Articles

Some first impressions from Botswana *John Steel*

It's been three weeks now since we set foot on our new home and I'm surprised at how quickly we've all settled in. Johannesburg was covered in a thick, yellow smog as we flew out but soon the clear blue sky, that has been with us ever since, surrounded us. Half an hour passed and we were looking down on the dry savannah of Botswana, a sort of rusty yellow dotted with trees, just like on the telly. The airport reminded me of Dunedin before the present terminal was built.

My first impression was that this place is dry; no, not dry, but Dry. Everywhere is covered with a thin coat of coarse, reddish sand and fine dust over what appears to be clay. There are plenty of trees, most of them evergreen, and many of them have very long taproots that go down a long way to reach water. There is, apparently, quite a good source of water deep underground and there is an increasing programme of well-sinking to tap into this. I have a sneaking suspicion that the long-term effects of drawing off this water may not be being fully considered. It is mid-winter here, something I have to keep reminding myself of, and so the vegetation has a feeling of drabness about it although here and there one comes across some spectacular floral displays. Most of them I have no idea what they are! I do recognise many families, however, well....., maybe some, or more likely a few....., actually just one, Poaceae; actually a few more than that – honest! On the way into Gaborone, the capital and our new home, I started to recognise some of the trees, especially; *Eucalyptus* spp.; *Araucaria heterophylla*; the beautiful *Tecoma stans*; *Carica papaya; Allocasuarina equisetifolia* and *A. decaisneana*; and huge cactus plants eight and more metres high. You've probably guessed by now that these are not African at all and Gaborone follows the rest of the world in preferring exotic plants over its own.

My section (I couldn't call it a garden) is a two metre dust moat around the house where half a dozen or so weedy things struggle to survive. I am slowly working them out and the most common is the native grass, *Cenchrus ciliaris,* not unlike marram grass but with a purple spike which opens out more than marram and is commonly used here effectively as an ornamental. Next most common is the Mexican firebush, *Euphorbia heterophylla*, a straggly, metre-high *Poinsettia*-like thing begging to be pulled out. It was introduced accidentally by the British in the nineteenth century in horse feed imported from South America and is now widespread. Most noticeable at the moment are the seed pods of all shapes and sizes that almost cover many of the trees. Today Samantha brought in a four winged samara which I tracked down to the genus, *Combretum*, in the Combretaceae, neither of which I'd come across before, which produces a very hard and durable timber. The seeds resemble those elm seeds so abundant in Anzac Avenue in Dunedin every year. Instead of papery, however, these are pergamentous (my new word for the week meaning stiff and parchment-like) and instead of two wings, have another pair at right angles to the other. Depending on the species, they range from one to six centimetres in diameter. At the rear of the section

was a large shrub that I seemed to know. Sure enough, when I keyed it out it turned out to be *Dodonea viscosa*, the akeake, and common throughout South Africa crossing over into Botswana near Gaborone where it is commonly planted as a hedge or garden ornamental.

I couldn't find a bryophyte anywhere until I spotted what looked like a lichen on the ground behind the house. Closer inspection of the circular white patches made me suspicious so I soaked it in water and within minutes I had a bright green thallose liverwort similar to those found in the Australian deserts. In amongst them were some moss strands and nearby I found a small brown patch of what turned out to be very pretty little moss, deep green with a strong, golden costa. My books haven't arrived yet so it will be a wee while until I can come up with names for them.

As for lichens, I have found a few, which I have collected and will try to name once I find a source for lichen identification. Sadly, none of the libraries has anything on southern African cryptogams. Those lichens I have found are very small, one *Physcia*-like, the others all crustose, corticolous things that don't do me any favours. To date, no *Ramalinas* for Jennifer but it's early days.

Lichens on twigs in the Dunedin area

A Knight & J Bannister

Several trends emerged from the lichens brought in from around Dunedin for the recent BSO workshop. Firstly, nearly all the specimens collected were on deciduous, exotic trees and shrubs, such as red currant, apple, pear, silver birch, magnolia, dogwood and maple. The most commonly collected lichens from urban sites (Kew, Highgate, Maori Hill and Macandrew Bay) were *Lecanora carpinea*, a spreading flat white crust, *Physcia adscendens*, grey-white with cilia, the eye-catching bright orange *Xanthoria parietina*, and orange *Teloschistes chrysophthalmus*, also with cilia.

Next most common were the grey-green, shrubby, (**fruticose**) lichens *Usnea oncodes (U. arida* in the *Flora of NZ Lichens*) and *Ramalina celastri*, which has strap-like lobes. These last three species tended to be small and tatty in the city and to grow more luxuriantly in the semi-rural areas of Sawyers Bay and Seacliff. The first 4 are widespread, cosmopolitan lichens, and it is interesting to speculate whether they arrived in New Zealand before or with the introduced trees on which they perch so readily. All flourish in a high light environment, so did they just take advantage of the increased light available in a new, deciduous habitat or did they arrive on exotic trees? They can sometimes be found on indigenous garden specimens, or on exposed twigs on the outer edges of our evergreen native forest, but are seldom found within it.

First, we divided the lichens into 3 main types, **foliose, fruticose** and **crustose**, as grouping morphological types is the first step towards using identification keys.

Foliose lichens have lobes with a distinct upper and lower surface, which can be lifted up from the substrate, to which they are attached over a wide area, often by rhizines. It's easy to tell the ones with wide, raised, leafy lobes, like *Parmotrema chinense*, or *Parmelina labrosa*, but we found other foliose lichens which were quite flat against the