case. Sea food and meat have different nutritional values and therefore seafood cannot be a substitute for meat. It was an eye-opener for me to gain different views on the matter.

My main highlights for last year were all the training sessions that I attended in different places. I have learnt so much from them as they changed my view on life and increased the love I have for nature. Another highlight was doing presentations. I love sharing what I am passionate about with others in the hope that they will learn something from it. It also builds self-esteem and confidence.

As part of my learning process, I regard challenges as opportunities to teach me new things about life. One of the challenges I came across was not having a field guide for spider collection, but that has not stopped me from doing my work the best I can. I am using the resources that I have instead of complaining about what I do not have. That mind-set also worked for me when the insects that I had
It's always dark before dawn. That's what I realised after I matriculated in 2009 from Imitsizha Senior Secondary School and endured three and half years without finding a job.

I was miserable. In June 2013 I saw the light at the end of the tunnel after finding a job in Groen Sebenza, a project at SANBI where I work as a para-ecologist in my village called Pirie Mission near King William's Town in the Eastern Cape.

As a para-ecologist, I collected plants and pressed them, preserved and identified spiders, and collected and classified insects. On this journey I encountered some challenges, such as struggling with scientific terminology during training sessions, using keys to identify insects and pinning insects, as well as not finding plants during the winter season. Going through these challenges, I realised that 'patience and perseverance have a magical effect before which difficulties disappear and obstacles vanish' – John Quincy Adams.

I am currently working as a Herbarium Assistant, based at Selmar Schönland Herbarium in Grahamstown. My new tasks are mounting and filing specimens and capturing specimen label information. Being a hard worker, dedicated, as well as a perfectionist has opened this new door for me! I see this as a once in a lifetime opportunity, which I had to grab with both hands. My strengths are my life weapons; I tie them around my neck as a reminder wherever I go.

Thank you Groen Sebenza for presenting an opportunity that will allow me to use my talents. My life will never be the same again.

A ‘new kid’ in the CREW ‘playground’

Gigi Laidler

Briefly, my background is a 4-year BSc majoring in Animal Physiology, Zoology and Nature Conservation (1976), followed by a BSc Hons (Agric.) (1977) in Animal Physiology at the University of Stellenbosch.

After graduating, my life path took me to Johannesburg, where I worked for four years at the University of the Witwatersrand as a laboratory technician. In 1981, life changed again, when my first-born arrived on the scene, and our little family moved to Stellenbosch.

In 1984, when my second child was almost two, I returned to work at the University of Stellenbosch, as a technician in the Animal Husbandry Department. When my husband's job promotion took our family to Port Elizabeth, I eventually found a job with the Port Elizabeth Publicity Association, where my responsibilities were many and varied, as I provided a broad portfolio of Office Management support to the Director.

Once again, our family relocated after four years in the ‘Friendly City’, when my husband joined the Western Cape Department of Environmental Affairs, and we moved to Cape Town. There I briefly continued working in the tourism industry.
The Richtersveld expedition was one of the most amazing adventures a young botanist like me could ever embark on. It was a 10-day trek, with endless adventures and life changing experiences.

Our journey started with a road trip, travelling nearly 1 400 km from Gauteng to the Northern Cape. We covered the distance over two days: Lize and Rudy von Staden, Barbra Turpin and I drove from Pretoria to Augrabies Falls National Park, where we set up camp for the night. During our stay, we admired the spectacular Orange River before heading off on the second leg of the trip.

We then headed for the Ai-Ais/Richtersveld Transfrontier Park, where we met up with the rest of the team – Ismail Ebrahim, Brittany Arendse, Robyn Powell and James Duncan. Domitilla Raimondo and Terry Trinder-Smith (of the Bolus Herbarium) joined us later. Our first campsite was at the Richtersveld Transfrontier Park nursery where, to the carnivore’s dismay, we were to have our last taste of meat for a very long time. We also became acquainted with our tour guide, Pieter van Wyk, a young nature enthusiast. He is a great example of the fact that knowledge is not defined by your age, but by your passion for what you do. He has been hiking the vast Richtersveld mountain ranges for over 10 years and was more than happy to share his knowledge with us.

The Richtersveld vegetation is unique. The diversity of plants growing within the small area is so vast it almost seems infinite; there are more than 300 species endemic to this region. There are beautiful daises, mesembs and plants that I have never encountered before,
such as species from the genera *Conophytum* and *Cheiridopsis*. The structure and uniqueness of the plants can only be explained as the result of the harsh climate of the area. With little rainfall and extreme heat, the plants have all developed unique survival mechanisms.

When travelling through the vegetation during the early hours of the morning the landscape looks green, but once the sun is out the landscape transforms, coming to life with brightly coloured daises, which have opened to catch the sunlight and soon close as the light fades with sunset. With a closer look one can see the miniature plants that grow low on the ground. This trait makes it very difficult to see the plants and as a result, they are easily trampled. One such species is the inconspicuous *Pteronia anisata*. Although very aromatic, this dwarf shrub only grows to about 30 cm and can easily be overlooked. Were it not for the fine-tuned eyes of some of our CREW members, this amazing find would have gone unnoticed. *Pteronia anisata* is classified as Rare according to the South African Red data list, known from only one population occurring in an area of less than 5 km². This species is exceptional because of the minute resin dots striating the bracts. Truly a remarkable and rare find.

Sadly, this magnificent vegetation is under severe threat. One of the...
biggest threats to the Richtersveld is the high level of grazing by livestock. Although the land is protected, farmers are allowed to graze their livestock herds in the park. This has had adverse effects on the vegetation – seen by the patchiness of the remaining vegetation – and is gradually causing extreme transformation of the landscape. Plants are also severely affected by the mining footprint within the park. Erosion resulting from the ‘rehabilitated land’ is causing massive habitat loss to the Richtersveld endemic plants. As a proud tree hugger, it is a very sobering thought hearing about the lush (within the standards of the water-hungry land) and abundant vegetation of the past and realising that this is receding at such a rapid rate.

The negatives should not overshadow the greatness of what is the Richtersveld. The trip was awe-inspiring and I can assure you that everyone had unlimited fun. Each day had a botanical surprise that exceeded the previous days. Although we went 6 to 7 days without a shower or lavatory, I would not exchange the experience for anything. But even so, one could not help but be excited on the arrival of the last day, when we spent the night in Port Nolloth at a guest house by the beach – with bathrooms!