

# John Medley Wood's Inanda – What Does It Look Like Today?

## Part 1: The Inanda Valley

David Styles

P.O. Box 50030, 4062 Musgrave. E-mail: tritonia@telkomsa.net

### Introduction

A famous type locality through the many collections of John Medley Wood, how do we find Inanda at the beginning of the 21st century?

The boundaries of Inanda as defined by the Ethekewini (Durban) Municipality do not correspond well with those of the Inanda district of Wood's day, which had a larger conception and included a large swathe of the coastal escarpment between the Umgeni River and the catchment of the Umhloti River. However one defines these boundaries, the countryside which Wood explored is now mostly gone, fallen under township and sugarcane, with open areas often degraded by alien invasion. Much disappearance has occurred in only recent decades.

This most recent and dramatic transformation has been fed not only by exponential reproduction of population since Wood's day, but an influx of people to the city in search of work and the chance of a better life. This is well represented by statistics: according to the Ethekewini Municipality nearly three million people live in the municipal area, out of an estimated eight million in the province. Sixty percent of the province's economic activity also takes place here, in only 1.4 percent of the province of KwaZulu-Natal's land area.

### Inanda Valley

This is the first in a series on the plants and natural areas remaining within present-day Inanda. We begin with the Inanda Valley (Figure 1). Though south of the epicentre of Wood's collecting, the Inanda Valley nevertheless contains much of Inanda's remaining natural vegetation

The Inanda Valley is a rather loose designation for the valley transected by the Umgeni River, embracing the Inanda Dam and continuing downriver of its wall. Construction of this 1 440ha (14.3km<sup>2</sup>) dam was completed in 1989. When full the dam is 1.5km at its widest point, and 50m at its deepest. It supplies most of Durban's population with water.

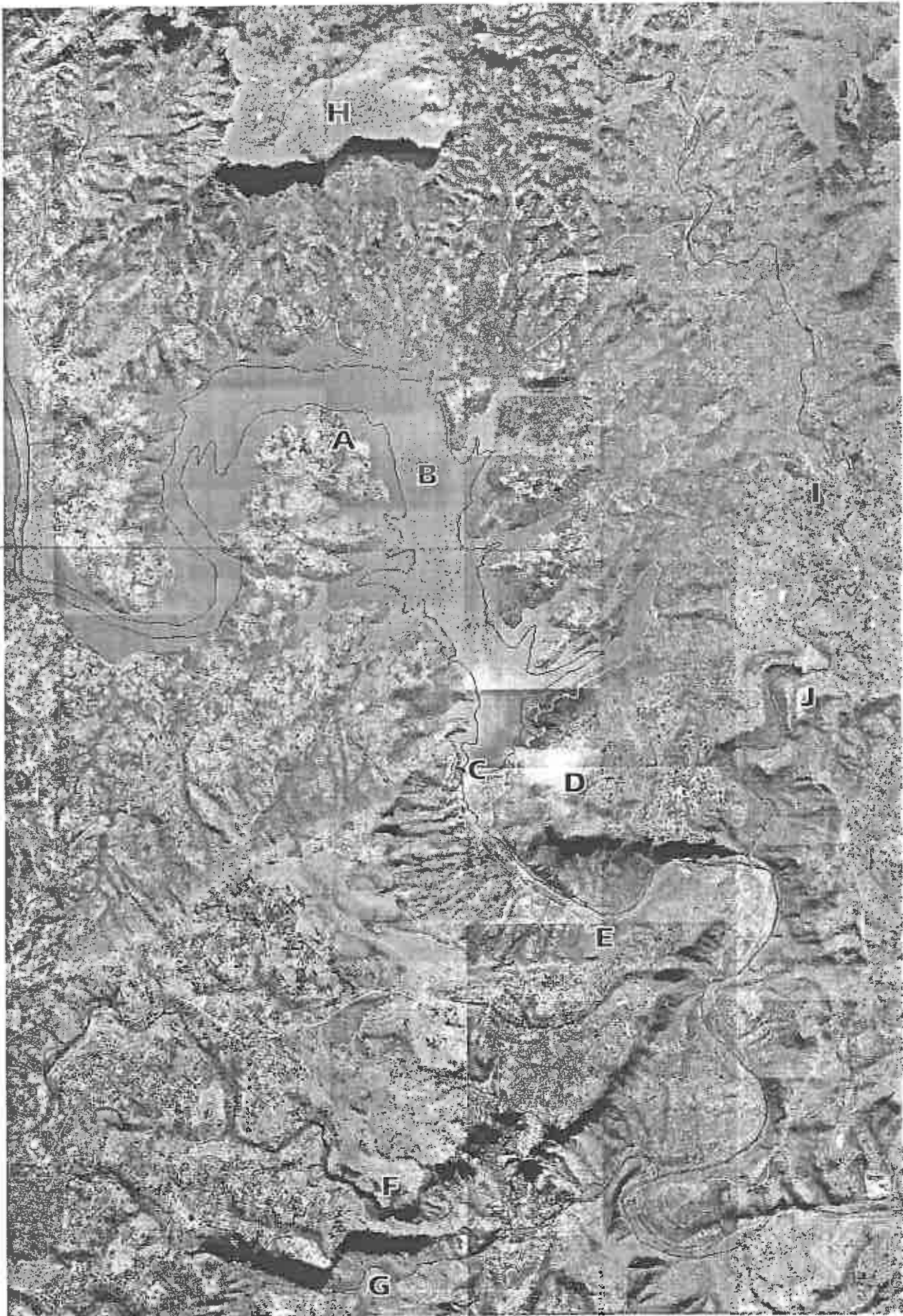
Mike Cottrell, who hiked through this part of Inanda in the vicinity of the dam wall in the 1960s recalls it being "devoid of habitation" (pers. comm.), while Geoff Caruth (pers. comm.), participating in the Duzi Canoe Marathon in the 1970s recalls paddling through a place that was then a very thinly inhabited tribal area.

I recall, as a boy, in the early 1980s, looking down into the nearby Molweni Valley and finding it almost entirely empty of habitation. On the edge of a large city, it was a thrill to see the emergence after sunset of a great blackness, joined by sounds of the night, such as the calling of Wood Owls and the Fiery-necked Nightjar. Today, the Molweni Valley cradles a growing semi-formal settlement and dense, low-cost housing crowds some higher slopes; the night instead brings only a disconcerting forest of lights and the noise of communal life.

Though there has been long-standing habitation along the Umgeni River, upriver of the present dam wall, in Geoff's mind a singular event which contributed to more intensive settlement around the Dam was its construction and consequent development of roads into a previously hard to access area. A second wave of development occurred from the late 1990s to the present with the expansion of the road network and more energetic provision of services to inhabitants. However, this has often followed thoughtlessly in the footsteps of homesteads established in scattered and haphazard fashion. The overall impression is of sprawl.

Making a descent by vehicle from the escarpment of the Durban suburbs of Hillcrest and Waterfall towards the Inanda Dam, one travels through semi-rural township and a great deal of valley bush. On the south side of the Dam is a small nature reserve called Mahlabathini Park, under the control of a land, wildlife and ecotourism management company called Msinsi Holdings. The company is owned by Umgeni Water, the bulk water utility that owns the land. Mahlabathini Park contains a good representation of valley bush plants, and provides a relatively secure, fenced-off environment in which to start getting to grips with them.

Unusual plants of the Inanda Valley include scattered occurrences of the Maputaland outlier *Croton steenkampianus* (Maputaland Fever-berry, see Figure 2) and the Porcupine Bush, *Pyrostria hystrix*. Present tree field guides show these trees nowhere near Durban and these records constitute a southward jump of several hundred kilometers in shown distribution.



**Figure 1.** A composite of photographs showing the Inanda Valley & surrounds, with some of the larger watercourses represented by solid lines. The composite is constructed from photographs taken at different times, and so some tiles have different hues.

**KEY:** A Mahlabathini Park; B Inanda Dam; C Dam wall; D Matabetule Plateau; E Umgeni River; F Nkutu River, Krantzkloof Nature Reserve; G Molweni River, Krantzkloof Nature Reserve; H Inanda Mountain; I Umzinyathi River; J Umzinyathi Falls.

*Aloe pruinosa* is a rare central KwaZulu-Natal endemic found in small numbers in the vicinity of Mahlabathini Park, and elsewhere in the Inanda Valley (Figure 3). A recent find is another rare plant, the pink flowering herb *Salpinctium natalense* (Rod Edwards, pers. comm.), otherwise known from only a handful of Zululand localities. Further exploration of this area will undoubtedly reveal more "Zululand" outliers.

Twining members of the Asclepiadaceae (now sunk into the Apocynaceae) are well represented. Five species of *Ceropegia* have been found in the Inanda Valley to date (Figure 4); certain other plants (not *Ceropegia* species) have not yet been found in flower and identified. *Sarcostemma viminale* and *Raphionacme flanaganii* (Periplocaceae) are common.

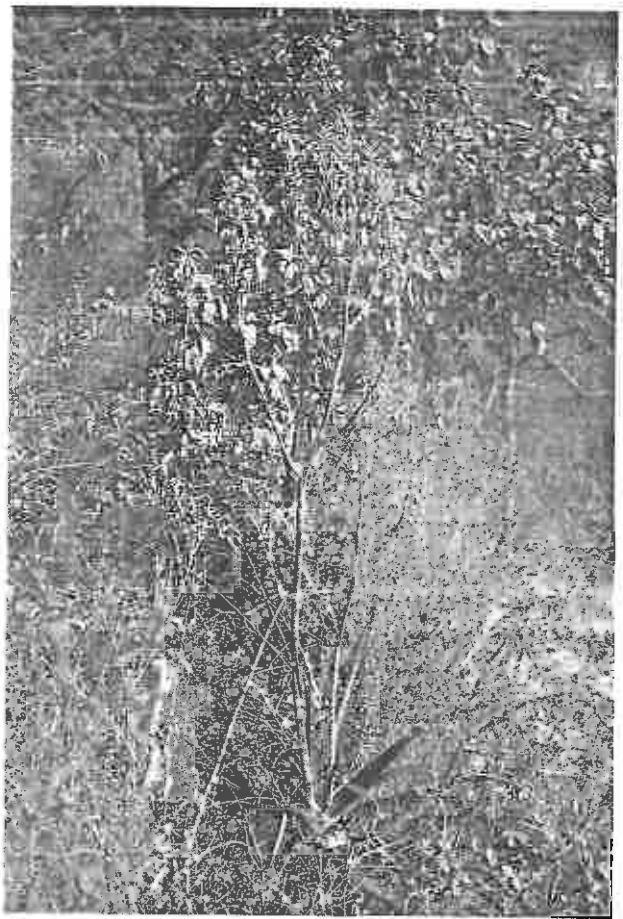
Traveling downriver of the dam's wall, the valley is still only very sparsely inhabited due to historical problems of access. A major access road has recently been developed (Figure 5), however. Still untarred, it cuts into steep slopes on north-facing aspects above the lower part of the dam, before following the south bank of the Umgeni River below the wall.

For now this new road allows unprecedented travel through many kilometers of natural vegetation comprising valley bush (Figure 6), transforming in many places into closed, dry woodland. There are few places off the road, except by near vertical descent. The route is characterized mostly by steep, sun-baked hillsides reaching back to extensive, typically red-stained Natal Group sandstone gorges (Figure 7).

*Annona senegalensis* (Wild Custard Apple) may be found along this road, and this appears to be the southernmost known occurrence of this species. One of the common trees in the closed dry woodland on



**Figure 2.** *Croton steenkampianus* (Maputaland Fever-berry), at a roadside in the Inanda Valley. The scattered outlier population in the dry parts of the Umgeni River catchment inland of Durban is hundreds of kilometres from its occurrence in Maputaland. Photo: David Styles



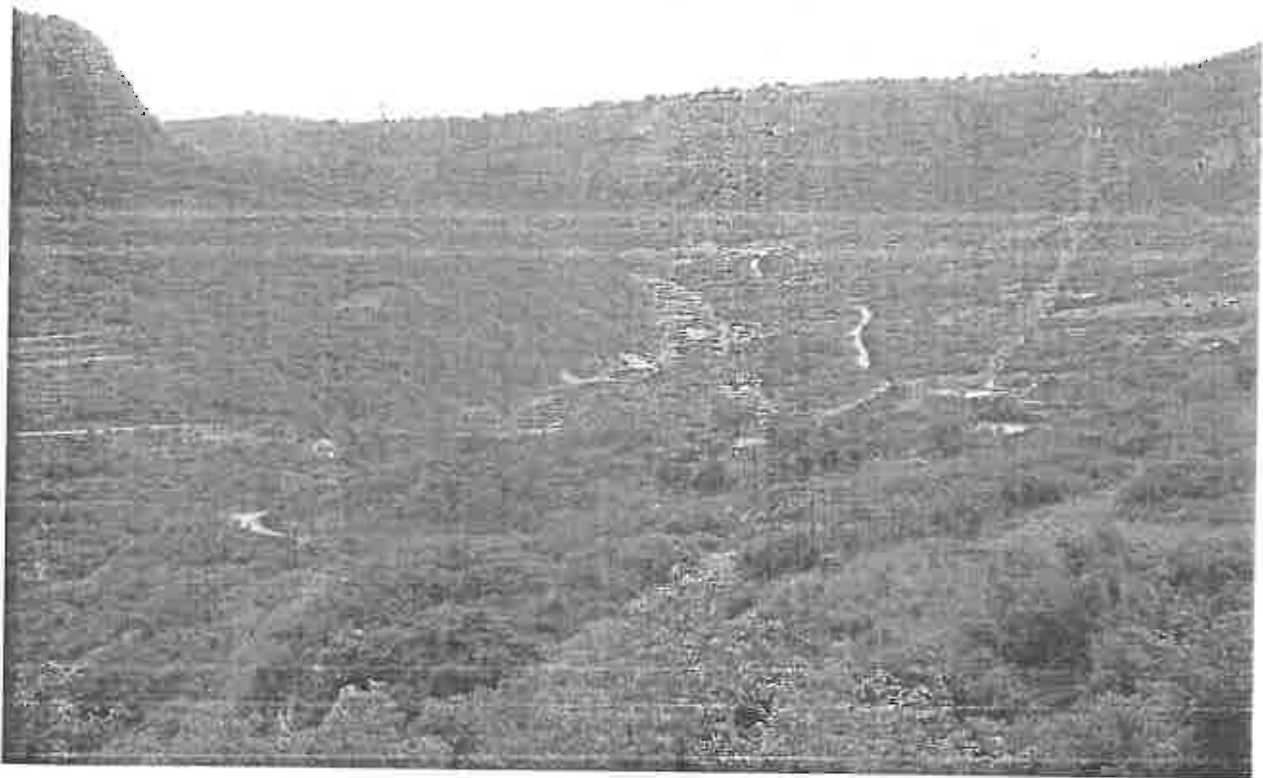
**Figure 3.** *Aloe pruinosa*, here in grassy thicket in the Inanda Valley, has pinkish flowers and inflorescence with a characteristic white powdery bloom. This is the most eastern known occurrence of this rare central KwaZulu-Natal endemic. Photo: David Styles



**Figure 4.** *Ceropegia distincta* subspecies *haygarthii* is one of many *Ceropegia* species found in the Inanda Valley to date. Photo: Richard Symmonds



**Figure 5.** New road through the Inanda Valley. Roads through natural areas not only provide access through them, but open them up to settlement. Photo: David Styles



**Figure 6.** Valley bush in the Inanda Valley, in mid-summer. In winter this scene is almost unrecognizable, with many plants deciduous and the overall colour drab. Photo: David Styles





**Figure 7.** Typically red-stained Natal Group sandstone krantz above the Umgeni River, with *Euphorbia triangularis* conspicuous. Photo: Richard Boon



**Figure 8.** *Wrightia natalensis* (Saddle Pod). Photo: David Styles



**Figure 9.** Coastal escarpment forest in the Inanda Valley. In spite of appearances the forest here is quite dry. Photo: Richard Boon

these hillsides is *Combretum woodii* (Wood's Bushwillow). It is, paradoxically a tree rare across its range, from central KwaZulu-Natal to Mpumalanga and Swaziland.

Typical trees and larger plants of this valley bush are:

- *Acacia* species (*ataxantha*, *natalitia*, *nilotica*, *robusta*, *schweinfurthii*, *sieberiana*)
- *Aloe ferox*
- *Brachylaena elliptica* (Bitter-leaf)
- *Calpurnia aurea* (Natal Laburnum)
- *Combretum molle* (Velvet Bushwillow)
- *Cussonia zuluensis* (a form with short pedicels)
- *Euphorbia* species (principally *tirucalli* and *triangularis*, *ingens* also present, with a localized occurrence of *grandidens*)
- *Gymnosporia maranguensis* (Tropical Spikethorn)
- *Indigofera jucunda* (Showy Indigo)
- *Millettia grandis* (Umzimbeet)
- *Rhus pallens* (Orange Currant)
- *Schotia brachypetala* (Weeping Boer-bean)
- *Sclerocarya birrea* (Marula)
- *Spirostachys africana* (Tamboti)

Other typical plants are *Hibiscus calyphyllus*, *Jasminum* spp., *Plumbago auriculata*, *Ruttya ovata*, *Tecomaria capensis* and *Tetradenia riparia* (Iboza). Some of these make an attractive display in winter. Look out then for members of the Acanthaceae: yellow-flowering *Justicia flava*, purple-flowering *Peristrophe cernua* and *Barleria obtusa*, and white-flowering *B. elegans*, which in spite of its spiny bracts is an attractive plant.

A number of "bushveld" trees not often encountered in the greater Durban area also occur:

- *Acacia gerrardii* (Red Thorn)
- *Aloe barberiae* (Tree Aloe)
- *Bauhinia tomentosa* (Yellow Tree Bauhinia)
- *Berchemia zeyheri* (Red Ivory)
- *Cadaba natalensis* (Natal Worm Bush)
- *Dombeya cymosa* (Natal Wild Pear)
- *Euclea undulata* (Small-leaved Guarri)
- *Maerua rosmarinoides* (Needle-leaved Bush-cherry)
- *Manilkara concolor* (Zulu Milkberry)
- *Mystroxydon aethiopicum* subsp. *schlechteri* (Kooboo Berry)
- *Olea europaea* subsp. *africana* (Wild Olive)
- *Pappea capensis* (Jacket-plum)
- *Wrightia natalensis* (Saddle Pod) – A brilliant garden tree, with very attractive yellow flowers, but never seen in nurseries (Figure 8)



**Figure 10.** Scree habitat of *Gerrardanthus tomentosus*. Photo: David Styles



**Figure 11.** Giant caudex of *Gerrardanthus tomentosus* in the Inanda Valley, with Rod Edwards behind. The stems climb into the scree forest canopy. Photo: David Styles

### Dry and scree forest

There is some good scree and dry forest on the krantz above the north banks of the Umgeni River (Figure 9). It has only been quite recently, from 2003 that I and others have begun to explore these krantz.

The trees of the dry and scree forest are very similar to those mentioned in my previous article in *PlantLife* 29 on *Metarungia pubinervia*, in the nearby Krantzkloof Nature Reserve, except that another robust member of the Acanthaceae, *Duvernoia adhatodoides*, can be quite frequent. Herbaceous constituents are *Isoglossa woodii*, *Justicia campylostemon* and *J. petiolaris*. *Plectranthus petiolaris*, with a tolerance for drier conditions, is quite common. There is also *P. fruticosus* (Forest Spur-flower) in moister places, and a form of *P. ciliatus* (Speckled Spur-flower) which seems distinct to the Natal Group sandstone gorges inland of Durban. Found away from water, it has pink flowers, and the leaves often lack the purple suffusion seen in more typical forms. *Streptocarpus* species include *Streptocarpus polyanthus* subsp. *polyanthus* and the local endemic *S. prolixus*, the type of the latter a Wood collection from Inanda.

Progress on these steep and thickly vegetated slopes is often difficult, and the screes, often sites of old rock falls, are sometimes unstable (Figure 10). These are habitats also very agreeable to snakes.

Towards the end of his residence at Inanda, Wood began a correspondence with the Royal Botanic Gardens at Kew about a species of *Gerrardanthus* which he had found in the area. Described by Joseph Hooker in 1883 in *Curtis's Botanical Magazine*, this was *Gerrardanthus tomentosus*, a member of the Cucurbitaceae or cucumber family, with a giant caudex.

Crouch *et al* (2003) continue the tale. "Wood discovered a population in a single stony ravine at Inanda in 1874. The largest plant at this site possessed a caudex of approximately 1.8m in circumference; from this the type specimen was subsequently prepared in 1880. Wood had made a number of unsuccessful attempts at sending caudices to Hooker at Kew, before finally landing a viable specimen on English shores in the late 1870s."

Until recently this rare plant, nearly endemic to the Durban hinterland, was known from only two or three other collections. Though a sizeable population has since been found in the Krantzkloof Nature Reserve, it was recently also found on one of the screes in the Inanda Valley. This population comprised only a few plants, however (see Figures 11 & 12).

Common trees on the krantz edges along the Inanda Valley are *Manilkara discolor* (Forest Milkberry),

*Olea capensis* subsp. *enervis* (Bushveld Ironwood), *Psyrax locuples* (Krantz Quar) and *Tarchonanthus trilobus* subsp. *trilobus* (Trident Camphor Bush). More uncommon trees are the alphabetical *Eugenia*s, *E. sp. nov. A* and *E. sp. nov. B*, and *Maytenus acuminata* (Silky Bark).

The krantz edges and faces are rich in succulents. One of these is the recently described *Gasteria pendulifolia*. Other succulents are *Aloe arborescens* (Krantz Aloe), *Bulbine natalensis* (Broad-leaved Bulbine), *Crassula capitella*, *C. multicava* subsp. *floribunda*, *C. orbicularis*, *C. ovata*, *C. perfoliata* var. *heterotricha*, *C. perforata*, an abundant *Delosperma*



Figure 12. *Gerrardanthus tomentosus* leaf and fruit. Photo: Neil Crouch



Figure 13. This resident told us he has employment during the week, but hunts in the Inanda Valley every weekend. Here he and his children hold a Water Monitor and a number of Dassies (Rock Hyrax) killed by his dogs. His is one of many settlements on the edge of the natural area. Photo: David Styles

sp. (with white flowers, for which I can not safely provide a specific epithet at this stage), *Euphorbia evansii* (Lowveld Euphorbia, not shown this far south in current field guides), *Kleinia fulgens*, *Peperomia blanda*, *Plectranthus* sp. (within the *hadiensis-madagascariensis* complex), *Plectranthus purpuratus* subsp. *purpuratus* (nearly endemic to the Durban hinterland), *Portulacaria afra* (Spekboom), *Rhipsalis baccifera*, *Sansevieria hyacinthoides*, *Senecio medley-woodii*, and *Tetradenia riparia* (Iboza).

#### Plateau above northern krantzes

The plateau immediately above the northern krantzes comprises an extensive area of grassland, and grassland and bush clump mosaic, on sandy soil. Known as Matabetule, this plateau is on its own perhaps worthy of a *PlantLife* feature.

It should be mentioned that within the Inanda Valley, unsustainable harvesting practices are in evidence, and hunting out of the remaining larger mammalian wildlife is ongoing (Figure 13).

#### Conclusion

This is, admittedly, a journalistic account of the Inanda Valley. My intention has been only to convey some impression of an area in transition. Exploration of this area is not very far advanced, though many of the plants mentioned above (and others) have been collected, with specimens supplied to the Bews Herbarium at the University of KwaZulu-Natal,

Pietermaritzburg (NU). These collections are ongoing, if erratic and according to time and inclination, but will in due course perhaps become the basis for a more extensive and scientific list.

Part 2 of this series will appear in a future issue of *PlantLife*. In this next installment we look at Inanda Mountain. One of the other principal natural areas remaining within present-day Inanda, it overlooks the Inanda Valley from some kilometres to the north. At much higher altitude, it comprises extensive escarpment grassland with temperate forest seams surviving on its sheer sides. It is another extraordinary place.

#### Acknowledgements

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Thanks also to Richard Boon for information from the Ethekwini Municipality, and Geoff Caruth and Mike Cottrell for earlier reminiscences of the area.

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## Succulents in the Crosshairs: Tips on Collecting and Pressing Really Good Herbarium Specimens

P.M. Burgoyne

National Herbarium, National Botanical Institute, Private Bag X101 Pretoria, 0001, RSA. Email: burgoyne@nbi.ac.za

Fascinated by succulent plants, humankind has collected them from all corners of the earth, depositing the dried specimens in herbaria. However, succulents make poor and often useless herbarium material unless special care is taken. Extra measures required during the preparation of such specimens are often too much trouble for plant collectors and therefore collecting succulents for herbaria tends to be overlooked by all except the dedicated succulentophiles.

Succulents are also popular cultivated plants, having been grown in gardens and glasshouses for centuries, probably because many collectors did not have the heart to 'sacrifice' the plants for herbarium specimens and also did not know how to go about it.

According to the International Code of Botanical Nomenclature it became mandatory from the 1st of January 1958 to designate a type specimen when describing a new species in order to validate the name (ICBN, Greuter *et al.* 2000). This forced collectors

to make specimens of their succulents. It should be borne in mind that if there is no voucher specimen of a plant in a recognized herbarium, it does not exist! Also, the knowledge of various individuals about many new 'records' may end up with them in their grave if some of the material is not submitted in this way. Indeed, one of the purposes of a herbarium is to bring together for posterity all the material collected by many botanists, over many years, decades and even centuries, in an orderly fashion in a single place. This facilitates the study of these plants by future generations of plant scientists.

Methods discussing ways of preparing herbarium specimens have been published on numerous occasions (Chudovska 1979a & b, Leuenberger 1982, Baker *et al.* 1985, Logan 1986, Smith 1991, Leach 1995 and Burgoyne & Smith 1998).

#### The business of pressing

The following easy method requiring only the use of