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.

The CREW Programme is growing each year, not only in the number of groups and volunteers, but also in the collective knowledge of our flora that is being built up bit by bit as each volunteer improves his/her knowledge of local species. This ever increasing botanical capital is paying off in the data that is being fed back to the CREW nodes to the national threatened species office.

Currently we are updating the Red List of South Africa’s plants in order to release the first online South African Plant Red List in April of 2011. We have been struck by the large number of species that required updating as a result of CREW volunteers work—we have over 700 threatened species that have to be reassessed due to fieldwork that has taken place over the past two years. Most encouraging of all is that a large number of the species that CREW volunteers have been monitoring will become less threatened once they are updated as many new previously undocumented populations have been observed and documented.
by CREW volunteers. This indicates very clearly that the CREW Programme is achieving its aims of contributing to the monitoring and conservation of South Africa’s plants.

Keeping this amazing network of volunteers going is a priority for SANBI’s Threatened Species Programme, however, finding the resources to fund CREW is becoming ever more challenging. In the past year we have experienced ongoing loss of funding support that we have come to depended on over the last few years. This includes funds from the Norwegian ministry of foreign affairs which have support us since 2005 as well as national government funding that we used to receive from SANBI.

The latter funding cut is being experienced by all programmes and projects run by SANBI as the institute has a large financial deficit that needs to be cleared. Fortunately the Botanical Society of South Africa (BotSoc), a major partner in the implementation of the CREW Programme, has been extremely supportive of CREW. In May 2010 BotSoc reconfirmed its commitment to CREW by renewing the CREW Memorandum of Agreement with SANBI. BotSoc financially supports the operations of CREW in the summer rainfall region and also pays for the salaries for two CREW coordinators.

A further benefit of the partnership with BotSoc is the sharing of their enthusiastic administrator, Zikhona, with the Cape Town office for three days a week. In addition to the support received from BotSoc, the CREW Programme is currently actively seeking funds particularly for the implementation of CREW in the Cape Floral Region. We are very confident that our funding applications will be successful. We have also not been deterred by the current poor financial climate and are going ahead with plans to start a CREW node in the Eastern Cape in 2012. We are actively raising funds for this Eastern Cape Project in which we will pilot involving community members in collecting plant specimens.

So watch this space—CREW is going to continue to expand and grow as there are many more threatened and rare plant species that need our help.

Domitilla Raimondo (Threatened Plant Programme Manager)

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Mpumalanga
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Reading through the articles submitted by the group just gave me so much inspiration and made me realise how fortunate we are to be working with such a dedicated group of people.

One of the most exciting projects for me this year was establishing our demographic monitoring project. We are now doing demographic monitoring for seven threatened plant species. The areas we are working in are Nieuwoudtville (Bulbinella latifolia var. doleritica and Euryops virgatus), Paarl (Argyrolobium angustissimum), Riverlands (Marasmodes defoliata), George (Disa procera and Nanobubon sp. nov.) and St Francis (Brunsvigia littoralis). This has presented us with a great opportunity to start collecting long-term monitoring data to enable us to look at population trends and the impact of threats on the viability of threatened plant populations.

Our C-team focus for 2010 was working in Piketberg and the Riebeek Kasteel/Riebeek West area. This area has not been well-botanised and our volunteers managed to record some interesting species the previous year. This gave us an indication that there might be many more species to be found as most of the field trips to this area resulted in new records of threatened species. Our key highlights for the season was new populations of Geissorhiza purpureo-lutea in Riebeek Kasteel, a new population of Ferraria parva in Hopefield, a possible new species of Marasmodes in the upper Breede River valley and a new population of Moraea insolens in the upper Breede River valley and a new population of Moraea insolens (a plant that I have been wanting to see since I first saw it in the Moraea book some 12 years ago).

In 2009 we recorded a new population of Moraea vuvuzela. This species was named in honour of the FIFA Soccer World Cup that took place in South Africa last year. The name ‘vuvuzela’ inspired great interest in this species and the organisation that funded the naming of the species has also made additional funds available for a project to contribute to the conservation of this highly enigmatic species. CREW will be conducting surveys in the Worcester area this year to try and locate more populations of this species and also to initiate a project at the Karoo National Botanical Garden to build an ex situ collection of the species and develop a threatened plant display in the garden. We will also be engaging volunteers from Worcester and hopefully we will be able to establish another CREW group in the area.

We have a new addition to the CREW family. Vathiswa’s beautiful baby girl was born in January and we eagerly await to see her and the baby soon.

It seems we are in for an exciting year. There are many new exciting projects to focus on and I am looking forward to another brilliant year of CREW work. Many thanks to our dedicated volunteers for all the contributions you have made to CREW.

Ismail Ebrahim
Our work since June 2010 has been concentrated on an area north of Humansdorp, mainly on the farm Honeyville. In 1838 James Backhouse camped on Honeyville on his way to Hankey. He recorded 14 species and although we have found some of them, we remain on the lookout for the others.

Our approach has changed and instead of looking at selected 1 ha plots and only recording the species in each site we are now building up a species list for the whole farm. There are various types of vegetation on Honeyville with mainly grassy fynbos dominating the area. The farm is unusual in having large stands of Protea neriifolia. In other Humansdorp grassy fynbos areas P. neriifolia has been burnt out. We are finding the new approach far more interesting as we are covering a larger and more varied area. Our aim is to build up as comprehensive a list of Honeyville plants as we possibly can and of course always to record species of conservation concern. By the end of January 2011 we had recorded nearly 350 species with ten species of conservation concern. It is always exciting at the end of a day to see how many new plants we can add to our list.

The owner of the farm, John Barrett, hopes to have Honeyville declared a private nature reserve soon and we are thrilled that our plant lists are so useful to him.

Although we do work on other farms, going back to Honeyville helps our team to become familiar with the plants. We never find it boring as there is so much to see; dainty Ixia orientalis and Disa hians waving in the wind, hillsides of Watsonia species of various colours and Cyrtanthus obliquus brightening up the veld. Then there are the sudden surprises when one is down on hands and knees as happened when we were examining two different species of Drosera in a damp, muddy seepage. The Drosera plants were fascinating on their own and then suddenly amongst them we noticed the tiny Utricularia bisquamata. This interesting species has minute utricles on its ‘roots’ to trap microscopic water organisms. A fascinating find!

Members of our team travelling in the Eastern Cape have come across species of conservation concern such as Apodolirion macowanii (Vulnerable), Crinum lineare (Vulnerable), Gasteria nitida var. armstrongii (Critically Endangered).
Satyrium hallackii subsp. hallackii (Endangered) and Tritonia dubia (Near Threatened). The CREW Threatened Species Observation Forms for recording these are most useful.

The Fourcade Botanical Group has celebrated ten years of monthly rambles and is still going strong with 23 members attending our final outing of 2010 to Witelsbos. The Juniors have enjoyed their activities and trips into the countryside which included Plant Monitoring Day. They are a very enthusiastic group and always eager to learn more about our environment.

In 2009 we found, as we thought, Annesorhiza thunbergii which hadn’t been collected since 1773 when Thunberg found it beside the Loerie River. However, it is now thought that our find could be a new species of Chamarea. The other possible new species or new subspecies in our area is a Psoralea that we collected at the St Francis Links golf course. The specimen has been given to Prof. Charles Stirton and we await the news. There are always new, exciting things to be found and our team is as enthusiastic as ever and keen to record, preserve and educate people about our magnificent flora.

Caryl Logie

The development of the Mamre Donkey Trail has been a long and challenging road. Firstly we engaged the community that came up with the idea and then proceeded to train tour guides and test the product. Our results were promising and we were positive that we had a winner. When doing our initial test tours at the Mamre Flower Show we realised that we required more input to ensure a more successful product. We approached the Claremont Rotary Club to assist us with additional funds to construct a decent donkey cart, develop a booking website and provide additional training for the tour guides.

The Rotary Club kindly funded the project and the road to sustainability had begun. We partnered with Stephen Lamb to ensure that the project was successful. The Mamre Donkey Trail is now a popular attraction and we are proud to have brought this project to fruition.

Figure 1.—Visitors enjoying a traditional meal.

Figure 4.—Start of Plant Monitoring Day 2010.

Figure 5.—Potential new species of Psoralea found in St Francis.
from Touching The Earth Lightly (http://touchingtheearthlightly.com) to assist us with the construction of the donkey cart and design of the website. We conducted two community workshops to train people how to harvest material from the wild sustainably and to put the materials to use in building a proper donkey cart. The donkey cart took the form of a metal frame with wood from alien invasive species used as the ‘body panels’. The tour guides were very excited to be part of the team that actually builds the donkey cart that will be used for the tour. The donkey cart turned out to be a great success. Every donkey cart owner in Mamre was envious of this ‘high-end luxury’ cart!

We then developed a website (http://www.mamredonkeytrail.co.za) for the project. The website has information about the historical significance of the town, background information on how the tour started and the contact details for the tour guides so visitors can book their tours.

Once the website was live and we had fine-tuned the tour we invited people to attend three launch tours. We invited reporters, project partners, community members and other tour operators. The launch events were very successful and it gave us a chance to see what the trail would be like if we were taking paying tourists. The tour started at the Mamre Moravian church after which visitors are taken on a relaxing ride through the town stopping at points of interest where the tour guides would relate stories about life in Mamre. Visitors are then brought back to the church for a scrumptious three course home cooked meal at the Old Restaurant. After lunch visitors are taken on a guided tour of the historical building on the church grounds.

The tour guides presented tours at the Mamre Annual Flower Show and this was a great addition to the activities at the show. We hope that the project will be successful and that we will have many more people coming to experience the wonderful town of Mamre.

Ismail Ebrahim and Morgan Sambaba

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**Stilbaai**

—a tribute to Dr Uys De Villiers ‘Tol’ Pienaar (12 August 1930—2 February 2011)

When Dr Tol Pienaar retired to Still Bay in 1991, he did not just sit on his laurels, as he was well justified to do, after an extraordinary working career of turning the Kruger National Park into an internationally renowned conservation icon and ecotourism destination. In 1953 he obtained a PhD with a thesis on the Hematology of South African reptiles. After a few years of lecturing in Histology at Wits, he bravely followed his passion and started from scratch as junior field ranger in the Kruger Park in 1955. He gradually worked his way up to Biologist (1961), Park Warden (1978), and finally Chief Director of SANParks (1987). Refreshingly, he had no need to drive around in a large, fancy 4X4 vehicles—he was always seen in his small Nissan bakkie.

We at Still Bay benefited enormously from his wealth of knowledge, expertise and vision. Just as he did in the Kruger National Park, although on a smaller scale, he had
the foresight to establish a Trust fund whose interest would pay the ‘Stilbaai Natuurbewaringswerkgroep’ to sustain alien vegetation eradication projects in the Pauline Bohnen and Skulpiesbaai Nature Reserves and maintain the newly created Nature Areas from Jagersbosch through Paling Kloof to the Green belt between Waterkant street and the Goukou River.

Tol was renowned for his scientific research but he also understood the need for us to re-connect with nature and realise its value for our survival. To promote this love and respect for our natural environment, Tol increased the number of camps, picnic sites, walking trails and entrance gates in the Kruger National Park. In Still Bay he created trails through Skulpiesbaai and the Nature Areas, as well as indigenous waterwise gardens at Jagersbosch, Palingkat Information Centre, and Soeterus in Melkhoutfontein. These trails and gardens attracted tourists from all over the world. For years Tol and his wife, Annette, ran the Gem Nursery along Jongensfontein Road, inspiring local gardeners to plant such sustainable gardens. Later he focused on turning the grounds into a haven of interesting plants and trees from all over South Africa, including a baobab, marula, mopane, sausage tree and showy rockeries of succulents and bulbs. He and Beat Young, the first honorarium supervisor of the ‘Stilbaai Natuurbewaringswerkgroep’, planted many different species of indigenous trees along the Nature Area walks. This illustrated the huge variety available and emphasised the role of trees in the sustainability of life. He drew our attention to the ancient and giant wild olive in Melkhoutfontein and the milkwood trees at Langbos.

Just as he inventoried plant, fish, reptile, mammal, amphibian, insect and bird diversity in the Park, so too did Tol and Annette collect plants for a Herbarium which would serve the entire Hessequa. He soon realised that this region is relatively under-botanised and unique. They collected over 2 000 plant specimens, some as far afield as Van Wyksdorp and Swellendam. Today many of these collection sites where interesting plant species were found, have been destroyed, e.g., Still Bay Heights and Kloofsig are now built-up suburbs, and the Renosterveld Riversdale commonage is a taxi rank. Tol was always willing to help with plant identification and very supportive of CREW. He rejoiced when some of our rare plant species were mentioned in scientific papers and generously contributed his excellent photographs of our coastal limestone fynbos plants to the Pauline Bohnen Nature Reserve photographic flower guide in order to make botanising a lot more accessible for the amateur. He remained faithful to his trustworthy Leica camera and refused to go digital.

Tol was a driving force behind the proclamation of the Still Bay Marine Reserve in 2007, which included the Goukou River estuary up to 15 km upstream.

It was Dr Tol’s dream to have a well-run Interpretative Centre at the entrance to the Pauline Bohnen Nature Reserve, not only to make this unique Reserve (where he did most of his collecting) accessible to the public, but to showcase our amazing natural inheritance and to adequately house the Herbarium. in this way the Herbarium could be expanded to include the new Marine Reserve plants. It would create ecotourism jobs and thereby contribute to the economy of the region. He was so disappointed that an opportunity was lost when the Municipality was unable to move the forester’s home here for this purpose early 2010.

May the Hessequa Municipality honour his memory by maintaining his legacy which he had the vision to create for the region and for South Africa and the international world.

Tol would have shared our relief that Advasol retracted their gas exploration attempt in
Blombos. He would also have welcomed our new Municipal Environmental Officer, Shagon Carelse, who is now challenged with a backlog of over two years as this is how long the post has remained vacant. By re-establishing the Hessequa Environmental Advisory Committee, which Tol had the insight to initiate in 1993 as the Stilbaai omgewingsadvieskomitee, his task will be lightened and better informed. As Chair of this advisory body, Tol expanded the Pauline Boonen Nature Reserve in October 2001 so as to create an ecologically significant conservation area which linked up with the coastal CapeNature Geelkrans Nature Reserve. He too was horrified to learn last year that the Municipality had facilitated the development of Plattebosch 485/51 thereby effectively plugging off Skulpiesbaai Nature Reserve into an ecologically sterile island. He played a decisive role in getting Skulpiesbaai declared as a Nature Reserve in April 2000, and the adjoining fishtraps a National Monument in 1998. He was very keen for all the plants along the Skulpiesbaai Nature Reserve trail to be labelled.

In the Kruger National Park, Tol mitigated the worsening drought situation; in Still Bay he continuously called for better management of our Hessequa rivers. He highlighted job creation by clearing the alien vegetation from our catchment areas as these plants rapidly deplete the systems of precious water.

Tol enjoyed the study of animals, big and small, the marine environment and coastal fynbos. He also studied, cultivated from seed, and photographed vygies from all over the land. This effort eventually culminated in a beautiful publication, co-authored with Ernst van Jaarsveld VYGIES. Gems of the veld. A Garden and Field Guide to the South African Mesembs (Cactus & Co, Italy, 2000). It’s a pity he won’t be here for the Fynbos Forum at the end of May 2011. Fortunately, his exquisite final book GOLIE JARE (Kruger National Park) was published in time and he could experience its wonderful reception.

Thank you, Tol, for all you have done for us and generations to come. May you rest in peace knowing that you have truly deserved a well-earned rest, back in your beloved Kruger National Park on that beautiful koppie in the company of Col. Stevenson-Hamilton and the Earth Spirit of the vast open silent plains.

We have indeed been blessed to have had such a giant in our midst. We miss you. We would like to extend our deepest condolences to his family, friends and colleagues.

Janet Naudé
**Tritonia dubia**

Noting that *Tritonia dubia* is listed as Near Threatened in the Red Data Book, I recall that years ago when visiting a sheep farm in the Gamtoos Valley near Humansdorp, I had observed this small species flowering in early spring. When passing the area on 5 August last year I deviated from my route to try to find them again. The area, known as De Mond, is in the fertile flood plain of the Gamtoos River Valley. The floodplain is intensively developed as irrigated cropland and pasture. I recalled that I had previously found these plants on the road verges on the western side of the valley where the sandy alluvial soil gives way to steep sandstone slopes. Sure enough, the little bulbs were still there and in full flower, making a brave display in one of their last remaining habitats. Clearly an inhabitant of the sandy floodplain, which has been totally transformed, they survive at the extremity of the plain where it gives way to the steep western slopes. These plants are threatened by habitat destruction even though they multiply profusely by offsets and seed. Although growing in a largely summer rainfall region, they are completely dormant in summer, behaving exactly like winter rainfall Tritonias. I was happy to make a positive report to CREW.

Many more rare plants, listed in the Red Book, await my attention in the Eastern Cape.

**Cyrtanthus spiralis**

Despite these triumphs, I also have a sad tale to tell. *Cyrtanthus spiralis* is a fairly robust member of the genus with spirally twisted leaves and well adapted to the harsh, dry thicket habitat where it occurs. *Cyrtanthus spiralis* is Red Listed as Endangered with the distribution cited as ‘Uitenhage to Port Elizabeth’. The listing further states that it has lost four of eight historical subpopulations (Despatch, Theescomb, Bethelsdorp and Redhouse) to urban expansion over the past 50 years and it may be about to lose another population.

I recall seeing it regularly flowering bravely in January on the verges of the N2 highway between Coega and Colchester. Alas, with the development of the Coega harbour and widening of the N2 into a double lane highway, these plants have all been totally destroyed.

My friend, Welland Cowley, told me of a small population near Perseverance between Redhouse and Despatch and I resolved to check this out and make a report to CREW when next I found myself in the area. I was able to do so on 12 January this year. I found a few plants growing in the short thicket in the general area described to me, some of which were in seed. However, falling in a Municipal area and grazed by cattle communally belonging to local residents, the area was in bad state of degradation. There was also evidence that quarrying had taken place and it is likely that this will continue since the population is situated close to the Perseverance quarries. However, this was not the worst news.

Two friendly policemen stopped me to investigate why a strange vehicle was parked in this isolated and, according to them, fairly dangerous area. When I explained my mission they were very co-operative, but informed me that the area was earmarked for township development at some future time. I believe SANBI, the Nelson Mandela Metropolitan and Eastern Cape Nature Conservation authorities should take action to either preserve the site as a conservation area or relocate the 50 or 60 bulbs that still survive here to a safer place.

Cameron McMaster
Despite the drought, 2010 was an exciting year in the Swellendam and Barrydale area.

On 30 March a controlled burn was exercised in the Bontebok National Park including the section with the population of *Erica filamentos* (Vulnerable). The regeneration of the veld is being closely monitored by the rangers as inappropriate burning may have led to the decline of this species. The burn would also have impacted on part of the *Protea decurrens* (Endangered) population as well as *Agathosma foetidissima* (Near Threatened) and *Acmaedania laxa* (Endangered). It was interesting to have the veld on the farm Riet Vallei as a comparison. It has the only other known population of *E. filamentos* and a healthy population of *P. decurrens*. This veld urgently needs to burn as, apparently, the last time it did was more than 20 years ago. It is now overgrown and moribund making it increasingly difficult for the populations of *Babiana patula* (Declining), *Freesia caryophyllacea* (Declining) and *F. fergusoniae* (Vulnerable) to remain healthy. The landowner is unlikely to burn the site—it will have to be a natural fire.

The only known population of *Diosma fallax* in the Bontebok National Park has been located and appears to be healthy and consisting of about 30 plants. A survey was done in the adjacent veld belonging to Appelsbos to encourage the landowner to conserve the area. *Phyllica velutina* (Near Threatened), *Acrodon subulatus* (Endangered), *Stoebe rugulosa* (Endangered) and *Babiana patula* (Declining) were found amongst other usual plants of this region. There was no sign of any *D. fallax* plants although the veld type is the same and it has been less frequently burnt.

It is exciting to have Christi Kloppers, resident in Swellendam, on the CREW team although his time is consumed by establishing his home and spending time with his two young sons. However, he will certainly make sure that the local landowners are aware of the need for conservation. He will also be spending more time at Rietjiesbos where we recorded populations of *Gladiolus emiliae* (Near Threatened) and *Gladiolus engysiphon* (Vulnerable) as well as one *Cyranthus odorus* (Endangered) plant in April 2010.

Over the mountains in the Karoo, the South West section of the Sanbona Wildlife Reserve burnt after a lightning strike on 23 March 2010. The affected area is thought to be about 5 000 hectares of veld that has not been surveyed before. Confronted with a lot of emerging leaves, it has been interesting to observe how the veld seems to be recovering.

Two populations of *Brunsvigia josephinae* (Vulnerable) have been recorded; one in the valley and one at about 900 metres above sea level. *Wurmbea compacta* (Vulnerable), a Montagu endemic, has been spotted (also in the veld closer to Barrydale) and *Boophone disticha* (Declining) has survived the burn in the most amazing fashion. It has been interesting to see the many species of *Pteronia* and *Merxmuellera* grass coming up after the fire.

We were rather disappointed that *Moraea unguiculata* is as widespread because it has a very special look about it.

Most useful for us is that at last we have our own field guide,
Plants of the Klein Karoo, that already looks well used. We would like to thank the Vloks for publishing this wonderful book. Apart from many others, the strange plant we had seen on our walks around Barrydale could at last be identified as Syringodia longituba.

Jill Blignaut from Stonehaven Private Nature Reserve continues to build on her incredible collection of plants pressed and photographed from this section of the Langeberg. After a long search she has finally collected a specimen of Erica barrydalensis (Rare) in flower.

Disa hunting with Hildegard has taken us to different localities. It is always refreshing to be in the seeps in mid-summer.

It was with a pleasant surprise that we realised that the farmers in the stewardship programme really miss seeing us around. Long live Odette and the stewardship programme! This year we will plan to fit in more visits.

Flora Cameron

Friends of the Tygerberg

This has been such a busy year. This past year we have been to 17 different sites, eight of which were completely new to us, comprising Swartland Silcrete Renosterveld, Swartland Shale Renosterveld, Swartland Granite Renosterveld, Atlantis Sand Fynbos, Cape Flats Sand Fynbos and Boland Granite Fynbos vegetation types. Quite exhausting and challenging!

We continued our work on Paarl Mountain Nature Reserve, assisting Karen Marais with her studies on the burn site but also checking on the Argyrolobium angustissimum (Critically Endangered) plants we had found the previous year. The species’ identity has now definitely been confirmed. This was thought to be a good opportunity for some demographic monitoring, duly accomplished in a subsequent visit together with Ismail Ebrahim and his team. We managed to tag 25 plants and recorded baseline data for those individuals.

Having had all this experience on Paarl Mountain burn site made us venture closer to home and do a similar exercise in the Tygerberg Nature Reserve (TNR). Three different sites had been burnt through control-led fires in the last two years. We visited these sites several times throughout the year and now have a better insight of what comes up after a burn. Oxalis strigosa (Endangered) turned up unexpectedly on a patch close to the De Grendel fence on the saddle of the hill. Aspalathus puberula (Critically Endangered) was growing profusely everywhere. Moraea elsiae (Vulnerable) appeared on the eastern slope. Gladiolus recurvus (Vulnerable) was discovered by Abraham Saaaiman of TNR growing next to the path on the saddle. When we took GPS readings for those, we found more growing under the pine trees close to the Kristo Pienaar Environmental Education Centre.

We were asked by the City of Cape Town’s Biodiversity Management Branch to accompany their officers to various new sites in the vicinity to check the vegetation for Red Data species and to compile plant species lists. At Botterblom Park at Vierlanden, Durbanville we found a new locality for Podalyria microphylla from the Contermanskloof area.
lyria microphylla (Critically Endangered) and we recorded an additional 13 threatened species. So far, only four threatened species are recorded for Jack Muller Park in Boston, Bellville. However, we have just started in this area—in the heat of summer—and will see what awaits us there in spring.

Tydstroom farm (near Philadelphia) boasts 22 threatened plants, which were recorded on our first visit to the site. Nirvana (close to Malmesbury) with similar vegetation to Riverlands is a gem with 21 threatened plants discovered to date. The City of Cape Town is currently negotiating a Stewardship Contract with the landowner. The conservation of this site will be an amazing achievement because of its high concentration of threatened plants and good quality vegetation.

Closer to home we visited a very small site in Bothasig. This area contains a small remnant of Cape Flats Sand Fynbos. It has now been cleared of most of the alien vegetation and we have been met with some surprising finds like Phylica thunbergiana (Endangered), Aspalathus albens (Vulnerable) and Aspalathus tylodes (Endangered). We subsequently searched the Plattekloof Heritage Site nearby and found Phylica thunbergiana (Endangered) as well as Serruria aemula (Critically Endangered) and Diastella proteoides (Critically Endangered).

Accompanying Cliff Dorse and Penny Glanville to a site in the Contermanskloof area we found rich pickings indeed. A new record of Podalyria microphylla (Critically Endangered), Ruschia geminiflora (Vulnerable) and Xipotheca lanceolata (Endangered) amongst a host of others.

The most encouraging find this year was two new species at Klipheuwel Radio Telkom Site. An undescribed Aspalathus species and an Otholobium species. The Otholobium has subsequently been named Otholobium crewii—we are thrilled! Klipheuwel is a fantastic site with an amazing variety of plants, especially in the Aspalathus genus. So far we have recorded 31 threatened plants from this site. It has never failed to surprise us with something new and requires further study.

With so much diversity and so many sites on offer there is always one step further to go. Our herbarium has been enriched with many more pressed specimens. The specimens have all been mounted now.

Many thanks indeed to all the Friends of the Tygerberg Hills CREW members, you are absolutely fantastic. Being part of such a team is so inspiring! Sadly we have lost our champion, Karen Marais, to Australia but I do hope Karen will come back one day and continue her brilliant work. Thank you also to Ismail Ebrahim, his CREW team and all the scientists that support us so well. Happy botanising to all!

Karen Marais and Hedi Stummer

The Darling Flora Group

The Darling Flora Group started the year with every intention of doing serious monitoring of the really special geophytes that occur in our area. However, due to unforeseen circumstances this did not happen.

We continued to monitor our regular sites to assess populations of threatened plants, especially early in the season. One of the biggest surprises for the year was Babiana pygmaea flowering in greater profusion on both sites. We wondered what the reason for this phenomenon was and thought it was either that they liked to be really trampled by cattle during the hot summer, or they are evolving to cope with climate change. Both sites were completely flooded during the previous winter followed by a very hot and dry summer. The following winter they were standing knee-deep in water again! This was a spectacular sight and the good news is that the Oudepost population seems to be expanding after the clearing of Port Jackson willows (Acacia saligna) from the site. We counted more than 500 plants along a 50 m stretch of roadside!

The conservation officer of Burgers Post farm, Jacques van der Merwe, found a new population of B. pygmaea as well as a few individuals of a hybrid between B. pygmaea and B. leipoldtii. This was a fantastic discovery as we were concerned about the existing populations. Jacques also managed to find a new population of Hessea cinnamomea, not far from the known location at Riverlands Nature Reserve.
We noticed fewer *Gladiolus griseus* plants at Yzerfontein compared to previous years but we did manage to find two new populations—one to the south of the town boundary and another near Silverstroomstrand off the R27. We are now living in Langebaan where we found both *G. griseus* and *G. caeruleus* in abundance. This area will be searched and monitored from this year on as we have permission from the landowner to do so. We are looking forward to some interesting discoveries.

Our *Geissorhiza darlingensis* at the Tienie Versfeld Reserve were out in profusion this year as well as the population at Baarhuis some 15 kilometres north of Darling. Unfortunately, we missed all the late flowering specials as I was away on a trip to Spain where we found Plumbago and Cape honeysuckle!

Finally, there have been some new developments regarding the Conservation Centre which the Darling Wildflower Society wants to build on the outskirts of the town. We have been given authorisation by the Department of Environmental Affairs and Development Planning to continue with the process adhering to some guidelines. The local authority has to secure tenure of the proposed land for the construction of the building. There are still some ongoing stewardship matters which we hope to discuss and resolve with CapeNature this year. The major challenge for 2011 will be to raise sufficient funds for the building. We do not want to use all the funds raised to date as that is set aside for the operational costs of the centre throughout the year. We are looking to employ someone for the office, guides in the reserves and assistants in the indigenous garden that we envisage to be established around the building. Hopefully by next year there will be more definite news to report on.

Once again a huge thank you to everyone at CREW, the members of our group and the landowners of Darling.

*Helene Preston*
2010 started very well for the Jacobsbaai Group. Our first achievement for the year was finding *Strumaria chaplinii* on the limestones west of Vredenburg. This was a very strange discovery as the other known populations of this species occur in cracks and depressions on granite boulders. In 2009 Nick Helme found the first population on limestone in the Yzerfontein area. This got us thinking that *Strumaria chaplinii* might occur in other areas and this year we will be searching in some of the areas around Jacobsbaai and Saldanha to try and find more populations of this highly threatened species.

In August we kept John Manning and Peter Goldblatt extremely busy. John came to see a new species of *Moraea* (most similar to *Moraea tripetala*) when we showed him two other species that had been bothering us. On the granite around Jacobsbaai we found another *Moraea* which is very similar to *Moraea inconspicua* and John and Peter agreed that this was a new species and I dubbed the new species *Moraea conspicua*!

Then we showed John a few patches of rather strange looking *Tripteris calcicola*. At first John thought it might be that they occur on slightly different soil or might experience different microclimatic conditions but a closer look confirmed that this too was a new species of *Tripteris*. Only in Jacobsbaai can you find three new species in one day!

We focused our attention on the Postberg section of the West Coast National Park during spring. It was fantastic to be able to access the area and many thanks to SANParks for organising access and granting us permission to visit the area. 2010 was not the best year for viewing flowers in the reserve but we did manage to monitor *Spiloxene linearis*, *Sparaxis calcicola*, *Tripteris calcicola* and many other limestone and granite specials. Our most exciting find was a new population of *Ferraria parva* sp. nov.

In October we had a fantastic find. *Indigofera platypoda*, which is a cryptic species occurring on the limestone rocks. It is an absolute miracle that we found this species as it has thin grey stems and without flowers they are nearly impossible to spot.

We look forward to finding more special plants in our area this year. We have monitored most of the target species that CREW has set for us and we continue to enjoy working in the field.
Long-term monitoring of special plants

CREW and Indigo Development and Change have established some long-term monitoring sites in partnership with the Hantam National Botanical Garden. This project endeavours to document long-term population trends and changes. Two species were identified for monitoring namely *Euryops virgatus* and *Bulbinella latifolia var. doleritica*.

The steps we take to monitor these species are as follows:

- Determine the plant age (adult, juvenile or seedling).
- Measure the base of the stem of the plant with a caliper.
- Measure the height of the plant from the bottom to the top of the plant.
- Measure the length of the flower.
- Count number of leaves.
- Take a GPS point (latitude and longitude).
- Make notes of anything that you observe.
- Write all the information on a data sheet.

The data will be collected and sent to CREW to ensure that the long-term monitoring is possible. The Nieuwoudtville CREW activities are supported by a range of stakeholders ranging from visiting scientists, interested locals, conservation agencies, local NGOs and businesses.

It has by now become an institution in Nieuwoudtville: every first week of the summer and winter school holidays the Nieuwoudtville CREW Group offers a range of activities for children. Activities are coordinated by Indigo—the local NGO associated with the CREW Programme and supported by local individuals, researchers and the CREW team from Kirstenbosch.

The activities draw in learners from the local primary and high schools. The learning aim is not only to generate an educational outdoor experience, but also to expose learners to scientific methods of monitoring using digital cameras and GPS devices. Most importantly, it is crucial to create a space where the children and young adults can feel creative, happy and safe. Some of the winter school highlights are detailed below and included:

- Ice and rock adventure.
- Make your own movie.
- What does biodiversity mean?

Ice and rock adventure

This was one of the highlights of the week. We departed with 20 learners early in the morning to be in the wild for the day! Just 7 km outside Nieuwoudtville, we stopped at the Glacial Pavement close to Oorlogskloof farm. A visiting student gave a presentation about the glacial origins of the scrape marks that can be observed on the bedrock. 300 million years ago glaciers several kilometres thick covered this area and moved some very large boulders over bedrock leaving the traces we can still see today.

We continued to the farm Papkuilsfontein, where we embarked on a long hike to the edge of a deep gorge. Although Papkuilsfontein is only approximately 30 km south of Nieuwoudtville, for many learners this was their first experience and opportunity to learn about special rock formations and plants in this area. We explored some ancient and rare specimens of the sterboom (*Cliffortia arboretum*) and mapped the population occurring on the farm along the cliff edge. Needless to say, there...
was lots of excitement! A long hike provided smaller groups to discuss special observations ranging from special insects and pollinators to questions on groundwater and climate change.

We ended the day with a meal at the Pakuilsfontein Restaurant and for many children this was their first restaurant experience. We had a joint reflection, evaluation and the legendary lucky draw of biodiversity books and stationery.

Make your own movie

This activity was offered by Shannon and Donna from Indigo. The idea behind ‘making your own movie’, was to give the children a chance to tell their own stories using a participatory video technique. The group was split into two groups of four and five. The facilitator then introduced the equipment to the first learner, to make sure he or she knows how to operate the camera. This learner then explained it to the next participant and so on. The introduction also included practical exercises to get familiar with filming and the camera. The topic of the movie was freely decided by the children and they proceeded to develop their own storyboards and planned how they were going to do the filming on the next day.

At the end of the second day both groups produced a short movie each with a powerful story that was shared with all children in the summer school at the closing session. There was great applause for the new video artists!

What does biodiversity mean?

This was an activity facilitated by the CREW team from Kirstenbosch. A choice of different activities was offered: Bio-puzzle Race, Back to the Future, Biodiversity Mind Map and the Fast and the Furious. The learners worked in groups and experienced that learning about biodiversity can be fun. A big thank you to the CREW team from Kirstenbosch!

Bettina Koelle, Donna Kotze and Shannon Parring

CREW visited Piketberg Mountain during 2008 and 2009 and their visits prompted a group of us to start looking at a number of endangered species we have in our immediate vicinity.

This started an interest in finding out more of the flora on our mountain. Our first outing was in February 2009 with four people. We now walk the second Saturday of every month and we sometimes number more than 20 with an average of about 12 regulars. Our outings, at this stage, are more of a ‘nature ramble’ as we lack members with a professional botanical background to help us identify and explain some of the things we see. When it comes to flowers, our limited diagnostic skills have sometimes convinced us that we have found lots of new species as we can’t locate pictures of them in our books! We have a strong emphasis on the social aspect of the ramble and insist that we have a stop for snacks and a chat. We try and visit a different farm every month and we’ve been amazed at the different microclimates within such a small area. This year outings have included visits.
to a yellowwood forest and rock paintings. One of our biggest questions this year was why *Erica piketbergensis* flowers in June and October. We now suspect these might be two different *Erica* species that are very similar and grow in the same areas.

Exciting finds which we have had diagnosed with the help of outsiders are *Gladiolus insolens* and *Pelargonium longicaule var. augustipetalum* which, apparently, has the largest flower in the Geraniaceae. Our other flower photographs will have to be identified when Ismail and Vathiswa come and visit with their superb diagnostic skills.

Angela Langton

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**George Outramps**

2010 has been our most successful year ever. Our goals were tough and stretched us to the limit. Our objectives for the year were:

- To plot 30 Species of Conservation Concern (SCC) new to us.
- To increase our botanical knowledge.
- To involving the rangers on the nature reserves more.

We were successful and achieved a number of goals:

- We plotted 54 SCCs new to us.
- Our botanical knowledge increased exponentially.
- We doubled our involvement with the rangers.

Our knowledge took a big step forward because of several factors. Jan and Anne Lise Vlok were always there with help and encouragement. Their wonderful book *Plants of the Klein Karoo* was published in 2010. This has given us a huge ‘hupstoot’ forward. The microscope proved invaluable and the plant family specialisation within the group started to bear fruit.

We did about 12 field trips involving the rangers from the Swartberg, Outeniqua, Kammanassie, Goukamma and SANParks reserves. Achieving our goal of monitoring 54 SCCs new to us was hard work. It involved ten overnight trips of three or more days and 35 day field trips in 2010.

Our journey through the year started in February when we spent three days in the Nature’s Valley area. We hiked Kranshoek, the long Salt River hike and did the Robberg hike on the way home. Rare plants found included *Muralitia knysnaensis* and *Acmadenia alternifolia*.

March saw us in the eastern Kammanassie Mountains with Johnny and Jonas. We had rather iffy weather, but nevertheless had a spectacularly successful trip with many new rare plants added to our list. One of the most beautiful of them was *Bobartia paniculata*. We missed out on climbing Mannetjiesberg because the mist and rain was on the deck.

In April we went to Williamsburg on the De Vlugt Road off the Prince Alfred Pass. This trip was initiated by Pam Booth of Eden to Addo. Gail spotted *Pelargonium denticulatum* which was a new rare plant for our list. We were introduced to the *Haworthia* plants and we recruited our youngest member, Ashleigh Harvey, to the Outramps. This would prove to be one of our best moves ever.

In May, Ismail, Vathiswa and the Swartberg Rangers joined...
us on a climb up Waboomsberg above the pass on the Central Swartberg. As always, it was freezing and some of the party retreated after reaching the nek. Most of us pressed on and were picked up on the Die Hel road on the northern side. *Berkheya francisci* was an exciting new find.

June was the month of the *Haworthia* species. Bruce and Daphne Bayer joined us on trips to Groot Brak and Williamsburg. We learnt a huge amount from Bruce about *Haworthia* and *Asparagus*. In 2011, we want to expand our knowledge of the very interesting and highly threatened genus *Haworthia*.

Bonniedale in the Attakwaskloof Mountains was our July objective. Once again the mist was on the deck, which meant that we couldn’t climb Spitskop. *Protea decurrens* and *Paranomus longicaulis* were two exciting finds.

In August, I deserted the Group and went hiking in the Alps around the Eiger and the Matterhorn. Beautiful Alpine meadows were a far cry from home, but it was a wonderful trip.

September saw our most exciting find of the year. Rusell was walking her dogs on a piece of wasteland close to the Garden Route Dam. This area used to be a pine plantation and had recently burnt. She spotted a *Gladiolus* and asked Marge (our Iridaceae specialist) to identify it. There was huge excitement when Marge pronounced it to be *Gladiolus fourcadei*, later confirmed by John Manning and Jan Vlok. This plant is Critically Rare and at the time there was only one other known population in existence. A picture was sent to Ashleigh at Jackalskraal in De Vlugt, who confirmed that she had found another couple of individuals on their farm. There seems to be no replacement for being in the field at the right place on the right time.

In spring (October), we returned to Kammanassie and couldn’t believe our luck as we found a few plants of *Gladiolus fourcadei* about 50 m from our camping shelter. Quite amazing! This second visit to Mannetjesberg was hugely successful. We found at least eight rare species new to us. Amongst the most beautiful was *Agathosma zwartbergense* on the summit of Mannetjesberg and *Geissorhiza elsiae* which hasn’t been found since 1987.

We also visited Ouposberg and Naartjiesberg in the Uniondale district. *Erica flocciflora* was all over the place and we saw a lot of *Leucadendron pubibracteolatum* too.

We finished the year on a real high on the Sleeping Beauty hike close to Garcia Pass. Rudi is one of our new recruits and at the age of 23 has strong legs which have proved very useful. He found *Erica dysantha* on the summit of Sleeping Beauty. This *Erica* only occurs on two summits 6.5 km apart. *Phyllica brachcephala* was found on the path to the nek and was last collected in the early 1900s. We were extremely excited about this discovery. We were also able to collect DNA material of *Gladiolus crispulatus* for John Manning.
We have set ourselves tough goals for 2011. Perhaps the most important of them is that we will plot 40 species new to the Outramps and find an undescribed species. To do this we will have to climb higher and explore further in our quest for success. We look forward to another brilliant year in 2011.

Di Turner

Port Elizabeth

It was a good year for the Port Elizabeth CREW Group—we managed to increase our membership, as well as the number of rediscovered plant species. Our plan to have monthly trips has proven to be successful with a regular core group of volunteers and a couple of visitors attending and accompanying us on our outings.

Our first rediscovery was Aspalathus cliffortiifolia, a low growing species Red Listed as Critically Endangered, Presumed Extinct. It was initially found growing close to a previously rediscovered population of Critically Endangered Aspalathus recurvvispina in Summerstrand. This species was only known from the type specimen collected in Humewood in 1911. With this rediscovery almost a century later it proved the highlight of the year! Both these species were later found at Schoenmakerskop as well, a considerable distance further along the coast.

Another exciting discovery was Othonna membranifolia. A trip with Ismail to Rooikrans in Groendal Wilderness Area, led to the rediscovery of this Data Deficient species, last collected in the area in 1932. Future searches for O. membranifolia will include the Elands and Van Stadens River Valleys, as these areas should provide similar habitats of rocky river edges, to that of the O. membranifolia population in Groendal.

We have also been assisting a local Masters student in his search for species of conservation concern (SCCs) in the Baakens River catchment area. This project forms part of the greater Baakens Valley Recovery Programme funded by the Table Mountain Fund and administered by WESSA. To date, 16 SCCs have been recorded, including three Critically Endangered (Agathosma gonaquensis, Corpuscularia lehmannii and Cyclopia pubescens), three Endangered (Curthanthus spiralis, Disa lugens var. lugens and Senecio scaposus var. addoensis), four Vulnerable (Apodolirion macowanii, Crinum lineare, Erica zeyheriana and Gymnosporia elliptica) and two Near Threatened (Aloe micracantha and Haworthia fasciata) species. Pelargonium reniforme subsp. reniforme was the only Data Deficient species recorded in the Valley, with a further three species listed as Declining (Boophone disticha, Cyrtanthus obliquus and Eucomis autumnalis subsp. autumnalis). Many of these species are restricted to specific habitats and the Baakens River Valley may well be one of the last remaining areas to support viable populations in the metro. Some of the more exciting finds include more localities of the Critically Endangered Cyclopia pubescens and Agathosma gonaquensis in the upper catch-
ment area near the western entrance of Port Elizabeth. However, this land is earmarked for development, which will destroy a substantial population of *Agathosma gonaquensis* and *Corpuscularia lehmannii*. The development will also fence in a population of *Cyclopia pubescens*, a fire-dependent species only found in the immediate area. Any suggestions on how to successfully translocate *Agathosma gonaquensis* (*Gonaqua buchu*) is welcomed.

Final highlights included recounting the population of Endangered *Cotyledon adscendens* at Bluewater Bay, which was found to be in good health and recruiting! More populations were found in the Addo Elephant National Park, close to the Sundays River mouth. Vulnerable *Cullumia circioides* and *Euryops ursinoides* were counted at Van Stadens Wildflower Reserve, where they were known to occur. Our final trip was to a newly established nature reserve to the west of Port Elizabeth, Hopewell Reserve, and we’ll be visited regularly this year, and beyond. We visited the reserve in February, but with the area very dry we could only locate Declining *Boophone disticha* and Near Threatened *Aloe micrantha* so far. The reserve hosts grassy fynbos on the hilltops and thicket on the steep slopes and valley bottoms. This habitat should provide for some interesting botanising and more flowering SCCs (hold thumbs!) after the autumn rains.

Future focus areas include the areas of Heatherbank, a fynbos-dominated area that is set aside for urban developments, as well as the succulent-rich thicket area between Boosens Park and Kwanobuhle where township development is planned.

A huge thank you goes out to all the faithful volunteers who sacrifice their Saturday mornings for a good cause.

*Clayton Weatherall-Thomas*

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**CREW—KwaZulu-Natal**

I can’t believe that the past year has gone by so quickly! After a three month winter ‘break’ for thesis work, I rejoined CREW in September last year—straight into planning meetings. Suvarna and I haven’t stopped since. The very late rains (the end of October) and consequent late, or in some cases lack of, flowering really messed up our planned field trip dates.

The November workshop at Sani, where CREW volunteers again had the opportunity to catch up with each other and to listen to some plant experts, was a great success. We look forward to the next one in Mpumalanga. Following close on the workshop was Suvarna’s wedding—a splendid and colourful affair which I was privileged to attend.

We’ve had some great plant identification courses this season; Andrew Hankey’s brilliant and funny ‘Plant families’ at the workshop and, more recently, Sid Ramdhani’s fantastic day of Kniphofias, including the genus’s biogeography, systematics and a wonderful hands-on guide through Codd’s key. This key was suddenly made easy with Sid’s insight into Codd’s thinking!

Of course, we’ve also had some amazing field trips. Standing out are a few days at Lupatana in the Eastern Cape, packed with Pondoland endemics— thanks Alison Lettenga! Another fantastic weekend was spent at Ntsiken Nature Reserve (see Tony Abbott’s article). We are eternally grateful to the Botanical Society for the loan of the Mazda 4x4, which makes our trips to these remote areas possible.
We continue to work very closely with, and provide botanical eco-advice to, the KwaZulu-Natal Biodiversity Stewardship Programme (BSP). As you will see in the group reports, CREW volunteer groups are assisting by visiting BSP sites in their area on a regular basis and recording the plant species found. CREW KwaZulu-Natal has grown over the past year with the addition of a new Highway Group in the Kranzkloof area of Durban, as well as a newly emerging group in Zululand. This season we formed a group with mainly Pietermaritzburg-based folk, the A-team. This team doesn’t have a specific area, but visit sites which don’t fall within an existing group’s region, although there is obviously some overlap. The A-team often join in on other groups’ field trips. Some interesting outings were to Bizana looking for (but not finding) Asclepias schlechteri in December, and a more successful search for the Critically Endangered Helichrysum citricephalum near Ixopo in March this year.

Thanks to all CREW volunteers for your unfailing enthusiasm at hunting down special plants over the past season!

Isabel Johnson

The season began with a planning meeting held at the home of Sue Swan. Attending and advising the group were Vic Schutte, Jacqui Shuttleworth and Sue Swan of the Umvoti Group along with Isabel Johnson and Suvarna Parbhoo from CREW (SANBI). Plans were made to visit as many of the potential sites in the area as possible, but what we didn’t reckon on was the very hot spring with no rainfall, causing very late flowering in most species. After that the rains never seemed to end!

However, at the end of September we revisited the Greenwich/Balmoral farms at Rietvlei where we had the exciting find of the previous season, the Critically Endangered Asclepias bicuspis. This visit revealed some 30 plants which were photographed and marked using a GPS but with only a few flowers present we decided to return in mid-October. How disappointed can one be? Despite the use of the GPS, we couldn’t find the plants—they simply didn’t exist! Eventually, after retracing our steps, we found four plants, one with chewed leaves but no seed. Nor did we find any Asclepias woodii (seen here last season) on either occasion. This area consists mostly of communal land, fairly extensively grazed by cattle and goats. We plan to re-visit in late September 2011 to check if A. bicuspis has re-appeared.

In mid-October 2010 we visited a new site on Mondi’s property, Inverness, where the resident forester claimed to have seen Gerbera aurantiaca in flower on one of the grassland strips. Again the dry season had taken its toll and other than finding a fine display of Dieramas which had enjoyed protection on a rocky outcrop from the cattle grazing in the area, there was...
The forester has been asked to GPS the plants next time he sees them. We then moved to the neighbouring Nomalanga, a privately owned farm stretching from the Mistbelt Grassland at Umvoti Heights into Valley Bushveld, currently being considered for a Biodiversity Stewardship site where CREW are compiling a species list. Again the effects of drought and fire were evident, but we explored quite a large area and we achieved our objectives of meeting the owners and acquainting ourselves with the area prior to further investigations over the next few months.

A search later in October to the site of Sarie Marais’s grave (yes, the one of the song) for Tephrosia pseudocapitata, threatened by the extreme fragmentation of the area from timber plantations and rural settlements, was unsuccessful. A local had reported seeing plants nearby but no plants were found when we visited. In early November, the farm Came in the Seven Oaks area was visited to look for further populations of Kniphofia latifolia. Other than the already known population close to the Greytown-Pietermaritzburg road, a further population in excess of 200 plants was found about 2 km upstream, below a dam wall. This population still has to be marked with a GPS and an accurate estimate of the number of plants done, but due to heavy infestations of brambles this may be impossible.

On 9 November a follow-up visit to the York Commonage took place. The object was to meet with a farmer on whose property we believe a population of the rare and endangered Leucospermum gerrardi exists. Only two populations are known in KwaZulu-Natal. Previous attempts to get the farmer to disclose the location were unsuccessful, as was the case on this occasion, in spite of undertakings that the location would be kept secret and that no plants would be dug out (by a very persuasive Ismail who was with us)—it seems we CREW are not to be trusted!

In mid-November Vic, Isabel and Neil Crouch visited the Kranskop district to search for Streptocarpus floribundus collected by Olive Hilliard in mid-November 1963, but not found since. We were fortunate to be accompanied by security guards provided by Mondi, as this area is notoriously unsafe, and made full use of this to search as many doleritic outcrops close to the original collection site as possible. In spite of this we did not even find a rosulate Streptocarpus plant, let alone S. floribundus. The mystery continues…

On 19 December, local botanist David Styles requested help from CREW to survey a population of what may be a new species of Asclepias (related to Asclepias dregeana) at Lake Merthley. In spite of overcast weather, almost 20 CREW folk turned up to help, including Ashley Nicholas, the expert on this group. A walk through the grassland revealed at least 50 plants, as well as some unseasonal late-flowering Hilton daisies.

Figure 1.—Asclepias sp. nov. aff. dregeana.

Our goals, or perhaps I should say our challenges, are obviously to seek out the rare and endangered plants of our area, but we are seriously challenged by the number of species we need to or would like to find, and so few people who are willing to be involved. Equally we are concerned about habitat loss caused by an increase in timber farming, along with sugar cane and other commercial crops, coupled with this is the irresponsible use of pesticides. There is also a serious need to educate the public as to why and what needs to be protected.

Nevertheless, we enjoy a very diverse area—thornveld and valley bushveld in the Muden and Tugela Ferry areas, and Mistbelt grasslands around the Greytown/New Hanover areas.

Vic Schutte
The season started in October when our GPS arrived and we could start pinpointing our target plants. We started by saving GPS points of the plants we had first seen and learned about on Mally Stainbank’s farm.

We recorded several *Gladiolus inandensis* plants endemic to this area, but with only a few records existing. Other finds in October were *Woodia verruculosa* (Larkview Farm) and *Brachystelma pulchellum* (Jack Stead’s farm). At the end of October, we went to Justin Platt’s farm to map the *Helichrysum pannosum* population again. While we were there, we found a harebell—*Dierama argyreum* (endemic to southern KwaZulu-Natal), as well as a huge population of *Hypoxis hemerocalidea*. *Hypoxis hemerocalidea*, or African potato, is a popular muti bulb which is under threat due to the sheer volume of bulbs harvested and used. CREW members have been asked to monitor the populations.

In late November we went to Mally Stainbank’s farm to look for orchids again as we were too late the previous season. This was a very successful outing with the following interesting plants found: *Crassula acinaciformis* (new distribution record), *Argyrolobium longifolium*, *Helichrysum woodii* (a rare, cliff-dwelling everlasting) and the spectacular orange orchid *Satyrium neglectum* var. *woodii* (which many people believe should be a separate species, *Satyrium woodii*). However, from November the rains got the better of us. Most lands became inaccessible because of the mud and we hardly saw a dry or sunny day for nearly four months.

We were very privileged to have Peter Wragg on our last CREW walk of the season in February. He knows the plants exceptionally well. Mally burned the field where the orchid *Disa nervosa* occurs. This interesting orchid imitates the colour and shape of certain *Watsonia* species in order to make use of the same pollinators. We were also able to record a new locality, the most southern recorded, for *Hesperantha lactea* (yellow evening flower).

*Alison Young*

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The weather was dismal for wildflower growth in the early summer. The visit to Wahroonga and Sterling was aborted owing to drought conditions, while the Impendle Nature Reserve outing was also dropped when the heavens opened and it rained all day.

The first visit to Boston View, where a section has been earmarked for a so-called biodiversity contract conservation area, had few flowers and nothing of significance was found. The portion is dry and heavily grazed due to the lack of rain. A second visit to this area is planned for later this year.

It was very pleasing when Mount Ashley, near Mpophomeni, was kinder. We tackled the northern slopes on this occasion. The lower-lying areas were overgrazed and degraded, but as we ascended it improved drastically and we had plenty of wildflowers to enjoy. *Asclepias woodii* was found quite commonly, but the *Schizoglossum bidens* subsp. *hirtum* (Data Deficient—Insufficiently Known), which had been found on the southern slopes the previous year, eluded
us. It was gratifying to find *Miraglossum pilosum* in a rocky nook on a drizzly summit.

In December, on ‘Edgeware’ hillock in Boston itself, success was happily achieved when, at the very summit, three plants of *Schizoglossum bidens* subsp. *hirtum* were found. This was our first visit to this site. To crown this success, four *Asclepias bicuspis* (Critically Endangered) plants were also found—this is now the third known locality for this species. The ‘Edgeware’ area certainly has major potential for future outings.

On 9 January 2011 the new year started well with a lovely day out in the special fenced area at ‘Palmer Four’ farm. The area boasts grassland, river, mountain slopes and cliffs in various directions and therefore affords one with excellent opportunities for finding many species. The flowers, whether present or absent, were influenced by the unusual weather during November and December of 2010. The day revealed at least 19 new species with more information still coming in. The overall count over the last seven years is at least 210 different species. Having found a single *Disa scullyi* last year, we went in search of more, but failed to find even one...such is weather timing!

David Clulow

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**Underberg**

Our first brief for the season was to compile a species list of the Himeville Commongage, a Biodiversity Stewardship site.

We have been out three times and instead of walking past the *Senecio* and *Helichrysum* species we now spend a great deal of time trying to identify them. This has been a very good project for local CREW members as a couple of them live on the common. We did however find the common to be affected by invasive alien plants and this has led to more outings to remove the alien plants and educate the local community.

Our first exciting outing on 30 November was to the Mgano Stewardship Project led by Bill Bainbridge and Isabel Johnson. Isabel was delighted to find two target species, *Fanninia calaglossa* and *Sisyranthus fanniniae* of which there were a number of specimens. This was a truly pristine grassland and we ended our day in a beautiful forest full of mature yellowwood trees.

We are very lucky to have amateur botanist Ann Rennie living in Underberg and when it was decided to improve our knowledge of grasses, Ann arrived with about 20 pressed specimens collected on her property over the past 30 years. We had a great morning with our tutor, Liz Mackay—a local with a great knowledge of our grasses.

David Clulow

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**Figure 1.**—Underberg volunteers out in the field.

**Figure 2.**—*Miraglossum pilosum* (Photographer: Barbara Clulow).
Another speciality of our area are the numerous orchid species and our field trip in late December found us in a vlei with about 250 Endangered *Disa sculiyi* plants.

Our highlight has been the discovery of a potential stewardship conservation site which is owned by the municipality.

We have contacted the relevant authorities and eagerly await the outcome.

What a privilege for us in Underberg to be able to assist in the collection of data in one of the most threatened biomes in the country our glorious grasslands.

*Julie Braby*

Out of our various doings of the year, one trip stands out above the rest.

A visit at the end of January to Ntsiken Nature Reserve brought back some good memories from 20 years ago. Rosemary Williams getting stuck in her tiny Charade on the steep track up to the reserve; sitting in the tent watching the floor undulate under us as the water flooded through our site; being driven through the vlei hip deep on a freezing cold rainy day by David Lindley to assess the wetland; climbing the four mountains flanking the reserve, watching the sun set over the vlei; sitting round a wattle wood fire in the evening—in those days it was all camping. The reserve had been fenced since my last visit and the improvement in the state of the grasslands was marked; it had previously been used by anyone who fancied it as a grazing area.

This January our party met up along the road within the reserve and went looking for the accommodation which we found after we passed it by and had to return. Very nice it is too, well looked after by a man named Dalu—a knowledgeable birder. The next day we tackled Ntsiken Mountain next to the vlei. Ntsiken is the name of the peak above a ridge some 300 metres above the vlei. Isabel Johnson and Peter Wragg were tireless in their exploration for a rare Erica, *E. psitticina*, which was thought to possibly occur there but was not to be found. A special place was the tarn at the north end of the ridge—a wonderful sight filled with water from goodness knows where. Only Pev Curry made it to the very top of Ntsiken.

The second day was spent exploring a kloof along the ridge running down to the vlei. Along the way we found a small vlei which carried a bounty of six beautiful orchid species with their feet in the wet soil.

Early one morning some of the group went out to hear the booming of a bittern—apparently a very important hearing/sighting for birders.
Happily all the plants were still there when we went out after breakfast!

Ntisakeni is a special place. The wetland is about 7 km long and ends in a rock barrier and waterfall. It was all farm land until the 1940s when government bought the farmers out to maintain the wetland as a water production area. The area was still occupied by the labourers and their families although they should have moved and it was thanks to Div de Villiers that these people were allocated land elsewhere allowing full conversion of the reserve. Do yourselves a favour and go there.

Tony Abbott

Highway

The Highway CREW Group was formed in 2010 to monitor areas chiefly in the Outer West/Upper Highway regions of the Durban area. We’re still new to the game and thus finding our feet, but we’ve had some encouraging results already.

Field trips have included an area in Drummond surveyed during their Conservancy’s Walk on the Wild Side and which yielded at least one of the target species, *Hermannia sandersonii*.

A trip to a site in Hammersdale in December to look for *Dierama pallidum* had to be cancelled because only two members of the group could make it and the trip was therefore not thought to be safe. However, in February Peter Wragg, who is back temporarily from the University of Minnesota where he is a PhD student in the Department of Ecology, Evolution and Behaviour, accompanied some of us on a trip to Cliffdale Hill where we found good numbers of *Dierama pallidum*, *Helichrysum spectabile* and *Senecio exuberans*.

‘Plant sleuth’ (to quote David Styles), Rod Edwards, recommended a visit to a grassland in Hillcrest opposite the Augusta Housing Estate that has been earmarked for a housing development. He described it, very appropriately, as a ‘wild flower garden’. This is a lovely area with hosts of species providing a dazzling display to rival any the Western Cape can offer. It would be a tragedy if this magnificent flower garden were to disappear under lawns and concrete as has been the fate...
of so many grasslands in the Upper Highway area. Among the target species noted were *Boophone disticha* and *Sisyranthus anceps*. The latter is listed as Data Deficient. David Styles mentioned that *Sisyranthus anceps* has possibly only been recorded twice in the last 100 years and that it could be a very rare KwaZulu-Natal Sour-veld/Ngongoni Veld endemic. Let’s hope so; it might help save the garden!

**Figure 4.—Dierama pallidum and friend (Photograph: Andrea Abbott).**

**Figure 5.—Sisyranthus anceps (Photograph: Andrea Abbott).**

**Figure 6.—Sisyranthus anceps (Photograph: David Styles).**

The Mpumalanga Plant Specialist Group (PSG) was established in 1994 and has a current membership of around 50 people drawn from Mpumalanga and further afield.

Members are predominantly amateur botanists who wish to actively learn about plants and each person is given the opportunity to research and deliver a presentation on a botanical topic of their choice at the monthly meetings in Nelspruit. Over the last few years, PSG has taken on the CREW role for Mpumalanga and has searched for some of the plants on the Rare and Endangered List.

The November 2009 outing to Mahamba Gorge, Swaziland produced several new records for Swaziland. This was followed by a trip in December to the Pilgrim’s Rest dolomites where an exciting new record of the fern *Asplenium trichomanes* was discovered. In February 2010 PSG spent a weekend at Verlorenkloof Nature Reserve, a locality for the spectacular and Endangered *Gladiolus cataractarum* of which a specimen was collected for the botanical artist Gill Condy to illustrate. In the same month PSG visited Mrs. Marais Nature Reserve in the Pilgrim’s Rest area and found the newly-described and Vulnerable root parasite, *Cytinus visseri*, and the Vulnerable *Gladiolus calcaratus*. In March, on behalf of the Mpumalanga Tourism and Parks Agency, PSG assessed the plant diversity of the newly acquired Queen’s River Nature Reserve near Barberton and to draw up an initial plant list. In June, PSG members ventured across the South African border to exercise their 4x4 driving skills in the Limpopo Transfrontier Park, Mozambique, and re-acquaint themselves with the flora of that region. Many unusual plants unfamiliar to the South African botanist were encountered, such as *Hymenodictyon parvifolium*, *Monochoria africana* and *Millettia stuhlmannii*. In October, the PSG searched for the Endangered pincushion *Leucospermum saxosum* in the Blyde River Canyon Nature Reserve in the Steenveld area but it could not be located. Sadly, evidence of severe harvesting of the Critically Endangered *Encephalartos cupidus* was discovered. Our last trip for the year was the annual monitoring of the endemic (rare and extremely endangered) *Dioscorea strydomiana*. A few juvenile plants were uncovered this year that we had previously missed. An exciting find in February 2011 was the exquisite and Vulnerable *Cyrtanthus eucallus* in the very steep, rocky riverine habitat in the Barberton Mountains.

PSG also organised two study weekends at the Buffelskloof Private Nature Reserve. In November 2009, members were treated to a course on ‘Botani-
Help us spot these emerging invasive alien plants!

The purpose of the Early Detection and Rapid Response (EDRR) Programme is to identify and act quickly in controlling emerging invasive alien plants before they become established. EDRR relies on your sharp eyes, therefore you are urged to assist us in locating the following top three emerging invaders.

**Diplocyclos palmatus** (Family: Cucurbitaceae) is a perennial climber with thin stems growing up to 6 m long. Native to Australia, it is more commonly known as the Lollipop Climber or Striped Cucumber. It is used in India for its medicinal properties. The Lollipop Climber is found in low altitude forests, vine thickets and coastal flats. It has alternate, palmate leaves which are hairy and bright green on the upper surface but pale and smooth underneath. Small yellow flowers appear from March to April. The fruits are initially green with white blotched stripes and ripen to bright red-orange resembling a lollipop, hence the common name. The small white seeds in the fruit are toxic. Although the fruit resembles a tiny watermelon, it is poisonous and not edible. In KwaZulu-Natal two localities for *D. palmatus* have been identified thus far. One at the Kloof Memorial Park and another at the Edgecliff Reserve.

**Furcraea foetida** (Family: Agavaceae) is a succulent mono-
cot with sword-shaped leaves arranged in a basal rosette. Originating from South America and the Caribbean, it has been widely cultivated for fibre. This species invades rocky cliff-like habitats. *F. foetida* reproduces by way of vegetative bulbils with no defined reproductive season. Approximately 1 200 bulbils can be produced per plant. This mass production of bulbils results in ‘carpets’ of young plants, as each bulbil equates to a new individual. The EDRR Programme has thus far detected *F. foetida* populations in KwaZulu-Natal, Eastern Cape and Western Cape. Research on control options are currently underway.

*Sagittaria platyphylla* (Family: Alismataceae) is a highly pervasive emerging invader from North America severely threatening aquatic habitats. This semi-aquatic hydrophyte grows in shallow, slow-moving water, posing a threat to wetlands. It is very difficult to eradicate as it grows very fast and reproduces in several ways. *S. platyphylla* occur in two growth forms: emergent and submerged. The emergent form is characterised by broad leaves with clear lateral lines, but it varies from ‘sagittate’, meaning arrow-shaped, to ‘platy’, meaning broad-leaved. Therefore it is called *Sagittaria platyphylla*. It can be distinguished from other Alismatales by an unbranched flowerstalk that bears male (on top) and female flowers/fructifying bodies on one plant.

The Early Detection and Rapid Response Programme on Emerging Invasive Alien Plants (EDRR) is run from the South African National Biodiversity Institute (SANBI), and funded by the Working for Water Programme of the Department of Water Affairs.

The EDRR Programme can be contacted through e-mail: alien-plants@sanbi.org.za

**Reshnee Lalla, Hlobisile Sithole and Chantal Motilall from the EDRR Programme (KwaZulu-Natal)**

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**Figure 3.—** *Furcraea foetida* (Photograph: Reshnee Lalla).

**Figure 4.—** *Furcraea foetida* bulbils, the reproductive structures (Photograph: Reshnee Lalla).

**Figure 5.—** A mature *Sagittaria platyphylla*, the Delta Arrowhead plant (Photograph: Hlobisile Sithole).

**Figure 6.—** Male flowers of *Sagittaria platyphylla* (Photograph: Hlobisile Sithole).
Plant Monitoring Day in the KwaZulu-Natal midlands

The CREW KwaZulu-Natal node, together with the Midlands Meander Education Project (MMEP), undertook Plant Monitoring Day with Grade 10 learners of two high schools in the Midlands—Dabulamanzi Combined School near Kamberg and Nottingham Road Combined School.

The activity took the form of an introductory lesson about the importance of, and the threats to, biodiversity. I was assisted by the MMEP facilitator, Charlene Russell, with some explanations when she noticed that the learners didn’t quite understand all that was being presented. The learners of Dabulamanzi were shy and reserved, and both Charlene and I had to do a lot more work to encourage discussion than with the learners of Nottingham Road.

A follow-up lesson with learners from Dabulamanzi Combined School was a video about mining and medicinal plants in the Pondoland region. The learners were thrilled to watch a video that was mostly recorded in isiZulu with English subtitles! The field work was set for the following week, but due to the very late rains few plants were flowering and we decided to postpone the outing.

We now plan to conduct Plant Monitoring Day in the second term so that the activity does not clash with CREW’s frantic field season. This year, being International Year of Forests, we plan to conduct the fieldtrip in the forest.

Suvarna Parbhoo

CREW and University of Zululand Partnership

In September 2010, Isabel Johnson and Suvarna Parbhoo from CREW, as well as Lize von Staden from SANBI’s Threatened Species Programme, presented theoretical and practical lectures to Botany students from the University of Zululand. This was the first of what is to become an annual involvement with the final year students enrolled for Plant Conservation and Management.

This newfound partnership between the two specialist units of SANBI and the University of Zululand aims to expose the next generation of botanical scientists to conservation in action. Through a short series of theoretical and practical contact sessions, students were given a glimpse of the wide variety of southern African conservation projects undertaken by CREW and TSP.

In order to give students some firsthand experience in rare
plant conservation, they spent one Saturday morning gathering data on the orchid *Didymoplexis verrucosa* (Vulnerable). This very rare saprophytic ground orchid is known from only one locality at the Twinstreams Environmental Education Centre near Mtunzini, KwaZulu-Natal. Although other ground orchid species were recorded during a thorough and systematic search of the area, the target species could not be found. The day’s unsuccessful search highlighted the dire need for immediate and continued action in order to protect such rare species from what seems to be imminent extinction.

Fortunately the students’ hard work was handsomely rewarded with a rare sighting of the geographically restricted and increasingly rare Gaboon adder (*Bitis gabonica*). With dedicated perseverance and a bit of luck, we hope to rediscover the *D. verrucosa* population during subsequent surveys in order to set up a regular monitoring program to unravel the demographic population trends of this rare species.

THC Mostert

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**Kniphofia Identification Course (CREW—KwaZulu-Natal)**

This genus can be a nightmare to identify and using the key, written by L. Codd in 1968, is not easy.

Imagine the delight, then, of CREW volunteers when they had the opportunity to attend a course given by *Kniphofia* expert, Dr Syd Ramdhani, on 25 February at the Maloti (and CREW) offices at Midmar. An introductory talk on the family Asphodelaceae and the genus *Kniphofia* in general, followed by a talk on biogeography and rare taxa, whet our appetite for the main offering—a guide to using the key. And, if you were wondering how to pronounce the genus name, we were told that the K is not silent...

Syd systematically went through all the terminology involved in using the key, giving us formal definitions and showing us relevant illustrations. The bracts are really important and this is possibly the most confusing feature in the key!

We then broke up into groups and attempted to key out some fresh material, which reminded us that species boundaries in this genus tend to be loose in some instances. Much discussion ensued regarding the construction of botanical keys and different ways in which to interpret characters, and we all learned something new.

It was also great to meet new, and catch up with old, botanical friends—an added bonus to the workshop. We thank Syd for all the time and effort taken to prepare and give this most useful workshop, as well as Suvarna and Isabel for organising it. We look forward to the next one!

Christina Curry
Expanding the CREW team

My name is Zikhona Mdalase a BotSoc/CREW staff member assisting with administrative duties in the Cape Town office.

I became part of the BotSoc family in May 2010. I was offered a six months internship which entailed rendering assistance in the Botanical Society’s front desk assisting members with opening and renewal of membership. On Fridays I worked in the CREW office doing administrative work, previously done by Wendy Paisley. I am enrolled for a National Diploma in Nature Conservation at the University of South Africa (UNISA) and completing my second year.

I am passionate about nature, particularly environmental education as I believe in making society aware of environmental issues. I believe that when society is informed of environmental issues and the impact of irresponsible human behaviour, it will be easier to change individual attitudes. Soon I will be involved in an Environmental Education Programme which BotSoc is planning to initiate. I would also love to work with schools in the previously disadvantaged communities to raise awareness about our special biodiversity and how they can be involved in conserving it.

Since the beginning of the year I have been processing specimens, capturing specimen data in the database and handling general administrative work in the CREW office. Presently, my main task is to assist with preparations for the volunteer workshop in April.

I enjoy being part of the CREW team and look forward to the field season because of the learning experience that will help me with my studies. Distance learning is very challenging and every piece of practical experience will go a long way in helping me achieve my goals.

Zikhona Mdalase

The Critically Endangered Siphonochilus aethiopicus in South Africa

*Siphonochilus aethiopicus* is one of the first South African medicinal plants to be recorded for trade; this plant has gained its popularity due to the medicinal properties of its aromatic rhizomes and roots. This plant is among the commonly sold medicinal plants at the muti markets of South Africa. The medicinal uses of *S. aethiopicus* range from treating mild asthma, sore throat, menstrual cramps, hysteria, colds and flu, headache and many other illnesses depending on the area. It is known as a natural anti-inflammatory throughout Africa. The Zulus use it for protection against lightning and snakes and for treating illness. Healers who collect wild ginger say they use it to prevent themselves from being harmed by other toxic plants. The Swazis use it for treating malaria and menstrual pains.

The Red List data of South Africa confirmed that there are less than 600 plants left in the wild. The KwaZulu-Natal population of *S. aethiopicus* has been declared extinct and the remaining populations are critically endangered. The remaining populations are severely threatened because they occur in unprotected areas especially in Limpopo, Mpumalanga and Swaziland.

The major threats to *S. aethiopicus* is harvesting for medicinal use, no other threats are known due to poor documentation of this species. There is a need to consider other plant species for substitution that are not threatened but traditional healers claim that the substitute species are not as effective as *S. aethiopicus*. However, they are aware that their valuable medicinal source is diminishing in the wild and feel that there is a need for conservation measures both *in situ* and *ex situ*. The future survival of this species as well as many other medicinal plants is highly dependent on the development of sound, sustainable harvesting practices. This will require a solidified partnership between conservationists and medicinal plant collectors.

Thamsanqa Makade