



ABOVE: Instilling a lifelong hobby of botanizing. Photo: Wendy Hitchcock.

The art of plant identification

Learn how to identify fynbos plants with **Wendy Hitchcock**

With the growth and popularity of the CREW programme, there is a need to train plant spotters in the art of identifying their subjects and, for ten years, Eco Activities has been doing just that. From a modest start with four or five botanical artists as my guinea pigs on a two-day course, the Eco Activities course has evolved into a five-day course with 20 participants or more. I have run the course more than 30 times and gained a lot of insight into what problems people have with identifying plants. I share some of these insights and hope this will assist you on the long road to identification. Remember that the best part of the fynbos is the fact that we are still finding new species and that we certainly don't know it all.

At the beginning of a course, I introduce three very useful words : *don't know*, *unsure* and *usually*. I also highlight two important facts from the beginning:

- Firstly, plants are not interested in our categories
- Secondly, botanists are not trying to make identification keys difficult.

Plants have to survive out there in the environment and the features that we can see to classify plants into one or other group are merely tools for us to use to make sense of the complexity. Botanists in the past spent many laborious hours observing and recording fine details and constructing relationships and groupings that make the most sense. Nowadays, botanists have another set of tools to peer more closely into the relationships of plants. This means that all the familiar groupings that we have got to know are being changed and shifted. We all know that change is uncomfortable. So get used to the fact that plants have complicated Latin names and they change. Just imagine how boring it would be if we had a little digital machine that spewed out the genetic code of the species and then its name? Imagine how much fun we would miss out on discovering new species and new localities.

I suspect many people embarking on a plant identification course think that there will be rows of plant species and that at the end of the course they will be tested to see if they know species x, y and z: with 9000 plus species in the fynbos that is simply not possible. Instead I set six outcomes for each participant to achieve. The level to which they achieve them depends on their existing knowledge. I also ask participants what they would like to gain from the course.

1. **Observe, dissect and draw** fynbos flower and plant structures.
2. **Know how and where to find** correct names of fynbos plants.
3. **Identify and record** important floral characteristics systematically.
4. **Use** a key to identify a plant.
5. **Start using** botanical terminology.
6. **Identify** at least six fynbos families.

Drawing is a skill that children love to do and yet many adults avoid. At what age do children start to dislike drawing? Where do we get this message that says 'I can't draw'? Everyone can draw but some people look more closely than others and produce better images because they practise more. I believe anybody can learn to draw because drawing is about understanding what you see and making a mark on the page to represent what you see. I suspect the problem for many people is that they don't draw what they see, they draw what they know. For plant identification, the process of looking carefully is vital. Drawing provides a direct feedback mechanism that you can immediately compare with what you are drawing – and make suitable adjustments.

Most adults are horrified at the thought that they have to draw. Yet with a little bit of encouragement, it is amazing how drawings improve. When dissecting a flower, the process of looking at the plant and systematic recording exactly what is there helps you to remember the characters of the plant. It is far easier to draw a shape than to try and find the correct words to describe it. However, that is exactly what botanists have to do – find words that accurately describe a plant species and differentiate it from another one. The complexity of botanical language that botanists have concocted over the years attests to their complexity and infinite variety, especially in the fynbos. The aim of the course is to enjoy the process and not to have an anxiety attack and I have reluctantly given only two people in 10 years permission to write instead of draw. Those two must know how privileged they are!

Terminology is the biggest hurdle for beginners. Even the plant guides that aim to simplify cannot avoid using some terminology.



ABOVE: What is this fynbos plant? If you can't identify it, you need to attend the next fynbos course! Photo: Alice Notten. (Answer in the next issue.)

Technical terms serve to isolate 'the people who know' from 'the people who don't know'. However, as with learning any new language, botanical terminology needs to be practiced and used and then it is not so daunting. Practising using glossaries and writing definitions are part and parcel of the course.

Of all the terminology a few words stand out as being universally difficult. Firstly, petals, sepals and tepals: and secondly carpels. I am still trying to find a foolproof way to get 100% understanding rate for the first one. Thank you to Alan Horstmann for the explanation that a carpel is the same as a uterus in a female animal but is positioned the other way up in plants. In addition, flowers can have more than one carpel all fused together to form the ovary. In both, be it foetus or seed, the young is attached by a placenta that provides nutrients to grow.

Using a key is something that a surprising number of people avoid but once they see how much information keys contain they don't feel so daunted. A few unconventional ways to use keys:

1. Give a group of people a collection of random objects and ask them to construct a key. They very soon realise how difficult it is to choose the best characters.
2. Practise using keys with plants you know i.e. get familiar with the keys first before you set yourself up for failure.
3. Use the keys backwards. This gives you a very good idea of what the really important features to look at are. And it forces you to find out what specific words mean.

4. Write down in the book what the words you have looked up mean in the key (only if the book is yours).

These activities or variations of them are used at my discretion based on what I think would be most useful for the particular group of people. A range of other activities engage participants in discussions in small groups or the whole workshop together, slowly sifting out combined existing knowledge and piecing it together with new understanding and terminology. By the end of the course, most participants have mastered the basic botanical terminology that enables them to feel confident to use a key in a field guide.

The microscope is definitely the star of the show because I can dissect a flower and explain to the whole group exactly what is there and link it to the terminology. For me, I know that it is a window on a magical tiny world of exquisite beauty and no matter how many times I dissect flowers, the colours and shapes shine out on the screen. I am amazed all over again. I am passionate about plants, particularly fynbos and I love the process of unpacking the characters of plants with a group of enthusiastic people. It is wonderful for me when I see people leaving with a glow in their eyes and I know that they have discovered a set of tools in a tool box that will give them a lifelong hobby of botanizing.

The next fynbos Identification course will be 30 June to 4 July 2014 at the Gold Fields Centre, Kirstenbosch

GET CONNECTED

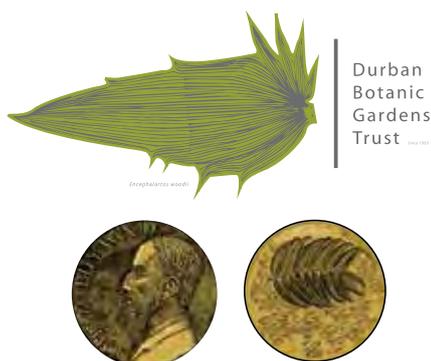
To all past participants, thank you for being my teachers. I know that in this process of teaching I have been the one who has benefitted the most because each question you have asked has made me think and question and learn all over again. I would value any feedback about how your plant identification process is going, or not. Please email me to tell me your story at hitchcock@mweb.co.za.

BOTSOC PARTNERSHIP

Custodians of Rare and Endangered Wildflowers (CREW) is part of the South African National Biodiversity Institute (SANBI) Threatened Species Programme and involves civil society groups in the monitoring and conservation of South Africa's threatened plant species. BotSoc became a partner of CREW in 2006, and provides financial support for project staff as well as supporting operation costs in summer rainfall areas of the country. The CREW team is led by Domitilla Raimondo (National manager), Ismail Ebrahim (CFR Manager) and Suvarna Parbhoo (KZN Manager). CREW is funded by the Critical Ecosystem Partnership Fund, CEPF. Visit CREW at www.sanbi.org/programmes/threats/crew.



Call for Nominations for the John Medley Wood Medal Award



Durban Botanic Gardens Trust

The Durban Botanic Gardens Trust is calling for nominations to award a medal to an individual who has made an exceptional contribution to either the Durban Botanic Gardens; horticulture in the eThekweni Municipality; or the advancement of flora in Kwa Zulu Natal.

The Durban Botanic Gardens Trust first awarded the John Medley Wood Medal in 2012 to Prof. Roddy Ward. The medal is named after the "Father of Botany", Dr John Medley Wood. Medley Wood, who died in 1915, had been Curator and then Director of the Durban Botanic Gardens and Herbarium for over 30 years. It was Medley Wood who beautified the old Gardens and made them Durban's brightest jewel. He was a prolific plant hunter and productive botanist who wrote the first flora of the province. He was recognised by Kew Gardens as having international status, and was awarded an honorary doctorate of science by the University of Cape Town, and has approximately 60 species named after him.

Nominees may be regional, national or international. Nominations, which close on the 31st July 2014, must be submitted on a form available from Martin Clement, the Curator of the Durban Botanic Gardens.

Kindly contact Martin on 031 322 4013 or Martin.Clement@durban.gov.za and a nomination form will be sent to you.