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NATIONAL FIELD MEETINGS

SOUTH AFRICA – 18 February – 2 March

Introduction

Jennifer Ide

Twenty-two participants, from England (11), Scotland (2), the USA (7), Mexico (1) and Kenya (1), arrived over three days at the Centurion Lake Hotel in Pretoria. Jolanda and Allan Nel, our tour guides for the next two weeks, had kindly arranged an optional programme for those who arrived early; this was taken up by all. From the beginning it was clear that Jolanda and Allan had put a lot of thought and careful planning into every aspect of the excursion, and we realised that this was going to be an exceptional trip. We were each given a 'goodie bag' containing a map, the itinerary, useful notes and leaflets, a note-book and pen, a small bottle of *Tabard* (the recommended insect repellent for South Africa – anxieties about malaria had obviously been noted) and some sweets.

Saturday 18th February

Elsenbroek's garden, Pretoria, Gauteng Province

Janet Keyes

With hadada (a type of ibis) protesting overhead, the BPS adventurers were welcomed to their first South African garden by the owners, Fred and Tersia Elsenbroek. Located in the Strubenskop, Lynnwood area of Pretoria, this garden was a good introduction to many of the native and introduced plants that we would find throughout our South African travels.

We were immediately struck by the variety, number and size of the cycads lining the drive. Of particular note was a specimen of the very rare *Encephalartos senticosus* (formerly *E. leomboensis*), which had been rescued by Fred from the rising flood waters of the Jozini Dam that threatened its endangered cliff-side home near the Pongola Game Reserve, KwaZulu-Natal, thus saving it from being permanently lost.

Notable among the ferns in the beautifully laid out garden were two large specimens of the beautiful New Guinea tree fern *Cyathea tomentosissima*, its unusually narrow ultimate pinnule segments giving the fronds a depauperate appearance. Other ferns included the ubiquitous and highly variable *Cheilanthes viridis* var. *viridis*, *Stenochlaena tenuifolia* climbing a tree in the back yard, and a number of *Pteris*, such as *P. cretica* and *P. tremula*, as well as *Adiantum hispidulum*, *Tectaria gemmifera* and *Didymochlaena truncatula*. The front garden also contained South African shrubs and large trees including *Podocarpus falcatus* (Outeniqua yellowwood), and several small pools filled with colourful koi carp. During tea hosted by the Elsenbroeks, the afternoon was 'topped off' with the discovery of a large bowl of *Ophioglossum reticulatum* tucked away under a tree fern near the swimming pool fence!

Allan and Jolanda Nel's garden, Pretoria, Gauteng Province

Pat Riehl

Arriving at the front gate of Allan and Jolanda's garden, you knew immediately that you were entering the world of a true pteridophile. Five cyatheas and two dicksonias lined the

drive-way. The roughly semicircular front garden beds provided privacy from the street and contained *Asplenium aethiopicum*, *A. splendens*, *Blechnum inflexum*, *B. minus*, *Cyrtomium falcatum* and *C. macrophyllum* var. *tukusicola*. There were also many species of *Dryopteris* and *Platycerium* and numerous cultivars of *P. bifurcatum*. There was whimsy too: clay stepping stones looking like cross sections of a tree trunk or impressed with a fern frond.

Alongside the garage were troughs planted with *Adiantum reniforme*, *Anemia dregeana*, *Asplenium pinnatifidum*, *A. capense* and *A. cordatum*, *Brainea insignis* and *Cheilanthes farinosa*. At the back of the house was a hothouse full of more goodies: orchids and tillandsias intermingled with ferns such as *Blechnum tabulare*, *B. patersonii*, *Cyathea capensis*, *Drynaria bonii*, *Huperzia gnidioides*, *Polypodium ensiforme*, *P. (Niphidium) crassifolium* and *Marginaria (Pleopeltis) bombycina*. A lathe-house was filled with more surprises. One wall was hung with soil pockets, currently a popular idea in the US, in which grew *Adiantum weigandi*, *Asplenium australasicum*, *Elaphoglossum drakensbergense* and *Pteris multifida*, to name but a few. A small pond was surrounded by *Cyathea dregei*, *Angiopteris evecta*, *Aglaomorpha coronans*, numerous *Microlepia*, *Pteris* and *Polystichum* species, and so much more.

As well as being a good plantswoman, Jolanda is a very accomplished artist and in her home were many fine examples of her work: clay lanterns decorated with fern frond designs, wood sculptures of fronds, and copper impressions.

One could spend many hours in this garden and still not read all the plant tags! (Thank goodness for plant tags!) Not only a plant lovers' garden, this is also a garden of two enthusiastic fern devotees and it shows. It was a treat to see.

Sunday 19th February – Strauss xeric garden, Villa Ferné woodland garden & Fernhaven Nursery, Pretoria, Gauteng Province **Jennifer Ide**

This was a very busy day for the group, now fully gathered. Our first visit was to the attractive garden of Sas and Susan Strauss, dominated by a diversity of drought-tolerant, mainly native, cycads, succulents and ferns, attractively planted amidst landscaped rocks and large pieces of drift wood. Among the ferns, all in splendid condition, my attention was particularly drawn by a variegated *Adiantum aethiopicum*, *A. hispidulum* with its pink young fronds, *Lygodium japonicum* fruiting prolifically, an elegant specimen of *Cheilanthes quadripinnata*, and the climbing *Pyrrosia lingua* with its densely scaly rhizome and abaxial surface of its fronds.

Our next visit was to East Pretoria and the natural looking woodland garden of Villa Ferné and the neighbouring Fernhaven Nursery, both owned by Chris Myburgh. The floor of the woodland was densely planted with a mix of *Blechnum tabulare*, crowns of *Asplenium australasicum* and of young *Cyathea dealbata*, and several species of cycad, all beneath a canopy of mixed native trees, including the intriguing *Bombax ceiba*, one of the kapok-yielding species, with its elegant, tall, soft grey, slender elongated bottle-shaped trunk covered from 'top to toe' with vicious grey spines. The nursery was memorable for its stunning, colourful, mixed displays of ferns, including large specimens of platyceriums, bromeliads, especially the brightly coloured urn-shaped *Aechmea* varieties and tillandsias. The selection of ferns was small, but larger species were chosen, which are useful in landscaped displays.

Rietvlei Reserve, Pretoria, Gauteng Province **Jane Whiteley**

After a delicious lunch, with great South African food and hospitality, generously hosted by the Fern Society of Southern Africa at the Stone Cradle restaurant, Doornkloof, Pretoria, we excitedly piled into the vans and headed off to the nearby Rietvlei Dam and Nature Reserve (25°52'58.4"S, 28°18'31.4"E) for our first glimpse of African wildlife.

Rietvlei, one of the world's largest urban nature reserves, is situated south of Pretoria but within the city limits. The reserve, which had its early origins as farmland, was opened to the public in the late 1940s and today is home to large herds of introduced endemic game species. A system of multi-use roads through its open Bankenveld grassland and hills with indigenous trees offered us a unique opportunity to view our first zebras, blesbuck, eland

and white rhinos, each seeming to have its own white egret sitting on its back, a help in spotting animals at a distance! Three distinct habitats, grassland, open water and wetland, make the reserve an excellent place for bird-watching. Ferns? In a small ravine, several unremarkable ferns were trying hard to survive! But it was the memory of seeing our first wild animals in Africa that we would take with us.

We finished a busy day with a second visit to the Nel's garden for those who had not had the opportunity on Saturday, to the satisfaction of all!

Monday 20th February – De Jager's Garden, Emalahleni (Witbank), Klipkraal Tree Fern Forest & MacMac Falls, Mpumalanga Province **Pat Acock**

Peggy de Jager who, in the absence of her husband, was assisted by her son, Martin, welcomed us to her marvellous garden at Witbank, approximately 130 kilometres east of Pretoria. As we drew up outside we were aware that we were somewhere special as we looked into a veritable jungle of ferns. Climbing up a small tree at the start of the driveway was a very large and fertile specimen of *Stenochlaena tenuifolia*. At the front and side of the house were very large beds of trees, including tree ferns, which formed a very attractive screen from the road. The tree ferns included *Cyathea dregei*, *C. robusta*, and *C. cooperi* and its cultivar 'Cinnamon'. Herbaceous ferns included *Woodwardia radicans*, *Hypolepis sparsisora*, *Pteris fauriei* and, surprisingly, *Equisetum giganteum* and *E. scirpoides*.

Around the back of the house were two shade-houses and several more borders of ferns. One shade-house had platyceriums including *Platycerium willinckii*, *P. superbum* and *P. veitchii*. In the other was a range of ferns such as *Asplenium bulbiferum*, *A. boltonii* and *Angiopteris evecta*. In and around the garden was a range of other blechnums including *Blechnum fluviatile*, and also *Didymochlaena truncatula* and *Polystichum polyblepharum*.

Leaving the de Jager garden, with its mix of native and exotic ferns, we faced a long drive of over 200 miles, but the journey was broken at the Klipkraal Tree Fern Forest (25°02'07.2"S, 30°49'34.8"E). Here, amongst conifer plantations, was a small reserve of the



photo: J. Whiteley

Klipkraal tree fern forest, South Africa

Patrick Acock, Klaus Mehlreter and Allan Nel discuss *Blechnum tabulare*, with *Cyathea dregei* in background

native tree fern forest with *Cyathea dregei* dominant. After we had dealt with the paperwork the guard lifted the barrier and we were allowed to proceed to our lunch spot on the veranda of a field station overlooking a lake. In the wet area bordering the lake was an area of very well developed *C. dregei*. These plants were quite spectacular and were the largest we were to see in the wild, being at least twice as high as any others. Growing amongst these were *Thelypteris confluens*, *Osmunda regalis*, *Cheilanthes viridis*, *Blechnum tabulare*, *Christella dentata*, *Pleopeltis macrocarpa*, *Macrothelypteris torresiana* and *Dryopteris athamantica*.

Later in the afternoon we visited the MacMac Falls (25°00'05.5"S, 30°49'11.3"E) – briefly, as the reserve was about to close. Along the approach to the falls we saw *Cheilanthes viridis* var. *viridis*, *C. involuta*, *Asplenium aethiopicum*, *Cheilanthes quadripinnata*, *Mohria vestita* and *Pteridium aquilinum*.

After more driving we entered an unmade road leading to Mount Sheba Forest Resort, our base for the next three nights. As we descended through the trees, large numbers of ferns were seen on the floor and edge of the forest as well as many growing epiphytically. It promised a great two and a half days of ferning to come.

Tuesday 21st February – Marco's Mantle Walk & 'Lost City' rock formations, Mount Sheba Reserve, Mpumalanga Province

Allan & Jolanda Nel

Mount Sheba Resort is situated on the Mpumalanga escarpment, about ten kilometres from the old mining town of Pilgrim's Rest. Although the area is known for pine plantations, most of the approximately 1,500 hectares of the Mount Sheba Reserve is unspoiled indigenous vegetation.

Marco's Mantle walk started close to the hotel (24°56'21.04"S, 30°42'46.90"E) and followed a three-mile circular route through the Mount Sheba Forest. John Burrows, co-author of the new Southern Africa Flora, joined us for the walk. At the start we were greeted by *Asplenium rutifolium* with freshly unfurled rosettes of fronds. As the path wound along, we recorded a number of ferns on the banks including *Asplenium boltonii*, *A. lobatum*, *A. varians* subsp. *fimbriatum*, *A. aethiopicum* subsp. *aethiopicum*, *A. splendens* subsp. *splendens*, *Cheilanthes viridis* var. *viridis*, *Dryopteris pentheri* and *Pteris catoptera*. An extremely large *Polystichum pungens* was found and John Burrows, agreeing that it was unusual, recorded the location and collected a frond. At the stream we encountered *Nothoperanema squamiseta* and *Stegnogramma pozoi*. We came across huge *Ptisana* (*Marattia*) *fraxinea* var. *salicifolia*, its beautiful new pink fronds looking like little hands reaching out. The sound of the waterfall meant that a short break was imminent; in the heat, some cool refreshment was much needed. Here, we recorded *Asplenium monanthes*, the proliferous *A. protensum* and *Athyrium newtonii*. There were even filmy ferns such as *Crepidomanes inopinatum* on some of the tree trunks. As we proceeded along the stream, *Loxogramme abyssinica* became abundant in the trees. The turn-off to the second waterfall signalled a lunch break.

Refuelled and refreshed, it was time to continue, noting *Cheilanthes hirta* var. *nemorosa* before we left. Not far from here was the end of the road leading back to the hotel, but before ascending we saw a colony of *Adiantum poiretii* and along the road was *Dryopteris athamantica*. Exhausted, we reached the hotel, and just below the tennis courts recorded *Lycopodium clavatum*, rambling with its twin-cones waving in the wind.

When the threat of a storm and heavy thunder had passed, we visited the 'Lost City' above the forest margin (25°00'05.5"S, 30°49'11.3"E). This area is very exposed and the rocks of a large outcrop, weathered over thousands of years, give the impression of the ruins of an ancient, lost city. It was a clear day, but in mist the area can be very eerie. The unique location, geology and climate provide a specific micro-climate and habitat for some unusual ferns. Huge clumps of *Cheilanthes multifida* subsp. *lacerata* grew at the bases of many of the 'ruins'. *Elaphoglossum acrostichoides* and *Asplenium friesiorum* abounded and large colonies

of *Huperzia gnidioides* were frequent. *Selaginella dregei* was so green that one could be excused for confusing it with *S. caffrorum* var. *caffrorum*. In small crevices in the rocks many plants of the white form of *Pityrogramma argentea* were at home, and newly unfurled fronds of *Blechnum tabulare* were visible among the tall grasses of the surrounding sward. Some rich ferning accomplished, we returned to the hotel just as the rain started.

Wednesday 22nd February – The Pinnacle & Fairyland Forest, Blyde River Canyon Nature Reserve, & Robbers’ Pass, Mpumalanga Province

Tim Pyner



photo: J.M. Ide

***Mohria marginalis*
en route to Fairyland Forest**

We stopped in Graskop to pick up our Guide for the day, Leon Kluge, a keen field botanist and trained horticulturalist with an international reputation for his garden designs and floral displays, which include the outstanding South African displays at Chelsea Flower Show. Venturing onto the mist-shrouded hills of the Blyde River Reserve, we soon arrived at the top of the deep Blyde River Canyon where we could look out onto a large rocky monolith, The Pinnacle (24°54'39.3"S, 30°51'00.8"E). Or we could have done on a clear day; all we could see was fog! However, undeterred, we started hiking towards the Fairyland Forest, taking care to keep up with our informative guide for fear of becoming lost in the fog, and negotiating at one point a shallow but extremely slippery stream. Only upon our return did we discover that we had been just a few steps from the lip of a waterfall plunging into the mists below!

Sticherus umbraculiferus, *Blechnum tabulare*

and the distinctive local subspecies of bracken, *Pteridium aquilinum* subsp. *capense*, were growing in the rocky terrain and we soon spotted our first new fern of the day, *Oleandra distenta*, growing on the rocky lip of the gorge. Continuing to slowly trudge onwards and upwards through sodden grassland overlying sheet rock, we made our way towards our destination. Larger rocks started to appear and ferns became more frequent. One fern in particular I found extremely attractive, the velvety hairy *Cheilanthes buchananii*, in perfect condition under rocky overhangs.

After a scramble up a rocky trail and a short lunch break we entered a small, quiet extension of the Forest (24°55'32.59"S, 30°51'47.39"E), which is named after the sparkling dew drops that still coat the extensive moss, lichen and fungal colonies when the daily mists lift. We immediately found ourselves knee-deep in ferns, mainly *Asplenium aethiopicum* subsp. *tripinnatum* and *Rumohra adiantiformis* mingling with *Asplenium boltonii* and *Cheilanthes viridis* var. *viridis*. Large rocks were home to superb colonies of *Elaphoglossum acrostichoides* and *E. macropodium*, both with many fertile fronds. These two species are rather similar in appearance so it was useful to be able to compare them *in situ*. The sandstone rocks also provided an ideal habitat for filmy ferns, first *Hymenophyllum capense* and then, after struggling through tight gaps and across steep gulleys, an old friend, *H. tunbrigense*, looking very similar to British plants. However, the jewel in the crown here was a massive sandstone wall covered with a dense carpet of softly hairy, ferruginous fronds dangling from the rock-face. This astonishing spectacle was provided by *H. capillare* var. *alternialatum*. Having never seen hairy or coloured filmy ferns before, this, for me, was one of several highlights of the trip. Upon returning to the vehicles the mist had cleared slightly and we were able to make out large crowns of *Cyathea dregei* on the walls and floor of the canyon.

On our way back to Mount Sheba, we pulled into a small lay-by on Robbers' Pass (24°52'14.9"S, 30°41'44.4"E), near the old town of Pilgrim's Rest, for a final treat: the elusive *Schizaea pectinata* with its grass-like fronds, some tipped with sori, well concealed at the base of large rocks.

Thursday 23rd February – Bourke's Luck Potholes, Blyde River Canyon Nature Reserve, & Kruger National Park, Mpumalanga Province

Avril & David Walkinshaw

We left Mount Sheba Hotel at 8.20a.m. in bright sunshine, stopping briefly in the nearby wood (24°43'53.40"S, 30°46'33.82"E) where *Asplenium gemmiferum* and *Cyathea capensis*, both new to the excursion, were recorded, as well as a number of other taxa including *Sticherus umbraculiferus* and *Lycopodium clavatum*. Beyond the wood we stopped to photograph a spectacular display of wild nerines in a large meadow and recorded *Dicranopteris linearis* nearby, before continuing to Bourke's Luck Potholes in the Blyde River Canyon Reserve, approximately 40 kilometres north of Mount Sheba on Route 532.



photo: J. Whiteley

***Schizaea pectinata* at Robber's Pass**

The badly pot-holed approach road to the Reserve (24°48'35.7"S, 30°46'34.4"E. N.B. road not found on all maps!) required careful driving. At our first stop by a bridge we recorded *Adiantum capillus-veneris*, *Pteris vittata* and *Thelypteris confluens* by the river, and at the second stop *Cheilanthes eckloniana*, *Asplenium capense* and *Pteridium aquilinum* subsp. *capense*.

We parked at Bourke's Luck Potholes Visitors' Centre (24°40'22.53"S, 30°48'31.80"E) on the reserve's western boundary and set off immediately to the confluence of the Blyde and Treur rivers, where water-borne sand and rocks have scoured out enormous potholes and gorges in the yellow and orange Black Reef quartzite river-bed. Several bridges and tracks allowed dramatic views of the swirling waters and amazing rock formations below. Species of special note were *Isoetes transvaalensis* and, on an inaccessible cliff, a large clump of *Psilotum nudum*. Other interesting taxa included *Asplenium cordatum*, *A. simii*, *Cheilanthes viridis*, both var. *viridis* and var. *glauca*, *Pellaea calomelanos* and *Selaginella dregei*.

The day was very hot, and refreshed after a picnic lunch we set off for the Kruger National Park, stopping on the way out of the Reserve to view the awesome scenery at the Three Roundavels Viewing Point near Leroro (24°32'45.6"S, 30°43'20.9"E). Here we recorded *Pyrrosia schimperiana* var. *schimperiana* sheltering among the rocks. Further along the road, the star of the day, *Actiniopteris radiata*, was recorded growing in the rocky roadside bank.

The regular afternoon thunderstorm with heavy rain had cleared before we entered the Orpen Gate of the Kruger National Park at 3.30p.m. Still approximately 45 kilometres from our camp at Satara, we excitedly spotted the wildlife of the park along the way, from marabou storks to hippopotami. After a welcome drink at the camp, we were whisked off on a game drive in open vehicles. The rich grasslands supported numerous herds of herbivores, and we also saw leopards and hyenas. One highlight of our time in the Park was a night-time barbecue in the bush. Two members of the party had reason to be particularly grateful for the presence of armed guards when they encountered a black mamba while being escorted to the toilets!

On the drive back to camp our searchlights disturbed a dozing, elderly male lion, but when it started to growl and roar we left smartly, returned to camp, took our malarial pills and needed no help to fall asleep.

Friday 24th February – Kruger National Park & Lowveld National Botanic Garden, Nelspruit, Mpumalanga Province **Barry Cameron**

The keen game spotters went off in the cars at 5.30a.m. after only a few hours of sleep following our midnight arrival. Before they returned, the rest of us had the opportunity to be more leisurely and to see the Satara Rest Camp in daylight. The camp was situated in a vast grassy plain dominated by marula, knob thorn and round-leaved teak. About 20 accommodation units – small bandas (South African round huts) with stone walls and neat thatched roofs were arranged in a circle. The centre was well-treed and alive with bird-life, most noticeably red-billed hornbills, red-winged starlings and a very noisy group of arrow-marked babblers. Breakfast was not provided as it was a self-catering camp but our thoughtful guides, Jolanda and Allan, had brought a snack to sustain us until lunch-time.

We departed Satara Camp at 9.30 and on the three-hour drive through the Kruger Park to our exit, Numbi Gate, we were lucky enough to see giraffe, elephant, hippopotamus and large herds of impala. We were also fortunate to have a rare sighting of a leopard as it emerged from the bush and crouched beside Jolanda's and Allan's car, at one point looking ready to spring through the open window onto Jolanda's lap! Among the many birds we saw vultures, Bateleur eagle, hammerkop and lilac-breasted rollers. Before exiting, we had a welcome unscheduled lunch stop at the world-renowned Skukuza camp. Everyone had enjoyed the brief opportunity to see some of South Africa's wildlife in its natural habitat. The bush was green with the summer rain and the well-treed, rolling landscape was most attractive.

After leaving the park we headed for Nelspruit, the major city of the Lowveld Region, with its warm, humid, subtropical climate. We reached the Lowveld National Botanic Garden (25°26'51.69"S, 30°58'44.50"E) only an hour and a half before it closed. We quickly dispersed in small groups to see the flora of this well run garden, which included a raised board-walk through the 'rain forest' section with its many educational display boards to the suspension bridge across the river and waterfall. Among the many ferns, those that caught the eye included the indigenous *Cyclosorus interruptus*, *Lygodium kerstenii*, *L. microphyllum*, *Microsorium punctatum*, *Stenochlaena tenuifolia* and the naturalised, invasive *Macrothelypteris torresiana*. The garden also contained an impressive number

of cycad species, mainly of the indigenous genera *Encephalartos* and *Stangeria*, but also many non-indigenous species of *Cycas*, *Zamia*, *Lepidozamia* and *Macrozamia*.

From here it was a further 40 kilometres to Sudwala Lodge for the night stop. We arrived at 6.30p.m. to be welcomed at the reception with a display arranged around a very life-like, soft, cuddly leopard with a sign around its neck, "Sudwalaskraal welcomes the Fern Group".

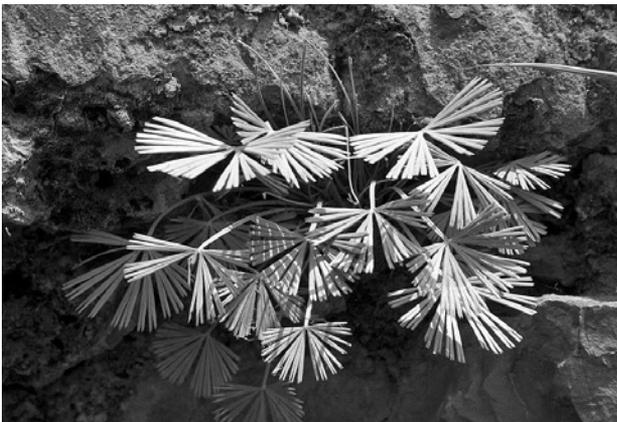


photo: R. Golding

Actiniopteris radiata, en route to Kruger National Park

Saturday 25th February – Sudwala Caves road, Mpumalanga Province; travel to Golden Gate Highlands National Park, Maluti Mountains, Free State Province **Grace Acock**

The group had unfortunately arrived too late the previous evening to complete the planned itinerary, therefore Allan arranged for anyone who wanted to meet at 5.30a.m., the

opportunity to drive up near to Sudwala caves (25°22'09.91"S, 30°41'58.49"E) and walk down before breakfast. It was as well that most of us availed ourselves of this opportunity as we saw *Anemia dregeana*, *Doryopteris concolor*, *Asplenium capense*, *Hypodematium crenatum*, *Adiantum incisum* and the alien *Pityrogramma calomelanos* var. *aureoflava* (possibly originally introduced for horticultural purposes), with a few of the common ferns we were seeing in most places. This newer subset of ferns seemed to be colonising the dry widened roadside banks and exposed rock-faces.

After breakfast, we left Sudwala Lodge for the 600-kilometre journey southwards through Mpumalanga and the Free State to the Golden Gate Highlands National Park using mainly toll roads, which meant that we made excellent progress. The scenery changed from grass-covered hills with occasional trees to vast areas of open grassland, with some maize cultivation. We passed through cattle and sheep farming areas and orchards, and in several locations passed large fields of sunflowers.

After a third stop the scenery changed again as we drove along the ascending road among dramatic rocks, stopping at Dolomite View to photograph the stunning rock formations of the Golden Gate. Reaching the Golden Gate Highlands National Park, we negotiated the checkpoint and continued upwards, arriving at the Hotel (about 2,000 metres) by 5p.m. This was possibly the first time that the group of pteridologists had arrived on schedule! By 5.30p.m. some members of the group were out in the fresh air to walk to a local waterfall (28°30'30.85"S, 28°37'03.38"E), where we added *Cheilanthes eckloniana*, *C. hirta* var. *brevipilosa*, *C. multifida* subsp. *lacerata*, *C. quadripinnata*, *Mohria rigida* and *Pellaea calomelanos* var. *calomelanos* to the record of ferns.

Sunday 26th February – Echo Ravine & Boskloof trails, Golden Gate Highlands National Park, Free State Province

Klaus Mehlreter

A cool autumn morning with a clear sky awaited us as we hiked from our hotel in the Golden Gate Highlands National Park (28°30'20"S, 28°36'37"E, 1,900 metres altitude) to the Echo Ravine and Boskloof trails (28°30'22.23"S, 28°36'12.49"E). The hillsides were densely covered with grasses (e.g. *Themeda* sp.) and some herbs (e.g. *Kniphofia triangularis* and species of *Lobelia*, *Sebaea* and *Helichrysum*). On the lower slopes were dense patches of *Leucosidea sericea* (old wood, Rosaceae) with its silky-haired leaves and flaking bark. Ferns, such as the desiccation-tolerant *Cheilanthes quadripinnata* and *C. eckloniana*, grew mainly along the disturbed margins of the trail, where they could compete with grasses. Within an hour the temperature rose and it became very hot. Just in time, we reached the shaded lower sandstone levels of the cliffs of the ravine, which erode faster than the 180 million year old Drakensberg Basalt and Quartzite that cap the Maluti Mountains. Water was dribbling down from the top of the cliff. We headed into the shady ravine, where the fern flora became more diverse, although the total cover stayed below one per cent. *Polystichum transvaalense* and *P. monticola* were the largest terrestrial ferns in the ravine. Around the rocks, on a thin layer of humus, grew scattered plants of *Asplenium adiantum-nigrum* var. *adiantum-nigrum*, *A. monanthes*, and *A. trichomanes* subsp. *quadri-valens*. On the wettest patches of the rock walls grew larger colonies of the maidenhair fern *Adiantum capillus-veneris* and the gesneriad, *Streptocarpus gardenii*, with its single entire leaf and inflorescence. Looking back out to the valley, the two curved and overhanging walls of the ravine appeared as petrified waves shortly before breaking.

Heading back out of the ravine, we crossed the slope of the hill to reach the next gorge, the Boskloof (*kloof* is a mountain gorge), with its remnant forest. On the open grassland, we spotted several individuals of *Ophioglossum luso-africanum*. It is amazing how such small plants can compete with the taller grasses and herbs, though they may rely on disturbed sites. Some species of *Selaginella* have also developed astonishing adaptations to the dry and sunny conditions of the rock surfaces. The three species we saw – *S. caffrorum*,

S. dregei and *S. mittenii* – are cushion plants with creeping rhizomes and very small leaves that can bend inwards and turn grey during periods of drought.

In the shady Boskloof, we added to the species list *Woodsia burgessiana*, *Asplenium aethiopicum* subsp. *aethiopicum*, *A. splendens* subsp. *drakensbergense* and *A. stoloniferum*. Plants of the last species were the smallest and seemed to be struggling to survive. Their once-pinnate leaves, however, had terminal buds that grew into new plants, thereby providing potential for the survival of the local population.

Monday 27th February – Mushroom Rock Trail & round-about explorations, Golden Gate National Park, Free State Province **Paul Ripley**

Leaving the vehicles at the Glen Reenen Rest Camp and Information Centre (28°30'22.23"S, 28°36'12.49"E), we set out along the Mushroom Rock Trail, another of the many well marked trails that traverse the steep slopes below the huge rock outcrops that are a feature of this area. We soon saw *Asplenium platyneuron* and *Mohria vestita*, and made a short detour to view *Ophioglossum lusoaffricanum*. *Cheilanthes quadripinnata* was very common among the rocks. We eventually came to a rock overhang at the base of the Mushroom Rock, where we found *Athyrium crassicaule* and *Polystichum monticola* as well as two new species – *Polystichum sinense* and *P. dracomontanum*. Much discussion centred on the possible existence here of a hybrid between these last two species. At this rich site we also found *Dryopteris athamantica* and the rare *D. esterhuyseniae*. *Selaginella mittenii* and *S. dregei* were also present.

Descending to the valley floor, a few of us took a 'short cut' along the river valley and soon found a fine *Asplenium aethiopicum* subsp. *aethiopicum* and *A. adiantum-nigrum* var. *adiantum-nigrum* among ferns seen already. *Adiantum capillus-veneris*, *Equisetum ramosissimum* and *Pteris cretica* were growing in most unfavourable locations: right beside the road in a dry and dusty, fume-laden environment.

After lunch the group split, some shopping in nearby Clarens, the remainder taking either the Holkrans trail behind our hotel (28°30'20"S, 28°36'37"E; 1,900 metres altitude) or, like me, a higher walk to Brandwag (Buttress) trail (28°30'22.23"S, 28°36'12.49"E), a huge overhanging outcrop that towers over the valley and hotel. Both groups saw *Blechnum australe* for the first time. On the high path we found *Polystichum sinense* and *P. monticola*; the lower group additionally found *P. dracomontanum*, *Woodsia burgessiana*, *Asplenium stoloniferum* and *Dryopteris pentheri*, among ferns found earlier. I was kindly shown these later, along with *Cheilanthes eckloniana*, which I had missed in the morning.

To avoid retracing my steps, I cut steeply down below a rock overhang covered with *Adiantum capillus-veneris*, and by a happy chance encountered Allan near the Glen Reenen Rest Camp. He led me to a pool below a waterfall above Glen Reenen and, after a most refreshing swim, pointed out *Mohria vestita* with its very strongly carrot-scented fronds; regrettably I never did come to terms with the mohrias on this trip.

The day was rounded off with a tourist visit to the Drakensberg View, which affords dramatic views to the Drakensberg mountains in the distance and orchids growing in the grass sward around the viewpoint, including a rare black orchid, *Corycium dracomontanum*.

Tuesday 28th February – Holkrans trail, Golden Gate National Park, Free State Province; Sentinel Peak, KwaZulu-Natal Province **Ian Bennallick**

The day dawned sunny with a clear and hot day awaiting us. Before breakfast, several folk who had not done so yesterday walked the Holkrans trail, the small track above the hotel, particularly to see the interesting *Adiantum poiretii* var. *sulphureum*, a variety not recognised by all taxonomists.

En route to our ferning site for the day, we drove through the young and sprawling township of Puthaditjhaba, then continued to the southern end of the Royal Natal National Park in the Drakensberg Mountains on the KwaZulu-Natal/Lesotho border. We eventually

climbed a steep, unmade road leading to Witsieshoek and Sentinel Peak, a large, prominent basalt formation on the Drakensburg ridge, to a car park just below the Peak (28°43'19.20"S, 28°53'47.54"E). The views north and south along the Drakensberg were sensational, with deep valleys sweeping below us, and eroding vertical cliffs high above. The first delight was *Selaginella nubigena* growing on precipitous rock-faces on the edge of very steep cliffs. Dotted around were many flowering plants, especially various *Helichrysum* and *Crassula* species. Along the path, ferns included *Cheilanthes quadripinnata*, *C. eckloniana*, *Mohria rigida* and *Dryopteris esterhuyseniae*, while *Polystichum sinense*, *Dryopteris pentheri* and *Cystopteris fragilis sensu lato* grew below a small hut. We delighted in watching family groups of the rodent-like rock hyrax chase each other over the rocks, while two white-necked ravens fed on discarded sandwiches!

After exploring at the end of the track, the vans were driven slowly back down as we searched the rock crevices of the road cutting, which provided dry areas and patches of damp seepage. Among the many additional taxa of ferns recorded were *Asplenium splendens* subsp. *drakensbergense*, *A. trichomanes* subsp. *quadrivalens*, *A. adiantum-nigrum* var. *adiantum-nigrum*, *A. aethiopicum* subsp. *filare*, *Cheilanthes hirta* var. *brevipilosa* and *Mohria nudiuscula*. A few plants of *Blechnum australe* were seen, and also a few *Woodsia burgessiana* near an area with *Polystichum dracomontanum*. The most interesting fern was the diminutive *Elaphoglossum drakensbergense*, which has a wonderful solid black sorus covering the back of the fertile fronds. Interesting flowering plants included broad-leaved leonotis (*Leonotis intermedia*), with its furry orange flowers, a strange large white-flowered *Harveya speciosa*, apparently parasitic on a large, yellow-flowered composite, an array of *Hesperantha* species, various composites and at least three orchid species. Allan spotted a chameleon slowly climbing the rock-face with typical jerky movements. Birds were numerous, with swifts, swallows and martins flying above us, as well as Verreaux's eagle and peregrine and red-footed falcons.

After lunch at a viewpoint, we continued down the track and again through the township of Puthaditjhaba. At 5.30p.m. we arrived at the Mont-aux-Sources hotel on the north-eastern edge of the Royal Natal National Park. Views of the Drakensberg Mountains were breathtaking, with the high Drakensberg 'Amphitheatre' (a one-kilometre-high, five-kilometre-long escarpment) looming to the west, marking the boundary with Lesotho. With the group settled in the hotel and chalets, we enjoyed drinks on the veranda before dinner.

Wednesday 29th February

Gudu Falls Trail, Royal Natal National Park, KwaZulu-Natal Province Alison Evans

It was a glorious morning for our short drive from our hotel to the Royal Natal National Park. A troop of baboons on the road melted away into the undergrowth as we entered the park. We took the essential group photo in the scenic car park before we divided into two parties. Those taking the long route set off along the track to Gudu Falls (28°41'19.5"S, 28°57'00.8"E) and soon listed *Cyathea dregei*, *Mohria vestita*, *Dryopteris pentheri*, *Pellaea calomelanos*, *Cheilanthes eckloniana*, *C. quadripinnata*, and the ubiquitous *C. viridis* var. *viridis*. We took a short detour through some knee-high bracken to see a lovely stand of *Athyrium schimperii*, with its pinkish-red stipes, growing at the base of a rock near to *Thelypteris confluens* and *Dryopteris athamantica*.

Back on the main track, a steep downhill slope on the left of the path was covered with *Osmunda regalis* and *Blechnum inflexum*, and *Mohria marginalis* and *M. nudiuscula* were growing on the small bank on the uphill side of the path. *Sticherus umbraculiferus* marked the border between the sunny, open grassland and the shady forest, and then we were into a profusion of *Dryopteris*. This led to some debate as to the taxa present: probably *D. lewalleana* and *D. pentheri*, but had we found *D. inaequalis*, from which the previous two species have now been separated? Deeper into the forest we started to see *Polystichum pungens* and *P. transvaalense* with its in-turned 'little finger' i.e. the basal basiscopic arista

lying over the surface of the pinnule. *Polystichum monticola* was also recorded and there was an abundance of aspleniums, plus the filmy fern *Crepidomanes inopinatum*.



photo: A.J. Evans

Royal Natal National Park, South Africa

Chris Evans, Elise Knox-Thomas, Patrick Acock, Mark Morgan, Ian Bennallick (*kneeling*), Jolanda & Allan Nel, Jane Whiteley, Grace Acock, Klaus Mehltreter, Avril & David Walkinshaw, Tim Pyner, Barry Cameron, Catherine Brock, Janet Keyes, Wim Burnett, Paul Ripley, John Whiteley, Naud Burnett, Alison Evans, Jennifer Ide, Pat Riehl, Roger Golding

The path up to the Gudu waterfall was very steep and long, but those who were not deterred noted *Amauropelta bergiana* var. *bergiana*, *Cystopteris diaphana* and *Stegnogramma pozoi* in a wettish area, and also added *Elaphoglossum acrostichoides*, *Pleopeltis macrocarpa*, *P. polypodioides*, *Asplenium stoloniferum* and *A. lobatum* to our list. On the way down we found a plant of *A. erectum* var. *erectum*, and two colonies of a gemmiferous *Asplenium* with little plantlets at the junction of the stipe and rachis, as in *A. monanthes* but with divided pinnae reminiscent of *A. lobatum*. Tim Pyner concluded that it was in fact *Asplenium lobatum*, and not a hybrid or new variety as we first thought. [Note. A very interesting plant, the fronds resembling the non-proliferous var. *lobatum* but the plantlets indicating var. *pseudoabyssinicum*. The latter occurs in central Africa, becoming much rarer in the South. It has not been recorded for the Natal Drakensberg and also proliferous fronds have not been recorded from its South African localities. This plant would appear to be an intermediate form. A plantlet taken into cultivation has produced fertile fronds with abortive sporangia, however, this may be due to sub-optimal conditions under cultivation. Further study is proceeding. TP] By now late for our rendezvous with the other party, we hurried down to the Cascades (28°41'22.09"S, 28°56'16.50"E), almost missing a lovely colony of *Huperzia verticillata* on a rock by the path.

Cascades Trail, Royal Natal National Park, KwaZulu-Natal Province Jennifer Ide

Starting from the same place, the shorter less strenuous walk followed the Mahai River to the Cascades, where it drops in a series of short falls, providing pools of varying depth. Along its length the trail closely followed the narrow river, with the majority of ferns

growing either on or in the protection of large boulders or on the ground among the shrubby undergrowth, all shaded by the tree canopy. After the trail crossed the river it continued through woodland for much of the remaining distance to the Cascades, except where the river bank widened to a flat terrace with low vegetation dominated by *Pteridium aquilinum* subsp. *capense*. Most of the ferns seen were in common with those found on the Gudu Falls Trail, the exceptions being *Cheilanthes viridis* var. *macrophylla*, *Elaphoglossum aubertii* and *Selaginella kraussiana*. Occasional *Cyathea dregei* when perched on steep streamside banks looked as though they might slide down into the river at any moment.

The day was very hot so it was with some relief that we arrived at the Cascades and cooled our weary feet and bodies by paddling or swimming in the pools and ate our lunch in the shade while waiting for the other group to join us.



photo: J.M. Ide

Pellaea calomelanos at Cascades Trail

Thursday 1st March – Devil’s Hoek trail, Royal Natal Drakensberg National Park, KwaZulu-Natal Roger Golding

In the morning, clouds shrouded the view of the amphitheatre from the hotel terrace, giving just intermittent glimpses of the higher peaks of the Drakensberg. After parking in the car park (28°42’34.6”S, 28°56’24.7”E), we set off to explore another valley in the nearby National Park, this time the Tugela (or Thukela) Valley and a short way along the Devil’s Hoek River. We soon picked up many now familiar ferns including *Adiantum poiretii*, *Selaginella mittenii*, *Lycopodium clavatum* (typically with more cones per peduncle than the British form), *Asplenium monanthes*, *A. aethiopicum* subsp. *aethiopicum* and *tripinnatum*, *A. varians* subsp. *fimbriatum* and *A. stoloniferum*, *Dryopteris pentheri* and *D. lewalleana*, *Cheilanthes hirta* (more than one variety), all four *Mohria* species (see table) (I never fully managed to sort these out in my mind, although others did better), *Polystichum luctuosum* and *P. transvaalense*, and *Sticherus umbraculiferus*. In a grotto-like rocky outlet of a stream we found the tiny *Elaphoglossum spathulatum* var. *spathulatum*, the only new taxon for the day.

The clouds continued to give tantalising glimpses of the higher peaks, with the dramatic Devil’s Tooth occasionally visible on the far side of the valley. The threat of rain failed to materialise – in fact, lack of rain in recent days was showing in the vegetation: a filmy fern on a boulder by the path was so desiccated as to be unidentifiable.

The other vegetation continued to provide fascinating distractions, particularly proteas, mainly *Protea caffra* and *Cussonia paniculata*; although not the best time of year for flowering plants there were still plenty to catch the eye, such as the bright yellow *Haplocarpha scaposa*, *Galtonia candicans* and *Monsonia attenuata* with its delicate white petals with black veins. We also saw several land crabs: two distinct colour forms, probably *Potamonantes clarus* and *P. depressus*.

Cyathea dregei was frequent again, growing in damper areas (including a tiny specimen growing out of a crack in a boulder), and as we made our way back down the valley we encountered *Cheilanthes viridis* var. *macrophylla* growing to an impressive size – some close to a metre tall, and other familiar ferns such as *Asplenium theciferum*, *Pleopeltis polypodioides* subsp. *ecklonii* and *Athyrium schimperi*. We stopped at a rock overhang to see some San rock paintings – rather indistinct, but the forms of hunters and various animals including eland were discernable.

After a late lunch back at the car park, a few of us took a few minutes to explore Otto's trail, the path by the nearby river, where the ferns included *Osmunda regalis*, *Dryopteris athamantica*, *Lepisorus schraderi* and *Doryopteris concolor* (looking rather dried out).

Back at the hotel the weather finally broke, with heavy rain and thunder. In the evening Barry Cameron gave us a fascinating talk on Madagascar, which left many of us dreaming of a future trip there. This was followed by thanks and presentations – first to Jolanda and Allan for organising such an amazing trip for us and then to Jennifer for managing all the details from our end.

Friday 2nd March – Makaranga Lodge Garden, Kloof, & Botanic Gardens, Durban, KwaZulu-Natal **Mark Morgan**

Immediately after breakfast we left the Mount-aux-Sources Hotel for our final destination of Durban. We had a three-hour drive to our first stop at the Makaranga Lodge and Garden at Kloof, 28 kilometres north-west of Durban (29°47'26.2"S, 30°49'0.44"E). Given the reduced altitude and proximity to the coast, the increase in humidity was very noticeable. Following an excellent lunch we spent an hour exploring this 30-acre subtropical garden, which was begun in 1976 with a combination of exotic and indigenous flora. Following a walk through the Andrew Walters Cycad garden, we came across very large specimen plants of *Todea barbara*. The garden also had a good selection of tree ferns, including *Cyathea cooperi*, *C. dregei*, *C. dealbata*, *Dicksonia antarctica* and *D. squarrosa*. *Platynerium bifurcatum* was growing on many of the trees in the garden.

We then drove into Durban to visit the Botanic Gardens (29°50'47.4"S, 31°0'23.4"E), which are situated within the city itself, providing a green oasis for the citizens of Durban. The most famous plant in the garden is the original collected specimen of the cycad *Encephalartos woodii*, which is now listed as extinct in the wild, all other specimens being clones of this one. It was collected in 1895 in KwaZulu-Natal by John Medley Wood, then curator of the Durban Botanic Gardens and director of the Natal Government Herbarium of South Africa. The plant is a male; no female plants have ever been found. An early fern sighting was an impressive climbing *Stenochlaena tenuifolia* with its distinctive, fine, feathery-looking fertile fronds, reminiscent of an ostrich plume. The group spent some time investigating the impressive Fern Dell, which had a good example of *Angiopteris evecta* alongside *Cyathea medullaris* and *C. tomentosissima*, and the long Fern House, reminiscent of the Filmy Fern House at the Royal Botanic Gardens Kew in its construction, but without the internal glass housing. Sacred ibis and hadada walked the lawns and the brilliantly coloured little red bishop, nesting in reeds of a large pond, especially had the cameras snapping.

We drove to our Hotel on the outskirts of the city for our last night together before going our separate ways the next morning – some going home from Durban and others flying to Cape Town.

And finally

Jennifer Ide

There are about 320 taxa of ferns and lycophytes native to Southern Africa, of which we saw at least 136. The highest concentration is in the eastern provinces and Lesotho, with the next highest in the Western Cape. A casual look through the new Southern African flora, with its distribution maps, reveals that much of the rest of Southern Africa is a desert in terms of pteridophytes and climatically, hence our visit centring on the eastern part of the region, which, for a bonus, has most stunning scenery. We are most grateful to Jolanda and Allan for the careful thought, all the planning work (including pre-visiting hotels) and their sheer generosity in so many ways, which ensured that the excursion was a success in every way and, above all, was interesting, enjoyable and fun. Thank you both.

Acknowledgement: I would like to thank Jolanda Nel for her considerable help in the initial editing of this report and Tim Pyner for compiling the table of taxa recorded. Jennifer Ide.

Reference

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		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
356-8	<i>Cheilanthes hirta</i> var. <i>brevipilosa</i>															+	+			+	+			+		
358	<i>C. hirta</i> var. <i>nemorosa</i>					+																+				
386	<i>C. involuta</i> var. <i>obscura</i>															+										
402	<i>C. multifida</i> subsp. <i>lacerata</i>						+	+		+																
396	<i>C. quadripinnata</i>				+	+		+					+			+	+	+	+	+	+	+		+		
390	<i>C. viridis</i> var. <i>viridis</i>	+	+	+	+	+		+	+		+	+	+	+	+								+	+	+	+
394	<i>C. viridis</i> var. <i>glauca</i>												+	+	+											
392	<i>C. viridis</i> var. <i>macrophylla</i>																							+	+	
684	<i>Christella dentata</i>					+																	+	+		
158	<i>Crepidomanes inopinatum</i>					+																	+			
156	<i>C. melanotrichum</i>						+																			
272	<i>Cyathea capensis</i>										+															
270	<i>C. dregei</i>			+		+		+					+										+	+	+	+
674	<i>Cyclosorus interruptus</i>																									+
see 706	<i>Cystopteris diaphana</i> (Note 2)					+														+			+			
706	<i>C. fragilis</i> subsp. <i>fragilis</i>																+				+		+			
see 712	<i>Deparia petersenii</i> (Note 3)					+																				
172	<i>Dicranopteris linearis</i>					+					+															
334	<i>Doryopteris concolor</i>															+										+
472	<i>Dryopteris athamantica</i>						+													+			+	+		+
484	<i>D. estherhuyseniae</i>																			+		+				
476	<i>D. lewalleana</i>					+																	+		+	
478	<i>D. pentheri</i>			+		+															+	+	+	+	+	+
498	<i>Elaphoglossum acrostichoides</i>					+	+		+												+		+	+	+	
510	<i>E. aubertii</i>					+																		+		
508	<i>E. drakensbergense</i>																					+				
500	<i>E. macropodium</i>								+																	
506	<i>E. spathulatum</i> var. <i>spathulatum</i>																								+	
134	<i>Equisetum ramosissimum</i> subsp. <i>ramosissimum</i>		+																					+		
32	<i>Huperzia dacrydioides</i>					+																				
34	<i>H. gnidioides</i>						+	+																		
30	<i>H. verticillata</i>																						+			

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y
160	<i>Hymenophyllum capense</i>								+																	
168	<i>H. capillare</i> var. <i>alternialatum</i>								+																	
162	<i>H. tunbrigense</i>					+			+																	
492	<i>Hypodematium crenatum</i>														+											
286	<i>Hypolepis sparsisora</i>					+			+																	
60	<i>Isoetes transvaalensis</i>												+													
558	<i>Lepisorus excavatus</i>							+	+																	
556	<i>L. schraderi</i>				+	+																+			+	
540	<i>Loxogramme abyssinica</i>					+			+																	
38	<i>Lycopodium clavatum</i>					+					+													+	+	
490	<i>Megalastrum lanuginosum</i>					+					+															
552	<i>Microsorium scolopendria</i>																									+
198	<i>Mohria marginalis</i>			+				+														+		+		
208	<i>M. nudiuscula</i>																			+	+	+	+	+		
204	<i>M. rigida</i>															+	+	+		+	+			+	+	
206	<i>M. vestita</i>			+	+	+		+						+			+	+	+	+	+	+	+	+	+	+
470	<i>Nothoperanema squamiseta</i>					+																				
528	<i>Oleandra distenta</i>							+	+																	
116	<i>Ophioglossum lusoaffricanum</i>																+		+							
108	<i>O. reticulatum</i>																								+	
110	<i>O. vulgatum</i> subsp. <i>africanum</i>						+																			
142	<i>Osmunda regalis</i>			+																		+			+	
410	<i>Pellaea boivinii</i>												+										+			+
418	<i>P. calomelanos</i> var. <i>calomelanos</i>	+					+					+	+	+	+	+			+		+	+	+	+	+	
416	<i>P. pectiniformis</i>								+				+													
312	<i>Pityrogramma argentea</i>					+	+	+																		
314	<i>P. calomelanos</i> var. <i>aureoflava</i>												+		+											
568	<i>Pleopeltis macrocarpa</i>			+	+	+				+				+			+	+				+		+	+	
566	<i>P. polypodioides</i> subsp. <i>ecklonii</i>				+	+					+											+		+		
680	<i>Pneumatopteris unita</i>																									+
462	<i>Polystichum dracomontanum</i>																		+	+	+					
466	<i>P. luctuosum</i>				+																			+		

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	
450	<i>P. macleae</i>					+																					
458	<i>P. monticola</i>																+	+	+	+							
454	<i>P. pungens</i>					+																+		+			
464	<i>P. sinense</i>																		+	+	+						
460	<i>P. transvaalense</i>					+											+	+				+		+			
130	<i>Psilotum nudum</i>												+														
284	<i>Pteridium aquilinum</i> subsp. <i>capense</i>			+			+	+		+		+		+								+	+	+	+		
324	<i>Pteris catoptera</i>					+																					
318	<i>P. cretica</i>					+											+		+	+		+	+	+	+		
320	<i>P. dentata</i>					+																		+			
326	<i>P. friesii</i>					+																					
316	<i>P. vittata</i>				+							+			+												
138	<i>Ptisana fraxinea</i> var. <i>salicifolia</i>					+																					
544	<i>Pyrrosia schimperiana</i> var. <i>schimperiana</i>													+													
488	<i>Rumohra adiantiformis</i>							+	+																		
190	<i>Schizaea pectinata</i>									+																	
84	<i>Selaginella caffrorum</i> var. <i>caffrorum</i>						+			+							+	+	+								
80	<i>S. dregei</i>						+	+		+			+	+			+	+	+								
96	<i>S. kraussiana</i>					+																		+			
94	<i>S. mittenii</i>																+	+	+	+		+	+	+	+		
90	<i>S. nubigena</i>																				+						
676	<i>Stegnogramma pozoi</i>					+																		+			
176	<i>Sticherus umbraculiferus</i>						+	+			+											+	+	+	+		
672	<i>Thelypteris confluens</i>			+								+										+					
438	<i>Vittaria isoetifolia</i>					+			+																		
708	<i>Woodsia burgessiana</i>																	+		+	+						

Note 1: *Adiantum poiretii* var. *sulphureum* recorded at this site, but not recognised in the Flora - see p. 432 last paragraph.

Note 2: *Cystopteris diaphana* is not recognised in South African floras, however, the morphology and habitat at some lower altitude sites seem consistent with this segregate.

Note 3: Included under *D. japonica* in the Flora, all plants seen matched *D. petersenii* in morphology and habitat.

Note 4: Visited by a few remaining members before leaving for airport.

Compilation of species recorded by P. Acock, A. Evans, R. Golding, J. Ide, K. Mehltreter, A. & J. Nel, T. Pyner, P. Ripley.