

# CREW News

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## CREW—National Overview

Domitilla Raimondo

**This year CREW celebrates its 10 year anniversary.**

What started off as a three year pilot project in the Fynbos with external grant funds from the United States, has expanded into a nationally implemented programme with financial and institutional commitment from SANBI and the Botanical Society (BotSoc). Few projects of this nature have a lifespan longer than five years, so getting to 10 is very impressive. The success of CREW is due to the dedication of our network of volunteers who donate their time and resources to monitoring and conserving rare and threatened plants. To honour this commitment, SANBI and BotSoc will be producing a coffee table publication this year, highlighting the plight of 100 of South Africa's most threatened plants. A major focus of the book, titled *Plants in Peril*, will be to demonstrate the work being done by CREW volunteers, highlighting CREW activities to monitor the status of threatened species accurately as well as contribute towards their conservation. The number 100 was chosen as this year is the centenary anniversary of the Botanical Society.

Over the past ten years CREW has grown at a sustainable rate, expanding from the focus on the Fynbos to include summer rainfall areas. In 2006 the Mpumalanga Plant Specialist Group joined CREW and in 2007 the KwaZulu-Natal Node was established. CREW work started for the first time in Limpopo in 2012, with an exciting partnership between the University of Limpopo and the Limpopo Botanical Society group (see article on page 34). This year, 2013, we take the bold step of moving the programme deeper into the Eastern Cape, working both in the Pondoland region in partnership with Sustaining the Wild Coast trust, as well as in the Grahamstown and former Ciskei region with Rhodes University. A CREW node will be established in Grahamstown based at the Selmar Schonland Herbarium and Vatiswa Zikishe, who has been working with CREW in the Cape Floristic Region (CFR), will head up the work in the Eastern Cape. Our first two years will focus both on setting up a group of volunteers based in Grahamstown to monitor plant species of conservation concern as well as piloting employment of young mem-

*CREW, the Custodians of Rare and Endangered Wildflowers, is a programme that involves volunteers from the public in the monitoring and conservation of South Africa's threatened plants. CREW aims to capacitate a network of volunteers from a range of socio-economic backgrounds to monitor and conserve South Africa's threatened plant species. The programme links volunteers with their local conservation agencies and particularly with local land stewardship initiatives to ensure the conservation of key sites for threatened plant species.*



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



bers from rural communities in the former Ciskei area to work as para-ecologists.

The term para-ecologist is somewhat unknown in South Africa. Para-ecologists are individuals recruited from rural communities to help conduct ecological and conservation research in the area in which they live. With dedicated training and constant linkages with visiting scientists, para-ecologists become local experts in biodiversity and work to bridge the communication gap between local and scientific communities, contributing to both scientific research and local development. CREW's para-ecologist project will run from April 2013 to November 2015, with three focal areas namely, the former Ciskei region of the Eastern Cape, the Pondoland region, and rural towns surrounding Cape Town (Mamre and Worcester). Funding for employing para-ecologists has come from the Groen Sebenza project (Jobs Fund) that SANBI is implementing across the Conservation Sector in partnership with 32 environmental/biodiversity organisations, and the Kirstenbosch Branch of the Botanical Society. Groen Sebenza is aimed at developing priority skills in the biodiversity sector to create sustainable job opportunities for 800 unemployed graduates and matriculants. CREW will be doing its bit to build skills by employing ten para-ecologists.

Reflecting on 2012, there is much to be proud of. Our volunteers surveyed many species of conservation concern with so many exciting finds (see articles written by each CREW group for examples of these). SANBI's virtual museum, iSpot, has taken off, with CREW volunteers making a massive contribution (see article on page 8). The data collected by CREW volunteers has been invaluable for updating the Red List. During 2012, the conservation status of 797 plants was updated. At the end of 2012, the CREW team received SANBI's CEO Special Award recognising the value of our contribution towards achieving SANBI's mandate to monitor the

status of South Africa's biodiversity. We would like to thank all our volunteers for their hard work that resulted in this recognition. We look forward to celebrating our ten-year anniversary with you. This year we encourage extra hard work to moni-

tor and conserve plants of conservation concern in your regions. We challenge you to help us break all previous records and to demonstrate that this programme has the necessary momentum to continue well into the future.

## News from the CREW KwaZulu-Natal Node



Suvarna Parbhoo

**Six months have passed since I took over the reins of CREW KwaZulu-Natal manager from Isabel, and a busy six months it has been.**

My highlights have been the four-day bumper CREW summer-rainfall workshop and meeting new volunteers via the Bioblitz project. My lowlights have been the untimely death of Rob Scott-Shaw and missing opportunities to join the CREW groups on field trips due to this season's strange weather. Sadly, 2013 began with the news that Roger Uys, Ezemvelo KZN Wildlife's ecologist, is relocating to New Zealand. Apart from being an ardent CREW fan, Roger has been extremely helpful with plant permits and access to the provincial reserves. We wish Roger all the best.

The fifth annual summer-rainfall workshop, held at Umthamvuna Nature Reserve, was by far the best attended workshop. Sixty-five participants attended, including CREW volunteers from KwaZulu-Natal, Limpopo and Mpumalanga provinces, students from UKZN-Westville campus, inland and coastal branches of the KwaZulu-Natal Botanical Society and the KwaZulu-Natal provincial conservation agency. It was the first CREW workshop to be held over four days. The workshop kicked off with Braam van Wyk's tree identification course and concluded with Marie Jordaan's *Gymnosporia* identification course. During the weekend, Braam informed us of the principles of plant geography by explaining the distribution patterns



Rob Scott-Shaw showing volunteers how to do plots at Red Desert Nature Reserve (Photograph: D. Higginson-Keith).





Participants at the 2012 CREW summer-rainfall workshop.

of plants and why some plants are rare. Mondi's environmental manager, Jacqui Shuttleworth, provided insight into the company's environmental programme. Tony Dold introduced his newly launched book, *Voices from the Forest*. On Sunday we were joined by an amaMpondo delegation to celebrate the launch of Sinegugu Zukulu's book, *Medicinal and Charm Plants of Pondoland*. The 2013 CREW summer-rainfall workshop will be held in Es-showe on 6–9 September with three well-known botanists (Neil Crouch, Benny Bytebier and Pieter Bester) already secured for plant identification courses.

My first official assignment as CREW KwaZulu-Natal Node Manager was to prioritise the 460 KwaZulu-Natal threatened plant species into target species for each of the eight CREW groups. This new target species list made for intense discussions at each of the planning meetings and gave the groups a new focus. The Nicholson Botanical Group set out on a mission to Dumisa in search of Data Deficient species. The group recorded more than 100 species in just two hours with the find for the day being *Searsia rudatsii* (Endangered), previously known only from Vernon Crookes Nature Reserve. The Underberg Group excitedly set out to find the historical localities of their



Ezemvelo KZN Wildlife ecologist, Roger Uys, eThekweni municipality ecologist, Errol Douwes and some participants of the Entumeni Bioblitz.

almost 40 priority species. The group's enthusiasm has grown tremendously over the past year, with an injection of new CREWites. The CREW herbarium techniques course at the Bews Herbarium, facilitated by Christina Potgieter-Curry, further enhanced CREW volunteers' confidence in plant collecting. Both the Boston and Underberg groups have submitted specimens to the KwaZulu-Natal Herbarium for the first time. The Mkhambathini Group continues to donate specimens to the Bews Herbarium and the Nicholson Botanical group has its very own

herbarium at Umthamvuna Nature Reserve but also contributes to other herbaria.

The CREW KwaZulu-Natal Node has entrenched its university project at the University of Zululand, University of KwaZulu-Natal (Pietermaritzburg campus) and Durban University of Technology. This project was initiated in 2009. University of Zululand students were again unsuccessful in their search for the very rare saprophytic ground orchid *Didymoplexis verrucosa* (Vulnerable) that is only known from one locality. University of KwaZulu-Na-

tal students collected baseline plant demographic data for a population of the medicinal *Merwillia plumbea* (Near Threatened) for the third year and conducted a mini Bioblitz at the site. We trust that we have inspired students to pursue careers in plant conservation.

The KwaZulu-Natal Node employed its first National Research Fund/Department of Science and Technology (NRF/DST) funded intern, Nomvume Petela. Nomvume was primarily responsible for contributing to the Bews online herbarium by capturing data for specimens of threatened genera on the BRAHMS database. The CREW

programme appreciates her invaluable help in this regard, as CREW volunteers will be able to access this information electronically [see <http://herbaria.plants.ox.ac.uk/bol/nu>]. The backlog of CREW data from KwaZulu-Natal was efficiently captured by Nkosinathi Mnwabe, a first year University of Cape Town student from Impendle in the KwaZulu-Natal Midlands, who joined CREW over December and January to do a stint of vacation work.

During the past year, the CREW programme in this province has received exposure at the Botanical Society KwaZulu-Natal coastal branch, eThekweni Municipality's biodiversity forum, KwaZulu-Natal

biodiversity symposium and WESSA KwaZulu-Natal coastal office. It will also be reaching out to the various other provincial conservancies in the upcoming 'quiet' season. In addition, we had two radio interviews with prominent regional radio stations, although these were primarily for the Bioblitz project. It is wonderful for CREW to have wide support throughout the summer-rainfall region.

The CREW KwaZulu-Natal node is grateful to the EDRR Programme: KZN Node, for the use of their vehicle and shared office space. I look forward to 2013 with exciting projects and new CREW groups.

## News from the CREW Cape Floristic Region Node

Ismail Ebrahim

**In the Cape Floristic Region the year started off with the annual CREW workshop held in Hermanus at the Habonim youth camp.**

The programme was packed with interesting talks and for me the highlight of the workshop, as always, was hearing the stories from the CREW volunteer groups about their achievements for the year.

On 12 June 2012 the iSpot website was officially launched at the Biodiversity Information Management Forum. iSpot enables people to share their observations of nature and in the process, learn about biodiversity. As part of the launch, we conducted a Bioblitz at the Kenilworth Racecourse Conservation Area. More than 100 people joined us for the event and the highlight of the day was recording *Hessea cinnamomea*, last seen at the site 70 years ago. This was the starting point for our Bioblitz project (see article on the Bioblitz project page 8).

Our C team field trips took a back seat to the Bioblitz project this year



Vathiswa with University of Stellenbosch students.

but there were nevertheless some good ones. One of the most exciting was the trip to the Caledon Swartberg Mountain, where we found new populations of *Moraea insolens* and *M. longiaristata*. Both these moraeas are listed as Critically Endangered. As many of you already know, *M. insolens* is my absolute favourite plant so, needless to say, I was very excited about this discovery. The population of *M. longiaristata* is also new and we were

surprised by the abundance of the species post-fire.

Our engagement with universities involving a Red List lecture and field trip to a site with threatened species was very successful. In 2012 we conducted our Red List training at the Cape Peninsula University of Technology, University of the Western Cape and Stellenbosch University. We also structured our practical session differently and





this improved the level of student participation. We included a practical identification exercise and training on how to complete the CREW forms. This gave us an opportunity to engage with the students more meaningfully and share our knowledge and experience better.

We rounded off the year with a great two-day trip to the Sandveld to collect Campanulaceae species. We were joined by Chris Cupido, Campanulaceae expert from the Compton Herbarium. The main purpose of the trip was to find some species listed as Data Deficient in the Sandveld and Cederberg regions. The *Wahlenbergia* and *Prismatocarpus* genera require taxonomic revision and our mission was also to collect as much fresh material for the herbarium as possi-



Critically Endangered *Moraea insolens*.

ble. These specimens will be used to unravel some of the species complexes in the family. This focused approach seemed to be very successful and we will try to do a few more family specific collecting trips this year.



Critically Endangered *Moraea longiaristata*.

We look forward to an exciting 2013. Both Kirstenbosch National Botanical Garden and the Botanical Society celebrate their centenary, so there are many activities planned for this year.

## Measuring species conservation success: The Red List Index

Lize von Staden

**Thanks to the large amounts of data on our species of conservation concern collected by you, our volunteers, many species' Red List statuses are changing.**

In many cases, however, these changes are as a result of an improved knowledge of our species, rather than an improvement or deterioration in their conservation status. The question therefore remains, can the Red List tell us whether we are successful in our conservation efforts to save species from extinction, or not?

International conservation scientists have developed a system that involves periodical reassessments of groups of species and incorporates changes in Red List Status as well as the reasons behind those changes into a statistic, or indicator, called the Red List Index. This index works much like the more familiar economic indicators such as GDP or the Consumer Price Index

in that it synthesises a large number of positive, negative or neutral trends into a single statistic that, when tracked over time, can give us meaningful insight into whether overall, we are doing better or worse in our conservation efforts.

The time frame for calculating the Red List Index is typically every five to ten years, and in adopting the Red List Index in South Africa we have decided to align the index with our national report on the state of the country's biodiversity, called the National Biodiversity Assessment, which is produced every seven years. However, as you may well be wondering, how is it possible to monitor the status of our entire flora as well as reassess all 20 000+ species every seven years? The good news is that for large groups of species, the Red List Index also works on a randomly selected subset of species, in which case it is called a Sampled Red List Index.

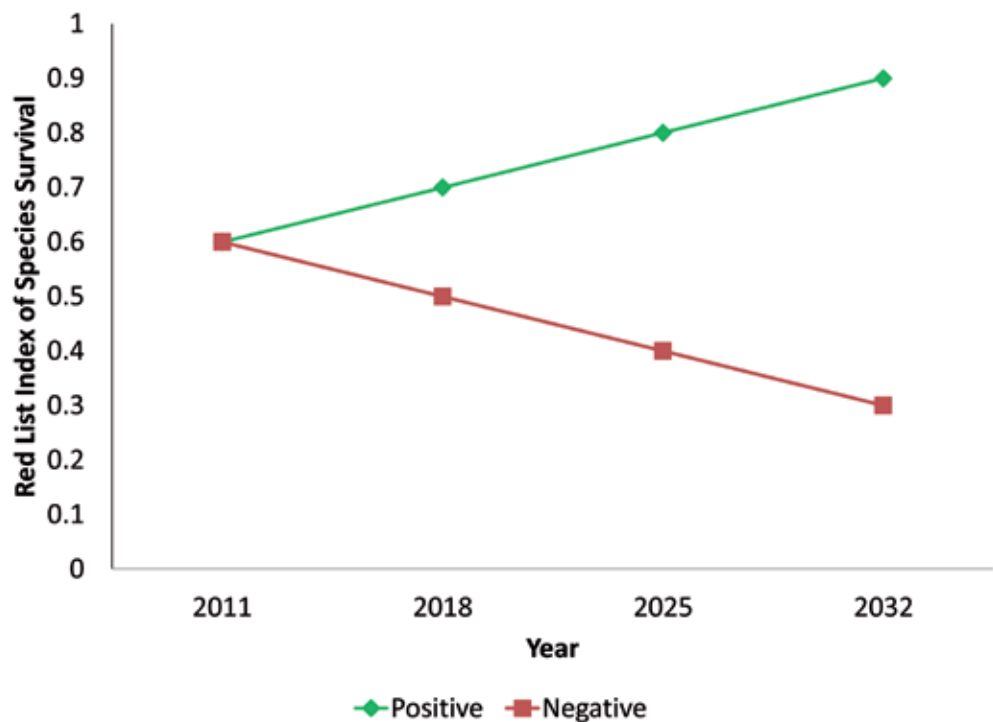
We have therefore randomly selected 900 species from the South

African flora to be closely monitored for calculating our own National Sampled Red List Index. This group of 900 species includes species from all Red List categories as well as from all parts of the country, and this is where we are going to need your help. For this group of special species, we need not only surveys to locate their populations, we also need to periodically revisit those populations in order to determine accurately how well they are surviving—work that many of our CREW groups are already doing. You will be hearing soon from Suvarna and Ismail which Sampled Red List Index species have been assigned to your group for monitoring, and we will be developing the methodology for the best way to monitor population trends for those species over the next year. We hope that you are as excited as we, the Red List team, are in joining us in this new chapter of conservation monitoring of the South African flora! If you have any further ques-

tions about the Red List Index, please feel free to contact me at my e-mail address, L.vonStaden@sanbi.org.za.

This hypothetical graph illustrates how the Red List Index shows trends in conservation success over time. The markers on the lines represent the value of the Red List Index calculated for a particular year. If the trend in the line connecting the markers is positive over time, it means that more species are genuinely improving in their Red List status—moving from categories of higher risk of extinction to categories of lower risk of extinction due to conservation interventions—indicating successful conservation efforts. On the other hand, if the trend is negative, it means that more species continue to decline—losing more habitat and populations over time, and thereby moving to categories of higher risk of extinction—indicating a failure to prevent species from going extinct.

**An example of how the Red List Index can show trends in conservation success over time**



## *Psoralea* studies benefit through CREW involvement

Abubakar Bello

**As a newly admitted international student at the University of Cape Town, the important contributions of CREW to my future career in systematic biology cannot be overemphasised.**

I am currently doing research for my PhD on the taxonomy and evolutionary studies of the genus *Psoralea* L. (Psoraleaceae, Fabaceae) in southern Africa. My supervisors, Prof. C.H. Stirton and Dr Muthama Musya, introduced me to CREW, which is just like a fellowship for my studies. To date, I have had the opportunity to visit almost all areas of the Cape Floristic Region on about seven field trips, including Bioblitzes, organised by CREW. These have contributed enormously to my introduction to the wide variety of Cape plants, especially members of the pea family (Leguminosae), which I am focusing on. Vatiswa Zikishe (CREW staff) introduced me to legumes in the

field and unwrapped the secrets of understanding the distinguishing key characteristics of the various groups. Furthermore, CREW Cape Floristic Region manager, Ismail Ebrahim, always alerts me to upcoming trips and Bioblitzes, and also takes care of my transportation. The information I received from CREW on the geographic distribution of some members of the genus *Psoralea* contributed immensely to the paper I presented at the recent 6th International Legume Conference at the University of Johannesburg (6–11 January 2013). Sarah (CREW staff) introduced me to iSpot, a user-friendly website that helps to identify anything in nature. Through CREW, I was able to collect herbarium and voucher specimens for my study species as well as some rare and endangered indigenous legumes. The idea of CREW to use students like me and other volunteers to monitor and conserve South Africa's threatened



Abubakar Bello in the field.

plants is timely and of paramount importance. I have no reservation in saying that, in my experience, CREW is a big success.



# Celebrating our contribution to developing future plant specialists

Vatiswa Zikishe

**P**lant identification is one of the most important skills in conservation, as we need to know and understand what we are conserving in order to apply proper management interventions.

One of CREW's objectives is to increase awareness of threatened plants and also to partner with universities in achieving our communal goal of conservation. Working in the CREW Programme has exposed me to people with various levels of plant identification knowledge and I have observed that students coming from universities often have limited ability to apply the techniques needed for this skill. Having identified this gap, in 2008 we started working with universities from the Western Cape, Eastern Cape and KwaZulu-Natal. We started off by giving lectures on Red List assessment methodology, its objectives and how to apply the IUCN criteria. After reflecting on the lessons we learnt while doing this training, in 2010 we then included herbarium techniques as part of the course to encourage participation from students. We showed them the link between doing Red List assessments and the importance of herbarium specimens to determine species status as well as to enhance their plant identification skills. Of the hundreds of students we've engaged with, we managed to get a few plant enthusiasts and for some, we made a huge contribution to their studies, as we cover vast areas of the Cape Floristic Region when we do fieldwork. Students can join the trips that cover their area or species of interest.

During last year's spring season, we had the privilege of working with Abubakar Bello from Nigeria, who is doing his PhD studies through the University of Cape Town, focusing on the genus *Psoralea*. Abubakar was introduced



Abubakar checking the plant description.

to the CREW Programme by his supervisor, Prof. Charles Stirton, who has also played a major role in assisting CREW to realise this goal. Abubakar's interest in plants is not limited to the genus chosen for his study but he has also shown an interest in learning more about other plants in the Cape Floristic Region. He is a very keen and promising student. CREW has provided the platform for volunteers across the country to pursue their passion for plants and for some, to further a career in plant monitoring. To everyone who has helped CREW to achieve these results, we would like to emphasise that it is not about what you got from us, but what you have put in that makes

us proud! Our successes may be small but by raising awareness, we have created a stepping stone on the way forward to educate and engage the public about plant conservation.

To other students out there who would like to participate in our activities, be it at university or job entry level, send us an email so that we can add you to our mailing list for notification of upcoming trips and other exciting CREW activities. You can also be a volunteer and enjoy an amazing learning experience in the field! E-mail me at [V.Zikishe@sanbi.org.za](mailto:V.Zikishe@sanbi.org.za) or my supervisor, Ismail Ebrahim, at [I.Ebrahim@sanbi.org.za](mailto:I.Ebrahim@sanbi.org.za).



# CREW Bioblitz Project

Domitilla Raimondo, Ismail Ebrahim and Suvarna Parbhoo

**C**itizen Science projects involve members of the public in monitoring biodiversity. In June 2012, SANBI launched the iSpot online portal, a Virtual Museum and Citizen Science interface.

During the latter half of 2012, as a result of funding received from DST/NRF's SAASTA (South African Association for Science and Technology Advancement) Programme, the CREW Programme initiated the Bioblitz Project. The aim of the project was to create awareness of biodiversity through conducting a series of Bioblitzes. During each Bioblitz, experts and members of the public worked together to survey natural areas, seeking, identifying and recording as many species as possible in a single day. Photographs of a range of animals from small creatures, like spiders and butterflies, to beautiful birds and rare plant species were taken and loaded onto the iSpot portal. For members of many rural communities, it was their first opportunity to visit nature reserves and for some, the first time using digital cameras and the internet. The iSpot portal is proving to be a highly effective biodiversity monitoring tool. Twenty Bioblitzes were conducted across South Africa, with a particular focus on rural areas that are biodiversity hotspots e.g. Pondoland in the Eastern Cape and the Bokkeveld escarpment of the Northern Cape.

As of January 2013, almost 100 of the 2 200 users on the site are CREW volunteers. Our volunteers have made 9 100 observations, 18 480 agreements with others' observations, 11 351 identifications and 5 231 comments to iSpot users' observations—with this number increasing every month. Records on iSpot are being used to conduct conservation assessments of species and these records are also fed into provincial conservation plans. Species previously thought to be extinct by scientists, have been recorded by members



Community group from Rondevlei at one of the Cape Floristic Region's Bioblitzes.



Geoff Nichols and Ashley Nicholas with his students at the Umthamvuna Nature Reserve Bioblitz.

of public. In addition, a host of new emerging invasive species has been recorded.

In the Cape Floristic Region, nine Bioblitzes were conducted with a

total of 598 observations loaded onto the iSpot website. Some of the exciting discoveries included a new monkey beetle at the Elandsberg Nature Reserve and a new popu-







The final Bioblitz at Table Mountain Nature Reserve where we were joined by a member of SAASTA (Photographer: D. Scholtz).

lation and range extension of the highly threatened and cryptic *Trianoptiles solitaria* at the Roman-srivier Stewardship Reserve. This species is only known from a handful of sites on the Cape Flats and this is an exceptionally good find.

In KwaZulu-Natal, 10 Bioblitzes were conducted with a total of 589 observations loaded onto the iSpot website. Participants included representatives from Ezemvelo KZN Wildlife, eThekwini municipality, various KwaZulu-Natal

conservancies, both provincial branches of the Botanical Society, University of KwaZulu-Natal (Pietermaritzburg campus) and WESSA. The endangered Hilton daisy (*Gerbera aurantiaca*) made for a spectacular scene at the Hilton college grassland while the Near Threatened *Brachystelma modestum* was a good find at the Table Mountain environmental area. Several observations of frogs, birds and oribi were made at the Bill Barnes Nature Reserve. We also made several marine observations at the Umhlanga Lagoon Nature Reserve. Vernon Crookes Nature Reserve, home to a rare species of giant earthworm, yielded a range extension of *Searsia rudatsii* [Endangered].

The Bioblitz Project was great fun and it gave us an opportunity to engage new volunteers in the project and visit some amazing sites. It was wonderful to experience the interaction between various experts and citizen scientists sharing their knowledge of, and passion for biodiversity with each other.

## Medicinal and Charm Plants of Pondoland

Domitilla Raimondo



Sinegugu Zukulu, author of *The Medicinal and Charm plants of Pondoland*.

**On 16 September 2012, the Botanical Society and South African National Biodiversity Institute launched the first ever publication documenting the use of plants by the amaMpondo people.**

Titled *Medicinal and Charm Plants of Pondoland*, the publication was launched at the Umthamvuna Nature Reserve, with conservationists, CREW volunteers and Pondoland herbalists amongst the more than 100 people in attendance.

Pondoland is an undeveloped wilderness area on the east coast of South Africa, stretching between Port Edward and Port St Johns. It has over 2 500 plant species, 220 of which are endemic to the

region. Pondoland is recognised by conservationists worldwide as a biodiversity hotspot. The region is however under imminent threat from the proposed expansion of a large multi-lane national highway and from opencast mining. The amaMpondo people who live in this region have a rich culture, which includes extensive traditional and medicinal use of local species, particularly the plants. Many of the plant species that occur only in this region are central to healing practices and rituals that are unique to the amaMpondo.

As with many ancient healing traditions, the amaMpondo have a broad, holistic approach to health care. Traditional amaMpondo medicines and charms, called

*amayeza*, include many plants used to treat a wide range of illnesses as well as for cultural and religious purposes, such as ritual purification, protection against witchcraft and religious ceremonies. Whereas Western health care is based on curing physical symptoms, many amaMpondo people attribute disease and misfortune to metaphysical powers, which can be controlled with the correct use of *amayeza*. For the amaMpondo, misfortune and ill health are caused by a breach of customs and traditions or by supernatural powers. Herbal remedies and charms are used in rituals to appease the ancestors, to protect against evil forces and to remove ritual impurity.

*Medicinal and Charm Plants of Pondoland* describes sixty *amayeza* plants and their uses, based on information told to the author, Sinegugu Zukulu, during interviews conducted with four herbalists, *Ixhwele* Mashona 'Sulamntwana' Wetu Dlamini, *Inyanga* Samson 'Jakalas' Gampe, *Umunuzana* Sizwe 'Mistoli' Shezi and *Umunuzana* Mpondombini 'Sixteen' Danca.

The information on indigenous plant use in Pondoland presented in this book will be of relevance to anyone interested in plants in the region, but it is primarily aimed at school pupils. Despite the international fame of the Pondoland biodiversity hotspot, the majority of the AmaMpondo people who live in this region are not aware of their unique natural heritage. In addition, the knowledge of the particular plants used in rituals and for healing is typically held by the older generation. The youth of the region are not learning from the elderly people how biodiversity traditionally has played a key role in their lives. This knowledge is of prime importance to ensure the long-term appreciation and therefore conservation of these species.

*The Medicinal and Charm plants of Pondoland* has been produced and published by SANBI with financial support from the Norwegian



Sinegugu Zukulu with the herbalists.



Herbalist indicating medicinal properties of plants.

Ministry of Foreign Affairs and AVIS. The Botanical Society of South Africa generously sponsored

the printing of 5 000 books. Books are available from the Botanical Society bookstores.



# CEPF/Botsoc Stewardship Project

Implementation of Biodiversity Stewardship by the Botanical Society of South Africa in eight botanically significant sites in the Maputaland-Pondoland hotspot in KwaZulu-Natal, South Africa.

Isabel Johnson

**We are now into the second year of the Critical Ecosystems Partnership Fund Project and CREW volunteers continue to be of great assistance.**

We have taken on two additional sites—Highover in the Umkomaas Valley, and Edgeware near Boston in the Midlands. Both of these sites, as well as Wingfield and Hlomohlo-mo, were approved as qualifying for Nature Reserve status by the BSP Working Group in early February this year.

Here are a few highlights. In mid-November the CREW A-team visited Highover, which supports one of the most important blue swallow sites in KZN. This is a fantastic property, stretching from the Umkomaas River up Valley Bushveld



On top of the world at Highover (Photographer: I. Johnson).



Moses Hlongwana with his specimen of *Disperis fannini* at the Bews Herbarium (Photographer: I. Johnson).

clothed slopes and spectacular cliffs to an area of mistbelt grassland on the top. In spite of a small problem with the BotSoc Mazda, we continued undaunted in Alison Lettenga's bakkie. Some interesting finds were a very narrow-leaved form of the endemic *Searsia ruidatisii* (Vulnerable), a low growing 'underground tree' that superficially looks like a legume, but some fruit and the characteristic 'Rhus' smell soon put us right! We also found *Thunbergia venosa* (Rare) and on a subsequent visit a new record for *Dioscorea brownii* (Vulnerable). Boston CREW have been very helpful with the Edgeware and Bostonview sites. Dave Clulow was roped into helping with Veld Condition Assessments and Forb Diversity plots, the latter ending in our getting very wet and dodging lightning strikes!

The Umgano Field Ranger training continues and some of the rangers are becoming proficient at plant identification. I knew we had made progress when on a recent walk through the grassland I asked what family a purple daisy belonged to and was informed that it was *Aster perfoliatus*. They visited the Bews Herbarium in July and saw specimens that they had collected mounted on herbarium sheets. We have spent some time on an identification key, and they are now keying out Umgano forest trees with some proficiency, in spite of language difficulties (trying to explain a 'quilted' leaf was challenging). Time and expertise given by Sally Johnson and Christina Curry have been hugely appreciated.

With the field season drawing to an end a great deal of paperwork awaits!

# A tribute to Rob Scott-Shaw



Isabel Johnson

**The unexpected and tragic loss of Rob Scott-Shaw has been a devastating blow to botany and vegetation analysis in KwaZulu-Natal and South Africa.**

Rob was incredibly supportive of CREW and we will all miss him enormously. He was involved with CREW for many years, even before CREW started in KwaZulu-Natal, and he attended the Cape Floristic Region volunteer workshop held at De Hoop in 2006. Always ready to give us advice on where to go and what to look for, he was a key figure in getting CREW KwaZulu-Natal going. He organised and joined us on field trips to Ithala, Inhlazatshe and many other places. Most recently, he met up with us at Dumisa, spending a worthwhile morning in the grassland at Glenrosa where he found several special species. He was fearless in pursuit of interesting plants and there are many stories of his disappearing over cliff edges with no thought of safety. He also drove his Condor (always full of plant specimens in varying states of freshness) to places that most drivers of robust 4x4 vehicles would avoid.

Rob attended almost all of the CREW summer-rainfall volunteer workshops—from Mtunzini in 2008 to Umthamvuna in 2012—and gave many inspiring talks. In particular, one vividly remembers his telling us how to monitor our own 'God's bit of nature'-grassland, which prompted many CREW members to enjoy the rewards of monitoring their own bit of turf.

Rob was a vitally important figure in KwaZulu-Natal botany. He will always be remembered for his many contributions, which include, amongst other:

His M.Sc. work on the difficult *Acalypha peduncularis* species complex.



Rob Scott-Shaw with CREW volunteers at Umthamvuna Nature Reserve.

His pioneering book *Rare and threatened plants in KwaZulu-Natal* (still a 'botanical bible' to many of us).

His huge input into the Red List of South African plants.

His vital contributions to the vegetation mapping of KwaZulu-Natal and South Africa as summarised in the VegMap publication by Mucina & Rutherford (2006).

His very comprehensive database of KwaZulu-Natal grassland forb diversity and the effects of grazing and fire (Rob possibly visited more grasslands and forests throughout KwaZulu-Natal than anybody else ever has, and collected huge amounts of data on vegetation composition and condition for both grasslands and forests).

His ground truth mapping of the KwaZulu-Natal forests.

He was the curator and technician of the Killick Herbarium at Queen Elizabeth Park.

He was a member of the CREW Advisory Forum, which met annually in Cape Town.

Rob was very unassuming and seldom criticised anyone. This, coupled with his immense knowledge, made him the valued mentor that he was to so many people. He also had a wonderfully wicked sense of humour and was a great party animal.

We will miss Rob enormously as we spent a lot of time in the field with him and we had an ongoing debate about *Senecio erubescens* varieties. I will never see one of those infuriating plants or do a forb diversity plot without remembering Rob.

Our sympathies to Maureen, Kate and Bruce.



# Early Detection and Rapid Response: Management of Invasive Alien Species and SANBI



Alex Marsh and Reshnee Lalla

## South Africa has a long history of invasive alien species management:

2013 will mark 100 years of bio-control implementation in South Africa.

The South Africa Plant Invader Atlas (SAPIA) is 30 years old and represents 30 years of invasive alien plant monitoring in South Africa. SAPIA lists over 700 plants as naturalised or invasive, of which 238 species are listed under the draft regulations.

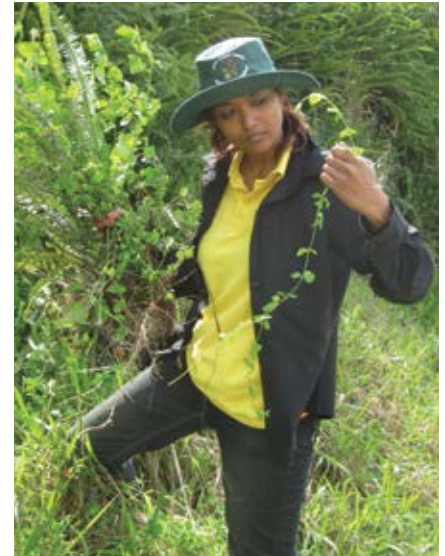
The Working for Water Programme—which has been in existence for 16 years—is recognised as the biggest plant management programme in the world. Its emphasis on poverty alleviation has encouraged the programme's growth and drawn international acclaim. Of the listed species, the Working for Water Programme subjects 64 taxa to regular control. These taxa, which are largely woody species, have been prioritised because of their effect on catchment areas and riparian zones.

However, despite the billions of rands spent on managing invasive

species, it is estimated that the negative economic impact of these plants is R6.5 billion every year.

Many of the invasive species being addressed by Working for Water have been proliferating across South Africa for decades and it is thus no longer worthwhile to direct efforts at their eradication. It is the role of SANBI's Invasive Species Programme to focus on invasive alien species (IAS), which may be feasible eradication targets.

In 2008 the programme started as a partnership between SANBI and the Natural Resource Management Directorate within the Environmental Programmes Branch of the Department of Environmental Affairs. The programme focuses its efforts on IAS detection, risk assessment and eradication planning. This is a concerted and co-ordinated effort by research institutions, conservation organisations and civil society across the country to limit widespread invasion of species that currently have limited distribution in South Africa. The Invasive Species Programme administers funds to conduct eradication and management of selected invasive alien spe-



Invasive Species Programme KwaZulu-Natal Coordinator, Reshnee Lalla.

cies. In the process, information is gathered on these species in order to ensure the best future management nationally.

For more information about the Early Detection and Rapid Response Programme, please e-mail us at [alienplants@sanbi.org.za](mailto:alienplants@sanbi.org.za).



Teams clearing invasive alien plants.

# Nieuwoudtville CREW

Donna Kotze and Estholene Moses (Indigo development & change)



**A**s Nieuwoudtville Biodiversity Facilitators, our aim is to share knowledge about the environment with the community.

Our Eco Club connects people from diverse backgrounds, such as scholars, farm workers and residents of the community, and it has become a place where children feel safe and happy. We see every day as a challenge and we are very positive about the road ahead.

The Nieuwoudtville summer school took place during the first week of the December holidays. The five-day programme of fun and environmental activities was hosted by various facilitators and we even had the CREW team here for one day! The week was focussed on learning and developing new skills, involving learners from primary and high schools. The highlight of the week was an endurance day hike in the Oorlogskloof Nature Reserve. This was a real challenge for the learners but the smallest learner was the champion walker of the day! Now we are all looking forward to the winter school in June 2013.

Five Bioblitzes were hosted in the Nieuwoudtville area—two in the Hantam National Botanical Garden and three in the Avontuur conservation area. Different veld types were monitored and documented in various areas of the Fynbos and Renosterveld, including a dedicated field trip to the special wetlands of Avontuur, accompanied by hundreds of hungry horseflies. Grade 10 learners participated in three of these events and not only enjoyed being out in nature, but also had the opportunity to develop technical skills, such as learning to work with a digital camera, GPS and tablet. Apart from exploring our special biodiversity, this exercise facilitated interaction and the exchange of knowledge between participants, ranging from local farmers to scientists from further afield. A special thanks goes to all South African



Team bioblitz.

and international scientists for sharing their knowledge so generously! The most exciting part for the learners was uploading their pictures on iSpot and making a powerpoint presentation of their key findings to the local audience.

In collaboration with the Nieuwoudtville Biodiversity Support Group, we (Indigo development & change) hosted a range of Eco Talks presented by scientists from different countries. Talks covered a wide range of topics, such as the interaction of *Rediviva* bees with their *Diascia* host plants (by Hilke Hollens, Munster University) and pollination by small mammals in South Africa (by Dr Petra Wester,

University of KwaZulu-Natal). The talk by Christopher Willis (SANBI) on dragonflies and damselflies really captured our imagination. One of our partners who presents an Eco Talk each year is Dr Michael Kuhlman (National History Museum, London), who gave a stimulating presentation on plant pollinator interaction in the Cape. Dr Anton Pauw also presented a fascinating talk on pollination.

We would like to thank all presenters for sharing their insights with the local and broader scientific community. If you are interested in giving a presentation in the Eco Talk series, please contact Donna Kotze at [donna@indigo-dc.org](mailto:donna@indigo-dc.org).

## Linking Biodiversity Conservation to Climate Change

Bettina Koelle (Indigo development & change)

**T**he CREW team in Nieuwoudtville is involved in facilitating quarterly workshops with small-scale farmers to support effective adaptation to climate variability and change.

This involves some action research processes focussed on

environmental monitoring. These workshops are usually offered for adults only but a few months ago, we were approached by a group of children to explore the option of having a parallel workshop for children, based on the argument that they are the ones who will have



to deal with the results of climate change one day.

In a learning exercise, facilitated by Dr Ute Schmiedel (University of Hamburg), the children explored the different types of plant leaves and how they store water as an adaptation to drought. They tested the water contents by pressing the leaves and experimented with drying leaves in the sun. The learners then shared their findings with the adults, who were delighted to hear about the results the young scientists had to share.

Engaging young persons in citizen science is important—and there are many opportunities to do so.

If you would like to know more about the Climate Change Preparedness workshops, you can contact Bettina at [Bettina@indigo-dc.org](mailto:Bettina@indigo-dc.org).



Dr Ute Schmiedel facilitating an exercise.

## Jacobsbaai/Weskus CREW



Koos Claasens

**D**ie afgelope blomseisoen was die mooiste die afgelope 20 jaar.

Dit was regtig besonders mooi om te sien hoe die struik, die een spesie na die ander, in die blom kom en elkeen meer blomme het en 'n langer blomperiode as vorige jare. Wanneer dit by bolplante kom lyk dit nie of dieselfde altyd geld nie. *Moraea hainebachiana* het 'n redelike konstante blomtyd (14–30 Augustus) en minder blomme as dit 'n droë jaar is en vanjaar het dit twee keer langer gebloom (7 Augustus–10 September). Aan die ander kant het ek gedink dat ons dalk meer van *Bulbinella calcicola* sou kry as gevolg van die goeie reën, maar net ongeveer 10% van die plante het gebloom. *Brunsvigia bosmaniae* blom konstant vir jare al, maar daar is heelwat meer blomme na 'n baie droë jaar.

*Moraea loubseri* is in 1973 deur Johan Loubser op 'n granietskop-



*Polygala umbellata*.

pie, Olifantskop, naby Langebaan ontdek en dit word as die mees bedreigde knolplant in Suid-Afrika beskou. Op 'n stadium is daar gedink dat die plant in die natuur uitgewis is, maar Johan Loubser het die oorspronklike terrein in 1982



The only known population of the Critically Endangered *Moraea loubseri*.

besoek en ongeveer 200 plante in blom gekry. Sedert 1982 het hierdie plante egter verdwyn en is daar by twee geleenthede, in 1995 en 2002, minder as vyf plante gevind.

In 2011 het Rupert Koopman weer twee plante gevind. In 2012 het ons die terrein baie gereeld besoek, aangesien dit amper onmoontlik is om die plant sonder blom te kry en 'n blom hou net drie dae. Ons moeite is beloon en 14 plante is gekry wat ten minste ses saadkapsules gemaak het. Die beloning is een van die weinige foto's van *M. loubseri* in die natuur.

Daar is gepoog om meer eien-domme wat nog natuurlike veld het

tussen Saldanha en Langebaan te besoek om onder andere die *Polhillia* spesie (Data Deficient), wat lank gelede daar versamel is, op te spoor. Sover was ons pogings nog onsuksesvol, maar die beloning om in interessante veld rond te loop maak op daarvoor. Met 'n besoek aan Cape Columbine het ons *Polygala umbellata* gekry wat die eerste aangetekende populasie daarvan in Saldanha kalksteen strandveld is.

plants which extended well into October. The specimen table at the Wildflower Show was the best in a long time as we found numerous new specimens not seen at that time before, due to the wonderful rains. Our walks at Tienie Versfeld Reserve are always successful because the soil is damp, even in summer, and there is incredible bulb diversity.

We had the privilege of joining Jacques van der Merwe at Burghers Post to see the *Hessea cinnamomea* (Endangered) as well as *Babiana villosula* (Near threatened) in flower in June. It was a highlight for all of us to see what he and his team had achieved towards conserving large parts of the farm and controlling the alien trees.

## Report from the CREW group at Darling and Yzerfontein

Heleen Preston

**Our groups have changed focus over the last two years, incorporating the areas around the Langebaan Lagoon into our monitoring space. We have focused on having more walks for members of the three communities, which proved very popular.**

We continue to monitor the special species around Darling and Yzerfontein. The *Babiana pygmaea* (Critically Endangered), *Geissorhiza darlingensis* (Critically Endangered), *Lachenalia purpurea-*

*caerulea* (Critically Endangered), *Gladiolus griseus* (Critically Endangered) and many more are doing well. Our *Babiana pygmaea* colony on Oude Post Farm seems to like being trampled by cattle during the long dry summer, or maybe there has been enough rain at the right time, as the population increases in size and number each year. None of the special species in the Tienie Versfeld Reserve seems to mind being grazed from time to time. This year there was again a spectacular display of flowering

Our walks within and around Yzerfontein proved very popular. Members' enthusiasm increased as the season progressed and they could identify plants from the field guides. This has also led to more members joining the Wildflower Society. A favourite outing is along the calcrete ridges on the commonage within the town to see the *Agathosma thymifolia* against the cliff. We walked along the Bokbaaiwygie trail in early September and were overwhelmed by the spectacular display of *Dorotheanthus clavatus* (Endangered) and *Spiloxene canaliculata* (Endangered) growing in profusion among the restios in the damp soil. This coastal Strandveld trail on private land is only open to the public during September



The critically endangered *Moraea loubserii*.



and is well worth a visit. We were unsuccessful in finding *Gladiolus quadrangulus* (Endangered) which we found there three years ago but we found them on Baarhuis Farm a few kilometres north within the same veld type. We found about 50 *Gladiolus griseus* growing not 10 metres from the lagoon edge, wedged between granite and calcrete in deep sand! At the same site we also found *Ixia purpleoro-sea* (Endangered), known only from

within the Postberg Reserve on the opposite side of the lagoon. *Strumaria chaplinii* (Endangered) and *Gladiolus caeruleus* (Near Threatened) also seem to like the cooler cliffs. I had the privilege of joining the Jacobsbaai Group for some of their outings and saw new plants like *Lachenalia viridiflora* (Critically Endangered) on the rocks at St Helena Bay. Koos Claasens and I visited the site at Olifantskop and found several *Moraea loub-*

*serii* (Critically Endangered) plants where there was only one plant the year before. Two weeks later, my husband and I found even more plants. This site will be monitored in future. Safety, however, is a concern as there is no access control around the quarry and illegal dumping and quad-bikes are a problem.

We look forward to another exciting year and thank the CREW team at Kirstenbosch for their support.

## Friends of Tygerberg Hills (FOTH)

Hedi Stummer

**O**ur main focus in 2012 was on the Dassenberg corridor. Working closely with the Cape Town Biodiversity Stewardship officers, Ulrike Irlich and Andre Rossouw, we visited Dassenberg Farm, Kanonkop, McGregor's Farm (another population of *Cephalophyllum parviflorum*, Critically Endangered), Touchwood, Nirvana, Franco's Farm, Tydstroom, the Koeberg plot, Brakkefontein and Papekuil Outspan.

We noted that although the sites were quite close to each other, the plant species lists were quite different.

The highlight of the year was discovering *Planea schlechteri* (Critically Endangered) at Briers Louw Nature Reserve in early February. Norwegian scientist, Prof. Per Ola Karis, who described the plant from pressed specimens, came to visit in November to see the live plants in the veld. We counted over 50 plants in March and we plan to monitor these plants in the future and check sites in the vicinity.

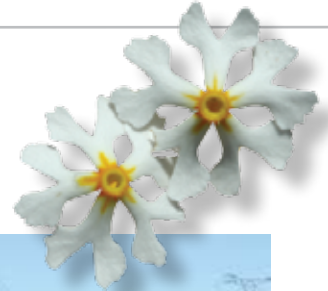
Hercules Pilaar had a runaway fire early in the year and provided an ideal opportunity to monitor the post-fire vegetation. We added about 100 species to the existing plant list, special species being *Aristea lugens* (Endangered),

FOTH CREWites.

*Erepsia patula* (Vulnerable), *Athanasia capitata* (Endangered), *Aspalathus recurva* (Vulnerable), *Moraea villosa* (Vulnerable) and *Watsonia strictiflora* (Critically Endangered).

Three visits were made to RDM Renosterveld Conservancy in the Elandsberg near Wellington. This site of 2 500 ha was burnt in the veld fire that swept through Bains Kloof and beyond in January 2012. We found many Red Listed species, including *Moraea angulata* (Critically Endangered), *Pelargonium chelidonium* (Endangered), *Serruria candicans* (Endangered) and fields of *Babiana*

*secunda* (Critically Endangered). Game is currently grazing on the property and this may affect the vegetation.



Our find of the season, the Critically Endangered *Planea schlechteri*.



Prof. Ola Karis looking at the *Planea schlechteri* population.

Our inability to access a Cape Flats sand Fynbos site (namely 6BOD or Fort iKapa as it is known today) has been of some concern. The City now has some control over the management of the vegetation and Andre Rossouw made it possible for us to resume our monitoring. Although the site looks more disturbed than before and has been neglected (we could not find *Diastella proteoides* [Critically Endangered] and only a few *Serruria aemula* [Critically Endangered]), we did find another population of *Aspalathus retroflexa* subsp. *bicolor* (Critically Endangered). The good news is that the site is now being cleared of the Port Jacksons and we can return to check the vegetation on a regular basis.

Another concern is the Plattekloof Heritage site. We have not received

permission from Eskom to monitor the vegetation. Last year the site was brush cut and then had a controlled fire rather late in the season. We found another population of *Aspalathus retroflexa* subsp. *bicolor* (Critically Endangered) as well as very healthy populations of *Diastella proteoides* and *Serruria aemula*, both Critically Endangered. Despite missing outings because of wet weather, we were fortunate in finding a viable population of *Lachenalia liliflora* (Endangered) (a form of *L. pallida*) at De Grendel.

We are proud that we could contribute to the fact that landowners are now more aware of the value of their vegetation through our interest and enthusiasm. We also find it very rewarding to have our information used by the City of Cape Town's Biodiversity Branch as well



*Watsonia strictiflora* found at Hercules Pilaar.

as the CREW programme. This makes it all worthwhile!

We greatly appreciate the financial donation for petrol from the Friends of Tygerberg Hills and the support from Penny Glanville at the Tygerberg Nature Reserve, the members of the FOTH CREW team, CREW at SANBI, the scientists at the Compton Herbarium and the City of Cape Town, who invite us to all these interesting places.

## CREW Hottentots Holland Branch

Cecilia Wolmarans

**During the winter months of 2012, the group joined Zikhona Mdlalase on Vergelegen Estate to help her with one of her botanical projects.**

In August we returned for a full day of exploration and found two small orchid species, *Disa obliqua*

and *Disperis capensis*. The flowers were out in abundance so we had to tread carefully. A study was done in the veld to determine the differences between *Lobostemon hottentoticus* (Endangered) and *L. fruticosus*, both occurring in this area.

In September we visited the Vergelegen Farm, situated right next to the N2 on the way to Stellenbosch. From a distance the farm seemed overgrown with aliens but amongst the grasses we found species like *Triglochin bulbosa*. Highlights were *Muraltia macropetala* (Vulnerable),





The team at Suikerbossie.

*Pterygodium catholicum* hidden in the renosterbos, and *Corycium orobanchoides*. On the same day we also visited Harmony Flats. Some of our members had not been there before and it was wonderful to see the delight on their faces as the veld revealed its treasures. We also participated in the Bioblitz on Harmony Flats but the weather did not cooperate that day!

One of the highlights of our October trip to Schapenberg was finding the small *Wurmbea marginata*. Unfortunately, the flowering time of *Lachenalia liliflora* (a form of *L. pallida*) was over but there was an abundance of *Babiana angustifolia* (Near Threatened), some with red markings and some without.

We were asked to compile a plant species list for the farm Suikerbossie, situated between Sir Lowry's Pass and Gordons Bay. Despite being geographically close to Schapenberg, there was considerable species variation, mainly because of differences in geology. At Suikerbossie we were able to examine *Amellus asteroides*, *Harveya purpurea* and *Spiloxene aquatica*. We were also able to compare *Berkheya barbata* with *Berkheya herbacea*. This piece of land is privately owned and the owner's involvement in the land stewardship programme is gratifying.

We also explored a piece of wetland on the Elsenburg Farm near Stellenbosch. The area is surrounded by farmlands, mainly vineyards, and is a refuge for avifauna. This was an ideal opportunity to get to know the grass species as well as interesting plants such as *Orobanche ramosa* and the colourful *Watsonia meriana*.



*Disa obliqua*.

One of the highlights of the year was definitely our outing to the Kogelbay area, joined by the Kogelberg CREW Group. The area was recently burned and with no existing plant lists, we were able to identify more than 100 species. We found a variety of grasses as well as species such as *Pelargonium incarnatum*, *Dilatrix pillansii*, *Leucadendron xanthoconus*, *Mimetes cucullatus* and *Protea nitida*, to name a few. We definitely want to make a return trip to this diverse area, as there is much more to explore.

## News from Swellendam and Barrydale CREW

Flora Cameron

**In 2012, the shrinking population of *Polhillia brevicalyx* (Critically Endangered) was increased by the discovery of another 10 plants.**

Odette Curtis has taken up the case of *Polhillia* in the Lower Breede River Renosterveld and together with Charles Stirton, has discovered a new species (*P. curtisae*) to add to the original list of *P. pallens*, *P. canescens* (Vulnerable) and *P. connata* (Critically Endangered). A management plan has been worked out and the conservation of the two populations has been secured.

The highlight of the year was the formation of the Overberg Lowlands Conservation Trust, the realisation of the dream of a previous CREW champion, Christi Kloppers. The launch was attended by landowners, SANParks management, CapeNature managers, the Mayor of Swellendam (the municipal area includes Cape Infanta, Malgas, Stormsvlei, Suurbraak and Barrydale), all sharing a common interest in conserving the renosterveld. The chairperson is the owner of Voorstekop (Uitvlucht), one of the first farms we surveyed.



Surveys are done as frequently as time allows, especially on the farms that took stewardship offers such as Uitvlucht, Skeiding and Grootvadersbosch. New areas, such as the communal farmlands southeast of Suurbraak, have been added to the list. These communal farmlands have already surprised us, as we recorded a large population of *Erica filamentosa* (Vulnerable) with *Protea decurrens* (Endangered) there, making this the third known population (the other two being Bontebok Park and Riet Vallei) and potentially changing their Red List status. The ownership of the farm Lismore has changed and the renosterveld, previously let out for grazing, will be conserved.

Together with Odette Curtis, we did an interesting survey to compare the typical vegetation of the quartz patches east of the Breede River with the patches around Plaatjieskraal, west of the Breede River. Both patches have *Gibbaeum haaglenii* (Endangered) in common but the associated plants are different.

Surveys around Barrydale, first started in 2006, are done on a regular basis and we are creating species lists for the various sites. We were excited to find *Bartholina etheliae* plants in a completely new location and we continue to monitor populations found on the farm Helderstroom as well as the *Wurmbea compacta* populations recorded in 2011.

Jill Blignaut continues her amazing collection of plants at high altitude in the Langeberg. An expedition to Misty Point was unsuccessful in finding *Pachites appressa* but there were 29 orchids in a burnt area, including the endemics *Disa aurata* and *Disa subtenuicornis*. Jill has collected about 60 species of *Erica*, including the endemics *E. chloropetala*, *E. heterophylla* and *E. praenitens* (a range extension from Riviersonderend).

Orchid spotting is always challenging during the hot summer months, but particularly worthwhile following the fires on the Langeberg in January 2012. In early December we climbed 10 o'clock peak and



Odette Curtis discussing the management plan of *Polhillia brevicealyx*.



*Polhillia brevicealyx* flowers.

through a film of orange *Watsonia schlecteri* and white *Satyrium acuminatum*, one *Pachites appressa* was spotted. A second trip to search the southern slopes deeper into the range yielded no hits for *Pachites appressa* but there were

magnificent displays of healthy populations of *Disa aurata* and *D. racemosa* amongst many other Orchidaceae.

We are looking forward to another exciting year in the Overberg.



# Swellendam CREW: Searching for *Pachites appressa*

Hildegard Crous



Examining *Pachites appressa* with Ditto, the dalmation.

“Flora, what do you think? Shall we quickly walk up? It doesn't look any more challenging than Skeleton Gorge, and that's about one and a half hours' walk. It's 10:30 now, we'll be at the

top by 12:00. That gives us plenty of time for looking around.” I am sure words like these are echoing in many a plant enthusiast's ears, resulting in feelings of some regret later.

It was 10:30 on a hot, steamy morning in early November 2010. We were at the first waterfall on the Swellendam trail, the turn off to 12 o'clock peak was just 50 metres behind us. Bill Lilitved had told me about the rare orchid found at the top of 12 o'clock peak. We were there anyway and we were so close, so we thought why not grab the opportunity? “*Pach...* something it's called,” I said to Flora. Of course I had forgotten the part about it only flowering one year after fire. This was 2010 and it had last burnt in 1999!

Needless to say, it was a very tough four hour walk, taking deceptively longer than anticipated. The unforgiving trail must have been designed by somebody with super long legs. Steps are built uncomfortably high and the steep gradient offers very little respite. Part of the way up, Flora realised that the old jeans she had on were so restrictive that she was sure she would never be able to reach the top. With some not-so-sharp secateurs they were promptly rendered to a pair of shorts. Water was scarce too. *Cliffortia* with its typically hiker-unfriendly foliage grew all along the path; certainly not a walk in the park. Of course we didn't find

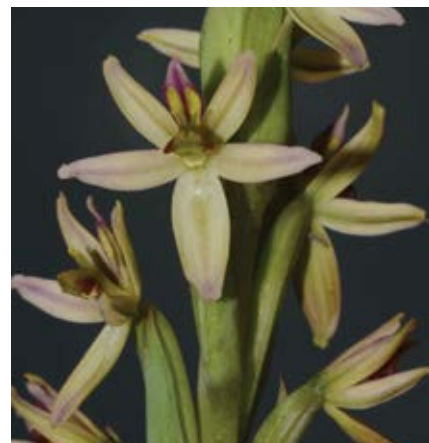


*Pachites appressa*.

*Pachites* and on our return in pouring rain after a thunder storm had developed, my firm resolution was not to attempt the walk again until it had burnt.

One year later the area did burn. Early December 2012 found us on our way up again. This time however, we both knew what *Pachites appressa* looked like, what altitude and aspect to expect it at, and better yet, had chosen the easier route up along 10 o'clock peak. An early morning start provided cool cloud cover with a multitude of plants flowering all the way up. *Satyrium acuminatum*, *Disa filicornis*, *D. bivalvata*, *Watsonia pillansii* and *Aristea* sp. provided a spectacle of colour. Our CREW eyes were peeled, we scoured the path edges, deviated off to suitable damp areas and seeps, edged along rocky outcrops and found nothing. “*Pachites*, where are you?”, Flora would call out (only mad dogs and botanists do this kind of thing)!

Laces came undone, and soon it was time for a water stop and to pat and praise Ditto, the unofficial CREW member. Then suddenly, “Flora, I think I've found it,” I said quietly but firmly.



Another close look at *Pachites appressa*.

Can it be *Pachites*? A little louder, “It's definitely *Pachites*, don't you think?” Somewhat louder, “The way the leaves are positioned? These aren't *Satyrium* buds. I think I've found it! I've found it!” I shouted. Stepping on to the higher edge of the path, I had looked down and scoured the slope. There it was with its distinctly grey-green foliage, peachy, orange coloured buds, and growing between *Aristea*, *Watsonia* and various grasses. Is it really possible? We could phone Bill now, no, better get home and double check the info in the e-mail. We don't want to make fools of ourselves.

William Burchell found *Pachites appressa* in 1815. Since then it has been seen only seven times, the last time in 2000. Although not as large as seen before, the plant in full bud and with fresh growth was such a prime specimen that we decided to collect it. This presented the opportunity for the plant to be properly photographed with flowers open at various stages. The specimen was given to the Compton Herbarium. Other specimens were found later, but none in such excellent condition.

Many thanks to my ever-faithful companions, CREW member Flora Cameron, and my dalmation, Ditto, both of whom never protest when the going gets tough.

# The Outramps in 2012

Di Turner

**The George Outramps had the most successful year ever. Some of the achievements include the discovery of new species, monitoring 63 special plants and 250 sites, and exceeding 5 000 postings on iSpot in our quest to catalogue the southern Cape flora.**

Amongst the memorable trips during the year, the spring excursion to the Rooiberg Pass to Bailey's Peak with the Gamkaberg rangers was probably the most productive and exciting. We found new species for the genera *Hippia* (confirmed by Dr Anthony Magee), *Leucadendron*, *Arctotis* (confirmed by Dr Robert McKenzie) and a *Senecio*, which is probably *S. esterhuyseniae*, recently described by Dr John Manning. Dr Tony Rebelo will join us next spring to look at the *Leucadendron*. We are grateful to Tom Barry of CapeNature's Gamkaberg Nature Reserve and the wonderful rangers that work there.

A trip to the central Swartberg proved very interesting. With the reserve manager's assistance in transporting overnight equipment to Gouekrans, we spent three wonderful days exploring the area around the high altitude hut. On the second day, Bill could not resist the challenge of a huge kloof that dropped down to the north. A few errors of judgement had him return to Gouekrans at first light the following morning.

Anyenberg proved to be a real winner, once again. This time we were privileged to have Prof. Charlie Stirton and Dr Robert MacKenzie with us. We found a few species of *Psoralea* and *Arctotis*. The reserve manager and rangers were very helpful, excellent company and contributed to the success of the outing.

There were many exciting day trips, one of the best being to Reins on the Southern Cape Coast. The outstanding find on this field trip was one specimen of *Erica baueri*



*Arctotis* sp. nov. from the Gamkaberg.

subsp. *gouriquae* (Critically Endangered).

In 2013 we plan to visit many new places and revisit some old ones in

our search for special plants with Red Listed status. The Outramps are full of enthusiasm for the challenges of another new year.



Outramps face many challenges in their quest for monitoring. Here they are re-building roads to cross a river.



# The Fourcade Botanical Group celebrates 10 years with CREW

Caryl Logie

**The Fourcade Botanical Group (FBG) held its first meeting in 1997, its main aims being to raise awareness of and help conserve our botanical treasures.**

Regular events include botanical rambles, activities with children, labelled flower displays, recording plants in areas set aside for development, and search and rescue projects. The FBG joined CREW with the establishment of the latter in 2003, and the FBG's first task for CREW was to sample plant communities within the proposed St Francis conservancy.

During ten years of CREW work we have had the pleasure of visiting some of the most beautiful local areas while searching for rare and endangered plants, assisting university students doing research in the area, or compiling comprehensive plant lists for landowners. Among the very highly threatened plants recorded are *Satyrium hallackii* in the St Francis/Oyster Bay dune system and *Erica glandulosa* subsp. *breviflora* north of Humansdorp. The plant used in CREW's logo, *Brunsvigia littoralis*, warranted special attention in demographic monitoring exercises. We hope that the data collected concerning this severely threatened plant will provide information on the effectiveness of the pollinators and the success of germination.

Besides important finds, the data gathered for CREW and the input received have enhanced our rambles and youth activities, and enabled us to provide accurate and meaningful information. Likewise, we hope that the data we have gathered will be of value to environmental consultants and help to conserve sensitive habitats and special plants. In this connection, the FBG has contributed to Environmental Impact Studies at a time when this sensitive botanical area is under consideration for a nuclear power plant, windfarms, quarrying and other major developments.

One of the greatest pleasures of CREW work has been the contact with specialists who have always been approachable and happy to advise and share their knowledge. The annual CREW Workshop in particular has not only strengthened these contacts, but through interaction with other CREW groups has provided new ideas and exchanges of knowledge. The get-together with management in the form of Tilla, Ismail and Vathiswa has also been invaluable.

In 2012 heavy rains and washways interrupted the FBG's activities, but when possible the group was in the field keeping an eye out particularly for *Disa lugens* var. *nigrescens* (Critically Endangered) as it faces an extremely high risk of extinction in the wild. Other plants targeted were those classified as Data Deficient either because there is inadequate information, such as *Nemesia fourcadei*, or because they are taxonomically problematic, such as *Sebaea fourcadei*. The population of *Erica glandulosa* subsp. *breviflora* (Endangered) on Honeyville was revisited and found to be in a very healthy state. Another exciting find was *Agathosma spinosa* (Rare) on Zuurany's.

The FBG believes that to preserve our biodiversity, a love of nature



*Satyrium hallackii* subsp. *hallackii* (Endangered).

and especially of plants must be inculcated in the next generation. For many just to walk and play in the veld is something not easily achieved, and through the years such outings have been an important aspect of our outreach to the local community. The pleasure and growing awareness of their natural surroundings has been ample reward and will, we hope, help to preserve our special portion of the Cape Floral Kingdom.



Demographic monitoring—measuring *Brunsvigia littoralis*.

# Napier CREW: Destruction and rehabilitation of the only known habitat of *Tulbaghia cominsii*

Cameron McMaster

**F**or many years I have travelled on the N2 highway from King William's Town to Grahamstown in the Eastern Cape.

A rocky dolerite outcrop, about 17 km from King William's Town on the left hand side of the national highway, often arrested my attention as a likely habitat for interesting plants. It must have been more than 12 years ago while headed for Cape Town that my curiosity overcame me and I stopped to explore the site. I was astounded at the variety of plant life growing in this unique habitat. There were large populations of *Nerine filifolia* and *Massonia echinata*, both species being of particular interest to me at that time. However, a small *Tulbaghia* growing in the cracks of the dolerite boulders caught my attention and not having seen it before, I made a collection and took it with me on my way to Cape Town.

Since I was due to visit the Compton Herbarium when in Cape Town, I took the potted plant with me in the hopes of getting an identification. I left it outside the door and while inside, I was confronted by its author, Dr Canio Vosa. By some miraculous coincidence he happened to be visiting the herbarium at the same time and had recognised the little plant outside the door as *Tulbaghia cominsii*, which he had described in 1979. He was aware of the rarity of this plant and was anxious to know where I had found it. It turned out that Mr D. Comins, curator of the King William's Town Museum, had collected the type specimen at that very same site and he had directed Dr Vosa to the population. The plant was subsequently named after him.

In his description of *Tulbaghia cominsii*, Dr Vosa refers to the rarity of the plant stating that, thus far,



Destruction of *Tulbaghia cominsii* habitat as at January 2012 (Photographer: C. McMaster).

it has only been found around the type locality. I am not aware that any other populations have subsequently been found in the vicinity or elsewhere. In his description, Dr Vosa describes the site as being near Tamaha, 17 km from King William's Town and mentions its association with *Nerine filifolia*. He goes on to say, "This attractive little plant is related to *T. violacea* Harv. but differs in its very thin, glaucous leaves, white or very rarely pinkish flowers with a pink or purplish perianth tube and a different karyotype. The glaucous colour of the leaves is very characteristic and is due to the stomatal pores, which appears as tiny white streaks under low magnification."

Having established that this was a rare plant, probably confined to this particular habitat, I visited the site regularly and also established a small population in my nursery.

Due to its very localised distribution, *Tulbaghia cominsii* is listed as Vulnerable in the Red List of South African plants. On later visits I found other very interesting plants that shared this unique dolerite outcrop—*Brachystelma meyerianum* and *Haworthia cooperi* var. *dielsiana* amongst others. As I am a CREW volunteer, I submitted a report to CREW in August 2010 and believed that with the recording of this important conservation site, the species would be protected for posterity. How wrong I was!

Only a few months later, my friend Tony Dold, Curator of the Selmar Schonland Herbarium in Grahamstown, sent me an e-mail with a picture of the site that had already been destroyed by the engineers Rumdel Cape engaged in reconstructing the N2 in this area. He was especially incensed because a few months previously, prior to the





*Tulbaghia cominsii* (Photographer: C. McMaster)

commencement of the reconstruction work, he had pointed out to the Environmental Impact Assessment (EIA) consultants the importance of this particular site and the necessity of preserving it. This was to no avail and nor was the CREW record at SANBI consulted by the persons responsible for the EIA. I had naively believed that the recording of the habitat of an endangered species in this way was a guarantee that it would not be disturbed. However, the only known population of *Tulbaghia cominsii* had apparently been destroyed.

I visited the site again in August last year and examined the damage in detail, taking pictures of the destruction. It appeared that if no further bulldozing was undertaken, a small area where both *Tulbaghia cominsii* and *Massonia echinata* still survived could be rehabilitated. The rehabilitation of this small surviving population of *T. cominsii* was vital for its survival. Consequently, on 16 October 2012, I e-mailed the Rumdel site engineer stressing the rarity of the plant and the importance of rehabilitating the site and provided them with pictures of the area concerned. The response was immediate and positive. Within hours the Environmental Control Officer appointed by SANRAL

(South African National Roads Agency Limited) to supervise the project contacted me. She explained that while she had not been aware of this particular plant, she had in fact walked the entire site/route many months previously, listing anything that might be rare or endangered, and negotiating with all the adjacent land occupiers to involve them in the process. As a result of this survey she had transplanted about 1 000 *Dierama* plants and secured the remaining natural colony by not building a bypass in the area and demarcating it so that no vehicles travel over the site. She also arranged to have 25 *Cussonia* trees transplanted, all of which were large and well established and all have survived. I realised I was now involved with a passionate conservationist and that, despite the tragic destruction of the *T. cominsii* habitat, SANRAL should in fact be given credit for their conservation efforts. Within 12 hours of being contacted and despite pouring rain, she had arranged a site inspection with the engineers who agreed to rehabilitate the site, to clear it, expose the original surface and to secure the site within the road reserve with

stone walls. They have undertaken to maintain the site for the remainder of their tenure on site i.e. until about December 2013. In addition, she has discovered more areas beyond the road activities where *T. cominsii* is surviving but where livestock walk over and graze the plant, which is clearly palatable, especially to goats.

This is one of the few conservation success stories and has been the result of my involvement with CREW. I shall continue to monitor the site and report on the success of its rehabilitation. I would like to pay tribute to the prompt action of the SANRAL Environmental Control Officer involved (who has asked to remain anonymous). She has suggested that if SANBI is serious about caring for their constituency they should approach and establish a dialogue with SANRAL to effect a working relationship and to alert SANRAL of possible areas and endangered species long before roads are upgraded. She is of the opinion that the situation will get worse if this is not done as "the new breed of greens don't care a fig! It's all about delivery". I hope SANBI will take note of this.

## Port Elizabeth CREW

Merika Louw

**We started 2012 off by looking for our first re-discovered species, the Critically Endangered *Aspalathus recurvispina* in the Sardinia Bay Nature Reserve.**

We found another large and healthy population in this area, in addition to the populations found in the Nelson Mandela Metropolitan University Nature Reserve and along the Schoenmakerskop Coastal Fynbos Trail. This is of some comfort to us, as the only other known populations are found in disturbed sites along busy roads.

In April we revisited Hopewell Nature Reserve, which has now

become a popular hiking and mountain biking destination, on the outskirts of the city. We suspect that we have found a small population of Critically Endangered (Possibly Extinct) *Senecio hirtifolius*, which we didn't manage to catch in flower, as well as the interesting *Trichodiadema orientale* (Data Deficient). Other special species found at Hopewell, include *Cyrtanthus obliquus* (Declining), *Haworthia fasciata* (Near Threatened) and *Boophone disticha* (Declining).

In June we visited a farm in the Elands River Valley, bordering on Groendal Wilderness Area, to GPS and count a known population of

one of our endemic trees, the Rare *Sterculia alexandri*. It was quite an enjoyable 4x4 excursion, as well as a steep climb to reach this population, which appears healthy and safe in its beautiful, forested location.

The unique low, quartzitic outcrops and surrounding grassy fynbos vegetation of our urban edge has been placed in serious jeopardy by development along the N2 towards Cape Town. CREW, together with the local WESSA branch and the Baakens Trust (now Baakens Valley Community Partnership), came together to oppose further destruction of these rocky outcrops, which host a unique assemblage of species of conservation concern which include *Cyrtanthus obliquus*, *Haworthia fasciata*, *Boophone disticha*, *Aloe micracantha* (Near Threatened), *Corpuscularia lehmannii* (Critically Endangered), and the largest known population of Critically Endangered *Aga-thosma gonaquensis*—associated exclusively with rocky outcrops and rocky habitat in the Baakens River Valley. We also found three Endangered *Disa lugens* var. *lugens* in flower in this area.

Another species threatened by development is Critically Endangered *Cyclopia pubescens*, a non-sprouting, fire-dependent, wetland-associated species, which



Local *Aloe* sap harvester at Redhouse.

only occurs in a few suburbs in Port Elizabeth. A quick check on two small scattered populations of *C. pubescens*, scattered along roads and within the Colleen Glen Grassy Fynbos and Wetland vegetation 'Witness Stands' (two municipal protected open space areas), revealed that these populations will soon be impacted by Rooikrans and Port Jackson invasions from the immediate surrounds. As part of the national Botanical Society's Centenary Celebrations, the Algoa Branch has decided to adopt these sites for alien clearing as one of their Botanical Heritage Projects.

CREW sponsored two of our volunteers to attend Wendy Hitchcock's Fynbos Plant Identification Workshop in Cape St Francis in July. Despite the miserable rainy weath-



The interesting *Pachypodium succulentum*.

er, an enthusiastic group enjoyed a most informative workshop. In turn, we have given talks to gardening clubs on CREW's work and some of our local species of conservation concern, in order to create awareness and possibly increase our volunteer corps.

On a Botanical Society (Algoa Branch) outing to Aloe Reserve, we found a population of Near Threatened *Tritonia dubia* flowering abundantly, probably due to the good rains, as well as a few specimens of the interesting Endangered *Euphorbia globosa*, also in flower.

In November, taxonomist and ethnobotanist, Dr Tony Dold, of the Selmar Schonland Herbarium in Grahamstown, gave a well-attended walk-and-talk at Redhouse. CREW volunteers, as well as BotSoc members, local municipal staff, and other interested members of the public, were treated to Tony's extensive knowledge of the medicinal, culinary and cultural significance of Thicket plants in Xhosa culture. We saw the weird and wonderful *Pachypodium bispinosum* and *P. succulentum* in flower and came across traditional plant-use in action, with two local ladies harvesting and tapping *Aloe ferox* leaf sap.

Through working with and for CREW, we've learned the importance of instilling appreciation for our local flora amongst young people, educating the general public



Tony Dold at Redhouse.





*Pelargonium peltatum* petals were used by explorer and artist Thomas Baines to produce blue paint.

about the importance of indigenous plants and biodiversity, and sharing knowledge and insights with people on all levels. The annual CREW workshops are always valuable and exciting, as we enjoy hearing about the work done by all the groups, and being inspired to work harder here! It's also good to see how

CREW is contributing to on-the-ground conservation of species of conservation concern through the provincial stewardship programmes and through community involvement and education, knowing that we are all working towards the same goal—conservation of our botanical heritage.

## Pondoland CREW: The Nicholson Botanical Group

Tony Abbott

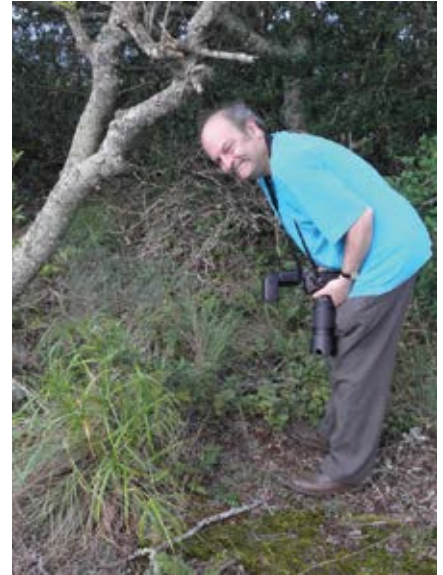
**The Nicholson Botanical Group is named after renowned conservationist and botanist, Hugh Nicholson (1906–1998), who was a close colleague of Rudolf Strey, then curator of the Natal Herbarium.**

One of the most important and exciting aspects of our work as CREW volunteers is the inclusion of our gathered data on plant occurrence, distribution and vulnerability in the national database, which is a valuable tool to guide environmentally sensitive development.

We also value the increase in our knowledge of local natural areas.

Southern KwaZulu-Natal is heavily developed by agriculture, silviculture and urban spread. We see it as an important part of our function to seek out undisturbed remnants of the coastal vegetation and to monitor their flora.

Another important aspect of our activities is gathering information for or assisting visiting professional scientists and in the process, we have learned a great deal. For example, we have collected *Pso-ralea* for Prof. Charles Stirton and *Indigofera* for Dr Brian Schrire. This has led to the description of a number of new species, many of restricted range. Prof. Braam van



Brian Schrire with *Aspalathus abbottii*.



Braam van Wyk and *Canthium van-wykii*.

Wyk, who first drew attention to the Pondoland Centre of Endemism as a unique region, has made huge inputs into the Nicholson Group.

Rare and endangered plants we have monitored recently include *Dioscorea brownii* (Vulnerable) from Ngele, *Turraea pulchella* (Vulnerable) and *Turraea streyi* (Critically endangered Presumed Extinct).



We take great pleasure in our Herbarium situated at the Umthamvuna Nature Reserve. Specimens are currently being photographed and the information captured in a digital

database. There are approximately 13 000 specimens, largely from the southern KwaZulu-Natal area. Our present efforts are directed towards compiling a Quick Guide to

the special plants of the Umthamvuna Nature Reserve. We wish to acknowledge the great support we received from Ezemvelo KZN Wildlife ecologist, Dr. Roger Uys.



*Turraea streyi*.



*Turraea pulchella*.

## News from Highway CREW

Andrea Abbott



*Boopone disticha* flowering in response to a managed burn on Eskotene Grassland in Everton (Photographer: A. Abbott).

### In 2012 we had something of a stop-start season in the Upper Highway area.

Factors like constant rain and members' busy lives led to several field trips being cancelled or, when the weather did play ball, poorly attended. However, we managed trips to Halkirk Farm in Hillcrest, a grassland in Monteseel high above the Valley of a Thousand Hills, and to a grassland in Everton. These were rewarded both by the variety of species found and the regular sighting of two of our target species: *Boopone disticha* and *Hypoxis hemerocallidea*.

The Monteseel trip in November yielded four target species: *Boopone disticha*, *Hypoxis hemerocallidea*, *Senecio exuberans* and *Brachystelma pulchellum*. CREW members living

in Monteseel have undertaken to monitor the site on a weekly basis.

From a purely visual perspective, the Everton grassland was especially rewarding. The site was burnt in early spring, the first controlled burn in many years. In response, three *Boopone* appeared, not having been seen on the site before. Regular monitoring during October and November revealed higher numbers than in previous years of other species such as *Hilliardiella hirsuta*, *H. aristata*, and *Tritonia disticha*. In December, the display of *Disa chrysostachya*, *Satyrium longicauda* and *S. sphaerocarpum* was breathtaking. The site is owned by the Education Department but the Everton Conservancy rehabilitated it well over a decade ago and has been managing it ever since.





Rose Dix and Carmen Brunette prying into the secret lives of *Clerodendrum hirsutum* at Halkirk Farm in Hillcrest (Photographer: A. Abbott).



Colour co-ordination! *Acraea oncaea* on *Disa chrysostacha* (Photographer: A. Abbott).

## News from CREW Mkhambathini

Alison Young

**We made 12 field trips in the 2011/2012 season, including many return trips to collect flowering material to make voucher specimens.**

There were two outings to the high mistbelt grasslands near Richmond to check on two populations of *Gerbera aurantiaca* (Critically Endangered). The sites are in conservancies and are in good hands.

We also visited several lower altitude grasslands. After a report by a landowner of an odd sighting of *Kniphofia albescens* on a hunting farm in the hot Umkomaas Valley, we found a population of 200 plants on a steep south facing slope. A check on the *Eriosema* cf. *populifolium* plants at Priscillavale confirmed that the orange (not white) flowers were a very large form of *Eriosema distinctum*. We have since found some *Eriosema populifolium* plants. We also found a new southern locality for *Hermannia sandersonii* (Threatened). Brian Schrire, who happened to be in the country at the time, confirmed a



Habitat in the Umkomaas Valley where *Kniphofia albescens* grows (Photographer: A. Young).

new locality for the mainly coastal *Indigofera grata* (Red List status unknown).

In the bushveld east of Pietermaritzburg we found a new record of *Disperis disciformis* (Least Con-

cern) growing in the leaf litter under some *Acacia nilotica* trees. We also found a population of *Androcymbium striata*, surprisingly unrecorded in the district. The *Asparagus* identification talk at the CREW workshop in Mpumalanga helped us to

identify five different *Asparagus* species in this same bush.

We did a course on *Hypoxis* identification in November, which helped to show what characters to look for in identifying different species. This has enabled us to see obvious differences in *Hypoxis* species easier when visiting unfamiliar areas and with other CREW groups.



*Kniphofia albescens* found further south of its usual range (Photographer: A. Young).

## Anne Rennie retires from CREW

Julie Braby and Anne Rennie

**Anne Rennie has had a lifetime interest in environmental matters, plants in particular, and she is known as a stalwart in the Sani area for her active involvement in wildlife and conservation organisations.**

She is a renowned amateur botanist who has made a significant contribution to botany through her plant collection, mainly from the Mahwaqa (Bulwer) Mountain on



Anne Rennie botanising with Isabel Johnson.

her farm, Sunset. Her love for her plants led to the publication of an impressive checklist of the plants on the mountain. Her interest in indigenous plants is not limited to identifying and collecting them but extends to cultivating them as well. Her home has always been open house to visiting botanists and students, and she frequently collected plant material for researchers.

Anne was the first member of CREW in Underberg. For a while, there were very few interested parties and Anne was the most active, going on any outing, whether it was one kilometre or ten. Many have benefitted from her vast knowledge of the local plants. She is now retiring from CREW but retains an active interest in plants. Anne reflected on her introduction to plant collection as follows:

“In 1972 I was given a copy of Trauseld’s book *Wild flowers of the Natal Drakensberg* for Christmas. I was trying to find names for the flowers on the farm but there were some that I could not identify. These I pressed amateurly and took to the Durban Botanical Gardens where I met Dr Ross. He looked at the folder, asked “Is this a child’s project?” and told me to come back after a few days. When I did, I was received very differently with “Come in! Where are you

finding these plants? They are the ones we have lost. Would you be willing to be a collector?”

I was introduced to Mr Strey in the Herbarium and he taught me how to press plants. He was a wonderful teacher although very strict and he was adamant that I concentrate on collecting just on our farm. To add to the interest, we found we were matching my collections with those of Maurice Evans made on Mahwaqa in the 1890s. The list grew and before he retired Mr Strey said, “This is no longer a hobby...it is work.” At that point I was adopted by the Bews Herbarium and this resulted in a joint paper entitled, A checklist of Mahwaqa Mountain, KwaZulu-Natal in *Bothalia* 32.1 (2002).

Since then I have continued collecting but I am sorely out of step with the computer age and digital photography. However, I can still press specimens that really interest me and enjoy having students to stay. Botany can still be an interest to octogenarians.”

Anne is an inspiration to us all but she is handing over the reins this year. The Underberg Group is fortunate to have a botanist move to the area and we welcome Sharron and Aldo Berruti to the CREW family.



# CREW Underberg

Julie Braby

**I**n the spring of 2012 there was great excitement in Underberg as we received our first target species list.

On our first outing, we were rewarded with many great plants but our target species, *Aspidonepsis cognata*, eluded us. It was very frustrating as we have seen it on previous occasions and therefore knew where to look. Our second outing took us to Lotheni Nature Reserve and a 16 km walk. Our target species, *Gladiolus loteniensis*, was last seen in 1994 and was nowhere to be seen on this occasion. In December we went to Sehlabathebe National Park in Lesotho, to an altitude of 2 400 m. Here we found two target species—*Aponogeton ranunculiflorus*, which is only 25 mm in diameter but quite beautiful, and *Protea subvestita*, which is on the decline due to too frequent fires. On a trip to Garden Castle Nature Reserve, we were surprised to find at least six mature *Disa tysonii* plants.

In January we returned to Lesotho where we found carpets of orchids. We counted almost 200 of one of our target species, *Satyrium micorrhynchum*. The last weekend in January is the annual WESSA Wildflower walk down the Sani Pass and once again we collected another target species, *Macowania hamata*. The flowers have been spectacular this season and I think we can thank the early spring rains and then the never-ending summer rains, which also bought some exceptionally warm days.



CREW Underbergers on Sani Pass looking at *Protea subvestita*.



Sehlabathebe National Park.

## News from Boston CREW

David Clulow

**O**ne of the sites visited regularly by the Boston CREW Group is the Impendle Nature Reserve.

Working with Ezemvelo KZN Wildlife, David Clulow has made a sig-

nificant contribution to the Impendle Management Plan, which is an impressive achievement.

The group also made trips to Edge-ware, on one occasion plotting grasses and wildflowers. Heavy

rains and some hot spells had a negative impact on the flowers. The trips to Boston View and Watershed were focussed on the identification of grasses, with the benefit of having experts in attendance.



One of the highlights of the year was a visit to the rich grasslands of Sitamani. The group compiled a list of over 50 species, including *Eulophia foliosa*, *Satureja compactum* and *Craterocapsa tarsodes*. The display of wildflowers was the reward reaped from a judicious burning program and careful protection from excessive grazing.

The CREW outing to Palmer 4/ Happy Valley in early January was well attended. Although not as good a display as previous years, a list of over 100 species was compiled. A tiny *Polygala* with blue flowers prompted a great deal of debate and there were several orchids, including the impressive *Pterogodium magnum* and *Satyrium parviflorum*.

In 2013 a Midlands CREW Group will be started to survey patches of natural vegetation for threatened species.



Botanising at Happy Valley (Photographer: C. Grant).



*Pterogodium magnum* (Photographer: C. Grant).

## Umvoti CREW



Vic Scutte

**Our activities in 2012 were curtailed by the departure of one of our original members and the indisposition of our team leader, Sue Swan.**

A member of the Oribi Working Group requested the identification of a flower that turned out to be a new population of *Gerbera aurantiaca*. During a subsequent trip to the area, we found several

plants in an area of approximately 200 × 50 m.

Another one of our target species, *Tephrosia natalensis* subsp. *pseudocapitata*, was reported to be growing in the vicinity of an old fort in the Kranskop district. We are waiting for confirmation of the identity of the plants we collected there. Target species for the rest of the season are *Syncolostemon latidens* and *Nerine pancratioides*.



CREW student, Nkosinathi Mncwabe, with Umvoti volunteers at Kranskop.



# Mpumalanga Plant Specialist Group

Mervyn Lötter & John Burrows

**M**pumalanga's Plant Specialist Group (PSG) is now a mature 18 years old.

Formed in an attempt to encourage plant enthusiasts to learn more about plants, the PSG has always been a very practical, hands-on group whose members are all encouraged—some may say coerced—to participate. PSG's strength lies in scheduled monthly meetings and outings to learn about our plants that have characterised our activities.

However, in recent years the PSG has happily agreed to also wear the CREW hat and try to carry out the CREW objectives for the rare plants in Mpumalanga, a role we have enjoyed playing—with more than a little success under the tutelage and guidance of Lize and Tilla. With an increased urgency to protect certain areas from the threat of mining, the last year has seen the focus of our outings shift towards specific botanically rich areas that have prospecting applications pending, or are in need of formal protection from any mining intentions. However, in terms of arranging outings for the group, we try to find a balance between serving a conservation function while similarly visiting areas that are exciting botanically.

Over the past 12 months, the PSG has been on seven outings. The first was a day trip to the grounds of Penryn College to help identify trees in the school grounds. This was followed by a weekend outing to Erasmushoop plantation, adjacent to the Blyde River Canyon Nature Reserve. The plantation manager had reported a sighting of *Leucospermum saxosum* (Endangered) that we were able to find, count and GPS. Other plants recorded include *Tulbaghia coddii* (Rare), *Erica rivularis* (Endangered), *Watsonia strubeniae* (Least Concern, narrow endemic) and *Eucomis pallidiflora* (Near Threatened).



Lize and the PSG debating the identity of a possible *Indigofera amitina*—a rare Barberton endemic (Photographer: M. Lötter).

In April we headed for the Barberton Mountains to look for a population of *Aloe craibii* (Critically Endangered), seen by Mervyn many years ago. We were not successful but did manage to find *Aloe albida* (Near Threatened), *Aloe chortolirioides* var. *chortolirioides* (Vulnerable) and *Thorncroftia thorncroftii* (Vulnerable).

There were no outings during winter and in spring our group headed back to the exciting Barberton Mountains in search of *Hypoxis patula* (Vulnerable) and *Eulophia chlorantha* (Data Deficient). The most recent *Hypoxis* treatment does not recognise *H. patula* as a valid taxon but more material is required to support this. The weather was threatening but luckily it opened up long enough for the PSG to find several localities for *Eulophia chlorantha* and *Helichrysum calocephalum* (Rare).

The next outing was a day trip to Morgenzon Nature Reserve to survey for threatened plants to support the formalisation of this area's protection status. Some of the plants of conservation importance observed included an unknown white-flowering *Eucomis*, *Protea*



The rare *Brachystelma stellatum* at Morgenzon, Pilgrim's Rest (Photographer: M. Lötter).

*parvula* (Near Threatened), *Ledebouria petiolata* (Vulnerable), *Clivia caulescens* (Near Threatened), *Brachystelma stellatum* (Rare) and *Tulbaghia coddii* (Rare).

In December PSG visited the amazing grasslands of Hartebeestvlakte that occur just to the north of the Long Tom Pass summit. The weather was miserable and visibility was severely limited but we were occasionally able to get out of the vehicles to survey the immediate environment and we found several plants of conservation importance, such as *Helichrysum summo-montanum* (Endangered),

*Ledebouria petiolata* (Vulnerable), *Erica atherstonei* (Near Threatened) and *Protea parvula* (Near Threatened). This Department of Agriculture, Forestry and Fisheries conservation area has a prospecting application pending.

Our last PSG outing was once more to the Barberton Mountains to summit the highest mountain within the Barberton Range. The summit is on the farm Heemstede on which there are 13 known species of conservation concern. The weather was once again torrid and with some children on this outing,

we opted to cancel the 3 km hike to the summit and to botanise on our way back from the start of our hike. While surveying a grassland area before lunch, Hester and Marinda found an *Aspidoglossum* species which Pieter Bester believes is a new species. This is very important as this farm has a prospecting application pending. We also found *Thorncroftia thorncroftii* (Vulnerable) and *Aloe chortolirioides* var. *chortolirioides* (Vulnerable) close by.

As we celebrate CREW's anniversary and salute the indefatigable

CREW leadership team, PSG is happy that we have achieved a balance between our traditional compilation of plant lists for interesting areas and the more focussed search for threatened species requiring further study. The whole group basks in the satisfaction of locating a rare plant and it more than makes up for the inevitable times when we return empty-handed. However, CREW serves an outstanding role in the conservation of South Africa's rare plants and we, the PSG, are happy to be a small part of it all.



## CREW Limpopo

Bronwyn Egan

**The Limpopo CREW Branch germinated with a bang in October when Domitilla Raimondo and Lize von Staden arrived to run a basic workshop at the Larry Leach Herbarium (University of Limpopo).**

Volunteers from the university's student body, Haenertsburg wild flower experts and BotSoc members from as far afield as Tzaneen congregated to listen to the exciting goals for CREW and to learn the intricacies of collecting and pressing plants. We were astounded to discover how many threatened

plants there are in Limpopo and were eager to make a start towards gathering information.

Despite threatening weather, the following day we took a short walk to the Haenertsburg grassland, which is one of very few examples of the threatened Woodbush Granite Grassland vegetation type. Although we did not find any Limpopo specials, we did document the details of the near threatened *Merwillia plumbea* population in full flower. Many other grassland species were flowering and I noticed the students eagerly scribbling down information

from Sylvie, Tilla and Lize as we picked our way through the veld.

After a lull in activity, an impromptu visit was made in January to a farm in the Wolkberg area. John Lategan, a local landowner, noticed an unusual orchid that he had not previously seen on his farm. He alerted CREW members who took photographs and a specimen and the identification of the plant was confirmed as *Disa zuluensis*. This is a most exciting find as it indicates a range extension of the plant, which is all the more important because the current localities are highly threatened by mining.

The most recent outing was a short day out to the Wolkberg area. One of the goals of this trip was to get GPS data for the location of a *Disa aristata* which had been noticed in early January. This was also an excellent learning opportunity, as Sylvie Köhne provided a running commentary on those plants that were in flower. A grass aloe with a flower of startling vermillion provided the icing on top for the day. We sat admiring the view of the Devil's Knuckles Range while a vermillion grass aloe (its name being the subject of much speculation) nodded gently next to us.







# Celebrating 100 years of milestones

*10 years...and celebrating and honouring the commitment of CREW and its Volunteers....*

**Zaitoon Rabaney**

## Looking back:

**In 1895 the estate of Kirstenbosch was purchased by Cecil John Rhodes as part of his far-sighted scheme to preserve the eastern slopes of Table Mountain as a park for the nation.**

On 6 May 1913 Sir Lionel Phillips, MP in the House of Assembly, spoke of the advantages of a botanic garden, the rare and lovely South African flora and moved for the consideration and advisability of setting aside a piece of ground at Kirstenbosch for the establishment of a National Botanic Garden which was carried unanimously. The next step in the management of such a Garden was the establishment of a National Botanic Society which was achieved in June 1913. Amongst the aims of the society were:

- To encourage the people of South Africa to take an active part in the progress of the National Botanic Garden at Kirstenbosch;
- To augment the Government grants towards developing, improving and maintaining the gardens, laboratories and experimental gardens;
- To organise shows with a focus on South African flora;
- To enlighten and instruct the members on botanical subjects by means of meetings, lectures and conferences and by the distribution of literature.

The Board of Trustees held its first meeting on 16 June 1913 with Mr Duncan Baxter appointed by the Botanical Society as a trustee.

The mission of the BotSoc is to win the hearts, minds and material support of individuals and organisations, wherever they may be, for the conservation, cultivation, study and

wise use of the indigenous flora and vegetation of southern Africa.

## The relevance of the BotSoc aims, then and now.

The BotSoc has faithfully fulfilled its objectives as well as extending assistance and support to the other eight (soon to be nine) National Botanical Gardens that have subsequently been established around the country. These gardens are established under the South African National Biodiversity Institute (SANBI). The Society has also championed the cause of wildflower protection and conservation, outside gardens, through conservation and education programmes, projects and other initiatives.

During 2013, there is much to celebrate on a number of fronts, as the BotSoc and Kirstenbosch National Botanical Garden celebrate their centenaries: the creation of the garden itself and what it has to offer, the conservation and protection of our rich biodiversity, the many scientific discoveries that contribute to worldwide knowledge, the commitment to ongoing education about our botanical and biodiversity heritage.

The Botanical Society is a registered not for profit organisation that has over 30 000 members spread across the world. The Head Office of the Society is situated at Kirstenbosch National Botanical Garden where a small group of core staff, service and support its 16 branches countrywide and manage projects along with the normal administration functions required by a large organisation. All National Botanical Gardens around the country are supported by a BotSoc branch. The Society signed a Memorandum of Understanding with SANBI

in 2010 cementing its relationship which dates back to 1913. It is fitting that the BotSoc and SANBI have a joint centenary suite of programme planned throughout 2013 in celebration of the Kirstenbosch Garden centenary and the 100 year existence of the Botanical Society of South Africa. The Society is committed to supporting the programmes and mandate of the SANBI. One of the programmes the BotSoc is supporting is the Custodians of Rare and Endangered Wildflowers (CREW). CREW is part of SANBI's Threatened Species programmes focussing on plants. The Society is proud to be associated with the CREW programme which, this year celebrates its 10th anniversary. The BotSoc volunteers involved in the CREW programme are saluted for their dedication and commitment to the ongoing surveying and monitoring of South Africa's threatened and vulnerable plants. Their support of the programmes is what leads to the success of the CREW programme.

It is important to note that the Minister of Environmental Affairs, Ms Edna Molewa, referred to the CREW programme in a news article in the South African Government news, when she referred to what South Africa is doing on the monitoring of its threatened plants. (<http://www.sanews.gov.za/south-africa/sas-endangered-plants-well-protected-minister>).

CREW is a key initiative in advancing practical conservation, and BotSoc members have an opportunity to be directly involved in this 'citizen science' programme. It does so by equipping a network of volunteers with the means to survey, monitor and conserve threatened plant species, aligning volunteers with their local conservation agencies and local land and stewardship

programmes where applicable. BotSoc provides financial support for project staff from historically disadvantaged backgrounds as well as supporting operational costs in some areas of the country.

### Looking ahead

Moving forward, BotSoc is definitely taking global plant conservation strategies into account, and will continue supporting SANBI with a mandate of plant conservation through initiatives like the CREW programme.

Celebrating 10 years of the CREW wildflower conservation creates an opportunity to tell the story and document the history with a coffee table book, *Plants in Peril* due for release during the latter part of 2013.

BotSoc is also a partner to the Groen Sebenza programme, a Jobs Fund Partnership project with the South African Government and Development Bank of South Africa, managed by SANBI. This involves the placement of five new internships for the skills development and job creation pilot programme in close collaboration with CREW. CREW's Groen Sebenza internships focus is aimed at developing priority skills in the biodiversity sector to create sustainable job opportunities.

After attendance of the IUCN's World Conservation Congress during September 2012 in South Korea, the BotSoc Conservation focus has been sharpened by taking the Global Strategies for Plant Conservation into account and working in partnership with SANBI and other conservation agencies to see what can be done collectively to work towards global targets for plant conservation.

BotSoc is proud to be an implementing partner to the CREW programme in fulfilling its mission in the conservation, cultivation, study and wise use of the indigenous flora and vegetation of southern Africa.

Become a member of the BotSoc, the largest membership-based environmental non-government group in South Africa.

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