

How many trips of a lifetime can one enjoy in a lifetime? That is the question that seems difficult to answer, but this trip to South Africa, the first for many attending the IWCS meeting at Howick in KwaZulu-Natal province, in north eastern South Africa, will definitely fall into that category. Also, many attendees took advantage of the opportunity to do some pre and post meeting touring, either on their own or on some of the week long packages offered by African Insight, who also provided the transport and knowledgeable guides for the various field trips associated with the meeting. The meeting site itself was a country inn in the beautiful rolling hills west of Howick, home of the meeting hosts Barry and Danielle James and also near Hilton, the home of the third co-host, Stephanie Dyer.

The care that they had taken to prepare the main conference room was obvious and the results most impressive. Skirted chairs and tables, water jugs, writing pads, flowers, festooned ceilings and carefully set out display tables ringed the room, giving one the feeling of attending a United Nations symposium, with all the trimmings.

We received a conference bag, filled with lovely surprises, such as an SA flag soap, and locally made nougat and ginger beer, and a package of SA wood samples. Our report on this meeting will consist of a brief account of the pre and post meeting tours we both experienced, since they were part of the whole experience, as well as brief reports on the activities and presentations of the meeting itself.

## Meeting Presentations

The six day program consisted of presentations in the main conference room, as well as field visits. This report is a snapshot of the conference addresses in the program, just to show you what you missed—if you did not attend.

After registration, the meeting commenced with a talk by local farmer and businessman, Robin Barnsley, who gave us **A glimpse into life in the KwaZulu-Natal Midlands**. Whilst we continued with the main program, a separate program had been arranged for accompanying persons, which included some lovely local country shopping, a visit to the home of Tsonga shoes, and a day trip to Didima

Camp in the Drakensberg Mountains, which included a visit to the San Rock Art Centre.

## An outline of Indigenous Forests in South Africa (SA).

Presented by Prof Coert Geldenhuys, a forest ecologist, who runs his own consultancy and is an associate professor at Stellenbosch University.

Indigenous forests in South Africa are used for timber, medicine, food and crafts, and play a major role in rural people's daily life. They are a source of great biodiversity, containing around 1,500 tree species. These forests are very dynamic and are found mostly along the east coast. In terms of rainfall and suitable substrate, about 7% of SA has the potential to support forest, but forest only covers 1% of the country. The difference between potential and actual natural indigenous forest cover is determined by natural disturbance in the landscape and, contrary to what many people believe, is not because of historical overutilisation. The distribution of these forests is largely dictated by fire patterns, with forests occurring mostly in fire shadows, such as gorges, valleys and wet, south-facing hill-slopes. Most exotic commercial plantations, on the other hand, are planted in the natural fire zone and so a great deal of emphasis is placed on fire protection in order to maintain them artificially. Natural forests are dynamic systems and well adapted to disturbance, being able to recover both within and on their margins. Gaps created within forests give opportunities for saplings to get a head start and establish themselves. Some people are of the opinion that, because of the limited area that they cover, forests should not be touched, but that is not the answer. A total lack of disturbance in a forest results in the final domination by a few select species and is not good for biodiversity.



Meeting Hosts: Stephanie Dyer, Barry and Danielle James and their sons, David and Timothy – meeting hosts in training

Utilisation should rather be carefully monitored and controlled, for the good of both the forest and man.



Typical upland terrain.

### The Commercial Forestry Industry.

Presented by Prof Colin Dyer, head of the Institute for Commercial Forestry Research Institute (and Stephanie's husband).

Commercial forestry plantations comprise 1.3 m ha (~3.3 m ac) of introduced species, while there is 0.5 m (~1.25 m ac) ha of indigenous forests and 40m ha (100 m ac) of savannah woodlands. Almost none of the indigenous forest is managed for commercial production, though wood is harvested in some areas. The history of exotic importation started in 1670, when oaks were planted on the slopes of Table Mountain in the Western Cape. Then, in 1864, black wattle was imported

from Australia in order to supply firewood and, later, the tannin in the bark was used for tanning leather. In 1875, the first eucalypts were planted and agroforestry really got underway for fuelwood and to produce wood for the growing railways.

However, it wasn't until 1938, with the planting of 150,000 ha (~375,000 ac) of commercial timber, that the first State-owned sawmills were established. By 1985, the Dept. of Forestry

controlled 0.25 m ha (~0.25 m ac) and private ownership accounted for 0.8 m ha (~2 m ac), and a few years later the Government pulled out of forestry. Today, there are 1.3 m ha (~3.3 m ac) of plantations, comprising 51% pine, 40% eucalypt and 8% wattle. These are planted on a 7-35 year rotation, with approximately 100,000 ha (~250,000 ac) planted annually. Target tree densities are 250 trees/ha (~100 trees/ac) for logwood and 1,850 for pulpwood, which utilises 67% of the area, producing 18.9 million m<sup>3</sup> (~9 billion bd ft) of roundwood per year. All plantation species are exotic and include: *Eucalyptus grandis*, *E. nitens*, *E. dunnii*, *E. macarthurii*, *E. smithii*, and their inter-specific hybrids; *Pinus*

*patula*, *P. radiata*, *P. elliottii*, *P. taeda* and their inter-specific hybrids; also *Acacia mearnsii*, *A. decurrens* and *A. melanoxylon*. Fire causes the main damage to plantations, which employ 165,000 people.

### Plant Diversity in South Africa.

Presented by Dr. David Johnson, who took us on an

amazing photographic tour through the plant diversity of the various vegetation types, including the Mistbelt areas, Drakensberg Mountain Range, woodlands (or forests with no gaps), the Highveld, Karoo, Desert, Fynbos, Lowveld and the Grasslands.

Would you have guessed that there are 72 differing species of beautifully flowering proteas in the family of Proteaceae. Later on in the program, David also presented an equally stunning display of SA birds.

### The History of Wood Use in SA.

Presented by Barry James.

Barry took us on a fascinating journey, starting with the prehistoric Bushmen and Hottentots, who used wood to produce bows and arrows, snares, fire sticks, quivers, axes, knives and javelins (or spears), as well as using plants for poison arrows and fish poison. This was followed by Iron Age Nguni herders and warriors, who used wood for spear and tool handles, walking and fighting sticks, meat platters, mortars and pestles, huts and fishing baskets. Then came the early settlers of the Cape Colony, and it was amazing to find out that they used almost 3 m<sup>3</sup> (~1,300 bd ft) of wood, from six species, to make a single ox wagon, plus of course the fact that tree felling methods were extremely wasteful and inefficient. Then, in the 19th century, the British navy established the Knysna dockyard and there was indiscriminate exploitation of the forests. This was only brought under control in 1939, when the forests were closed to independent woodcutters. The extent of loss of forests in SA has been exaggerated; nevertheless, they were heavily exploited and no real attempts were made to grow indigenous timbers commercially as it was felt that they were too difficult to grow in plantations. As a consequence, the 20th century saw timber imports rise dramatically and the shift to exotic plantations began. Amusingly, once plantations were established, concerns



Indigenous forest area.



were expressed that indigenous trees were invading the plantations! A few SA species have gained international prominence, but they are mostly from savannah and not forests. No monitoring of the extent of this exploitation is taking place and it is probably unsustainable in the long-term, particularly for species such as red ivory (what we call ‘pink’ ivory, *Berchemia zeyheri*). At present, there is research into the potential to cultivate indigenous woods commercially and the top 10 priority species identified for investigation are: *Ptaeroxylon obliquum* (sneezewood), *Millettia grandis* (umzimbeet), *Ocotea bullata* (black stinkwood), *Podocarpus falcatus* (real yellowwood), *Prunus africana* (red stinkwood), *Curtisia dentata* (assegai), *Acacia karroo* (sweet thorn), *Podocarpus henkelii* (Henkel’s yellowwood), *Ilex mitis* (Cape holly), and *Rapanea melanophloeos* (Cape beech). Barry is also investigating the market potential for indigenous woods and has some first-hand experience marketing these woods.

He later gave us a talk, entitled ‘**The Adventures of a Wood Scavenger**’, about his experiences and adventures with harvesting, processing and marketing indigenous wood and the difficulties in trying to establish a business trading in indigenous wood.

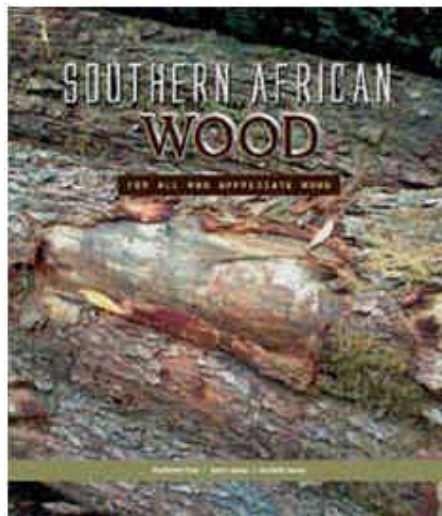
#### **New Book Title Coming Soon**

Barry ended with a very important message. Coming soon is the book, *Southern African Wood*, by Stephanie Dyer, Barry and Danielle James. Hey! Get a copy.

#### **Identifying Wood in South Africa.**

Presented by Stephanie Dyer, who spoke on many aspects of identifying SA woods, starting with its history.

The Forest Products Institute opened in 1929 and then, in 1975, Neels Kromhout (Stephanie’s father), pioneered the work on the anatomical properties of indigenous wood species at the South African Forestry Research



Stephanie Dyer talking about identifying wood Institute (SAFRI). SAFRI operated from 1977 to 1990, when it merged with CSIR National Timber Research Institute. In 1998, this finally became the Division of Forest Technology, CSIR. However, since 1999, wood identification services have been pro-

vided by Stephanie, through her business, Timber Information Services, in Hilton.

Stephanie referred to the following wood identification publications:

- In 1935, the first publication on wood identification was by Van Wyk at the University of Stellenbosch, which described 44 indigenous species.

- This was followed in 1975 by C.P. Kromhout’s anatomical properties and key to 136 indigenous SA species.

- In 1980, Robbertse published wood anatomy of *Acacias*, which was published in an IAWA bulletin.

- In 1989, Stephanie Dyer published the macroscopic characteristics of a number of indigenous and exotic timbers and a key to their identification in Bulletin 62, Department of Environment Affairs, Pretoria.

Stephanie informed us that wood samples are still available from CSIR (SAFRI

standard sample size is 113 x 76x12 mm) or from Barry James (IWCS size).

South Africa’s wood collections include:



Barry James’ wood specimen layout at the meeting.

- CSIR collection of approx. 5,000 samples, housed at CSIR, Durban;
- University of Stellenbosch collection;
- Stephanie Dyer’s approx. 1,000 collection.

These collections are used for the verification of wood identification results as required by timber

importers, forestry companies and Government, antique dealers and auctioneers, as well as forensic scientists, architects, museums, collectors, woodworkers and the public. Stephanie then went through the list of procedures to macroscopically identify wood, including: colour, density, odour, fluorescence, burning splinter test and end grain.

**Trepreneur Program and Woodland Rehabilitation.** Presented by Andrew Whitley. Andrew spoke on the Trepreneur Program, which is being run by the Wildlands Conservation Trust (<http://www.wildlands.co.za/>).

This is a tree growing program for communities, which has been very successful and has seen 350,000 trees already planted since its inception, enabling poorer, vulnerable community members to grow indigenous trees in exchange for food, school fees, clothing, bicycles, gardening equipment, water tanks or building material. Given a selected planting project, for example: a disused 800 ha (~2,000 acre) cane farm on the edge of town, seeds are collected locally, seedlings are propagated by members of the community until they are 0.3 m (1 ft) high, when they are ‘bought’ by the project in exchange for a ‘credit note’ so that the seller can pay for school fees, or buy a bicycle, etc. The trees are then planted in a community nursery until they grow to a reasonable size, when the project leaders organise mass planting days. In the case of the cane farm regeneration project, 3,000 trees in were planted in 3 days. If the trees are planted on private land, then the landowners become ‘carbon farmers’ and are paid R2 (approx. 20c in \$ equivalents) for each tree planted. With tree losses, then overplantings are organised in the same way as would a commercial plantation. In this project, the community is now producing around 300,000 trees per year. After planting, the trees are maintained by a local contractor and on big programs there may be paid

planters, hole diggers and supervisors. The tree species propagated include 32 pioneer tree species, 29 climax tree species and 37 understory species, added where suitable as biodiversity enhancement. The indications are that this project is a huge success and



Community nursery.

involves the community in gaining experience, ownership of the trees and they benefit in a practical way by gaining assistance in matters that are self-improving. There are other similar ongoing projects in floodplain and rubbish dump rehabilitation.

**The Medicinal Plant Trade in SA** was presented by Steve McKean, who is employed by Ezemvelo KZN Wildlife.

Medicinal plants are used by 72% of the S. African population, mainly the indigenous black people. This is largely because they often have more faith in traditional medicine than in Western medicine. Some 20,000 tons of plant material is used annually, which is derived from more than 1,000 plant species. The value of the medicinal plant trade equates to 5.6% of the National Health budget. It is, however, almost impossible to control. Less than 0.25% of that plant material is actually being cultivated and most of the remainder is harvested illegally in the form of bark, roots, bulbs, leaves, stems and tubers. The result is that many plants are being harvested unsustainably and some are even extinct in the wild. Supplies of others are dwindling and these are being imported from neighbouring countries.

It is largely a hidden economy, but it is an important economy and if the traditional medicines were to disappear, the Government would need to find approximately R2.9 billion to replace it with Western medicine. Regulation alone does not work and new and innovative solutions need to be found that include all role players.

Izak van der Merwe, of the National Department of Forestry, spoke on SA's **Champion Tree Project**, after which he accompanied us to the Benvie Arboretum in Karkloof and the Botanical Gardens in Pietermaritzburg to view some of the Champion Trees.

The project focused on a selected few special trees. One aspect was the indigenous “Big-5” species, namely



baobab (*Adansonia digitata*), wild figs (*Ficus* spp.), matumi (*Breonadia salicina*), Outeniqua yellowwood (*Podocarpus falcatus*), monkey thorn (*Acacia galpinii*), then the “Exotic Big-5”, and then the actual Champion Trees. This was started in 2004 and focuses on selected individual trees, chosen for their exceptional characteristics, such as age, size, historical and cultural significance, aesthetic and landscape appeal, strange shapes and uses or just the “wow” factor.

Ian Gourley spoke on **Ageing of African Acacias**, which was a fascinating talk and slide show on his research work whilst at the Oxford University Forestry Institute. His MSc thesis was entitled “Age and growth rate determination of some African *Acacia* species”. His investigations focussed on samples with a history of management, known age and known weather records from six central, eastern and southern parts of Africa.



And will we ever forget Rob Caskie and his flamboyant address on **South African history in a nutshell**. Wow! Carrying a traditional knob stick of umzimbeet (*Millettia grandis*) and dressed in his trademark khaki shorts (which he even wore to the Antarctic as a dare to raise money for charity), he spoke Zulu like a Zulu and got to the heart of the matter as he re-enacted the drama of South Africa's past.

Pat McKrill (on the cover image), holding a few writhing brown house snakes, gave an entertaining and interesting talk on **South African snakes** and his encounters with people's phobias, which often lead them to behave in an illogical manner, such as locking doors to prevent a snake from escaping. He dispelled some myths, such as that black mambas will roll themselves into a wheel and chase after you, and gave some practical advice on how to deal with encounters with snakes.

#### **Woodworking presentations included:**

- Clyde Neumann and Chris Morewood gave consecutive **woodturning demonstrations**, with Chris turning a small whistle and Clyde a candlestick, also of sneezewood. Clyde then used white milkwood to turn a strange looking shape which, when cut into quarters lengthways, suddenly became a very accurate profile of Table Mountain in Cape Town. The candlestick and the four Table Mountain profiles were then offered at the auction.

- Pierre Oliver, on **Box making with indigenous SA woods**. Pierre took us through a slide show of boxes that he had made with a variety of indigenous and exotic woods. He is a retired businessman, who supplements his income with box making and making rolling ball sculptures with stainless steel ([www.pierrecraft.com](http://www.pierrecraft.com)). He lives on an estate in a mistbelt forest in the Karkloof, near Howick, and much of the indigenous wood that he uses and experiments with comes from natural mortalities and windfalls in the forest.

- Rob Scott, on **Working with SA woods**. Rob is a cabinetmaker, who does restoration work for the KwaZulu-Natal Museum Services. He probably has more experience working with indigenous woods than anyone else in SA and the quality of his work is exceptional. He spoke about his experiences working with SA woods and bemoaned the lack of a fine wood-working culture in SA. He showed slides of a bench made with laminated hard pear (*Olinia ventosa*) strips, which is housed in the Tatham Art Gallery in Pietermaritzburg. He also brought a few picture frames, made with *Olinia ventosa* (hard pear), *Zanthoxylum davyi* (forest knobwood) and *Ptaeroxylon obliquum* (sneezewood), as well as a stunning sneezewood chair. He sang the praises of these little known SA woods.

- John Soderlund, on **Making musical instruments from indigenous woods**. John, a practicing psychologist, gave us a slide show of the intricate process of making an electric guitar out of a few different indig-



enous woods, after which he gave us a live demonstration of the guitar in action. Later that evening, at the gala dinner, he joined the guest musician, Jeff Judge, and played his beautiful tamboti (*Spirostachys africana*) guitar. (Barry also gave a surprise performance on his saxophone!) John enjoys experimenting with SA woods and each guitar is totally unique and carefully and lovingly made (<http://www.jgsguitars.com/>).



#### **Day outings during the meeting included:**

- **Benvie Arboretum in the Karkloof**, where a Scottish immigrant and cabinetmaker started planting a garden in 1882, importing seedlings from all over the world. His great granddaughter, Jenny, owns the farm today and she and her husband, John, gave us a fascinating tour of the gardens. In that garden are three mountain ash (*Eucalyptus regnans*) trees, one of which stands at 61 m high, and these trees are listed as Champion Trees.



Coert Geldenhuys measuring a Champion *Eucalyptus regnans* with the help of Alan Curtis with Jean Sumner, Ankie Goddard, another Rob Scott, Bob Goddard, and Karen Fett-Thompson looking on.

- **The KwaZulu-Natal National Botanic Gardens in Pietermaritzburg**, where we saw the avenue of London Planes, which are now listed as Champion Trees (<http://www.sanbi.org/gardens/kwazulu-natal>). The guide



gave us interesting snippets of information about the various trees and shrubs we encountered, such as an interesting display of cycads (*Encephalartos* spp.) and the Bird of Paradise or Crane flower (*Strelitzia reginae*).



*Encephalartos* sp. - Cycadaceae

- **Baynesfield Estate near Richmond** ([www.baynesfield.co.za](http://www.baynesfield.co.za)), which was founded by pioneering farmer, Joseph Baynes, in 1863. He was one of the first farmers in the Colony of Natal to mechanise and he strongly supported the establishment of Cedara Agricultural College and the promotion of agriculture at university level. He was also one of the first farmers to dip cattle, which saved his cattle from a deadly East Coast Fever epidemic. Having no heirs, he left his beautiful Victorian



house and estate in trust for the benefit of all South Africans. On the estate is a tractor and steam museum, woodworking museum, blacksmith's workshop, collection of old sewing machines and agricultural equipment. The tulip tree (*Liriodendron tulipifera*) in the garden is listed as a Champion Tree and there are two huge old belhambra (*Phytolacca dioica*) trees. Tea and lunch were served under a pecan nut tree (*Carya illinoensis*), which was planted by Joseph Baynes.



*Phytolacca dioica* - Phytolaccaceae

- **Tala Game Reserve** is a privately owned game reserve in the Thornveld area, south-east of Pietermaritzburg ([www.tala.co.za](http://www.tala.co.za)). The change in vegetation was marked by the presence of *Acacias* and *Aloes* and the game drive even took us through a small tamboti thicket. Although the weather had turned chilly, we had good sightings of impala and wildebeest, a lovely close-up view of some giraffe and a herd of zebra, white rhino grazing and hippo wallowing in the dam. Back at the camp, a welcoming fire awaited us and we were treated to a traditional South African braai (barbeque).



- On Saturday morning, the last day of the meeting, we left for Barend and Helen Booysen's farm in the cold and mizzly rain to do the **Dargle Forest Walk**, which is in an indigenous Mistbelt forest extending over a number of



*World of Wood*

private properties. The Booysen's gave us a warm welcome and we had an interesting and informative walk. That afternoon we visited the 95 m (310 feet) Howick Falls. According to local legend, the pool at the bottom of the



falls is home to the Ikanyamba, a giant serpent-like creature, not unlike the famous Nessie of Loch Ness.

The consensus of both of the authors of this report is: We have never experienced such a fantastic series of conference presentations at ANY former IWCS meeting we have attended.

- The program was well designed, with overhead PowerPoint presentations by all the speakers, and the reception by all who attended the two days of presentations was evident by their rapturous response. I am only too aware that this report does not adequately give justice to the wonderful and informative program. We congratulate Barry, Danielle and Stephanie, and their team, for a wonderful job, well done.