

## The Pondoland Centre of Endemism, Species Richness and Threats

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by Val Payn

The Pondoland Centre of Endemism, though extremely small in geographic terms, is extremely wealthy in environmental terms. It extends from the Mtumvuna River at Port Edward, to the Kei River. Much of its environmental wealth is also highly 'site specific' i.e. the particular set of geographic circumstances of the region has resulted in high numbers of endemic species, generally contained in very small populations, making it ecology extremely sensitive to disruption. Although no extensive and comprehensive study has ever been done on the natural assets of the PCE, an area of 1880 square kilometers, a recent study of the flora of 4 sites in the area, namely Mkambati, Oribi Gorge, Umtamvuna Nature Reserve and Port St Johns revealed 2 253 species of which 196 were endemic. Of the endemics only 16 occur in all four of the above mentioned sites, indicating that each of the investigate sites contains its own specific endemics. The region has been very poorly scientifically surveyed, and new plant species continue to be discovered.



*Typical landscape of riverine/ estuarine forest and grassland*

For purposes of comparison, the Kruger National Park only contains 1 400 species as does the whole of the United Kingdom. Most of the endemics occur in a narrow region extending from the Mzimkhulu River to the Egossa fault in the Mbotyi/ Magwa region , together with Mt Sullivan and Thesiger in Port St Johns. The area consists primarily of grassland interspersed with deep forested ravines and gorges, some areas of grassland interspersed with ericaceous 'moorland', coastal woodland thickets and some escarpment subtropical forests. The rivers with the greatest number of endemics include Mzimkhulwana, Mtumvuna, Mzamba, Mnyameni, Mtentu, Msikaba, Mkwini, Lupatana, Miambomkulu, Cutweni and Mkosi. (Mkambati and the Wild Coast. De Villiers and Costello. ISBN 0/62035 320/1)



*Typical communal family dwelling with subsistence farming fields and wattle woodlot. Such a family would also likely keep cattle and goats which would graze on communal grazing lands.*

Known endemics include one monotypic family (rhynchocalynaceae) 6 monotypic genera, 100 species of shrub, shrub and herbs and more than 30 woody species. There are also elements of the Cape floristic element, including families of Proteaceae, Ericaceae and Bruniaceae.

In addition, the Pondoland region is a known depository of Sangaon and other stone age artifacts, although these sites have only been cursorily investigated, and has a strong cultural tradition. It is therefore has huge potential as a reservoir of archeological and cultural heritage.



*Typical species rich grassland with shrubs, species, and stream bed*

Many poor communities in the region rely heavily on natural resources as a means of sustenance and supplemental income, though no study that I know of has been done to determine the extent to which natural resources supplement community incomes. Along the coast, it is obvious to any casual observer that gathered 'sea produce', i.e. limpets, mussels, fish, rock lobster, forms a major part of the protein of subsistence coastal communities in the area. It is also likely that 'wild food', gathered wild fruits, herbs and edible leaves forms an important part of the diet variety and helps contribute to the health of communities in the region. In the face of increased human populations and without adequate controls it is debatable how long current 'harvesting' can be maintained, but there can be no doubt that the collapse of these would have dire implications for subsistence communities.



*Species rich estuarine forest –Msikaba river gorge.*

In the PCE the natural environment is still relatively intact and population densities are low. The Northern section, Mzimvubu to Port St Johns, is considerably less populated and hence more ecologically intact than the southern section ( south of Port St Johns). The northern section also contains the largest number of endemic rich estuaries and gorges ( 8 of the 12 mentioned above)

Any change to the status quo of the PCE that impacts negatively on the environment therefore has the potential to increase levels of poverty amongst Pondolands subsistence communities. To date very little of the area is under any sort of conservation protection. Areas directly adjacent the sea ( from high tide mark to 1km inland) are afforded some protection under the Transkei Decree, and certain small reserves and forested areas, of which Mkambati is the largest, fall under the jurisdiction of DWAF and Eastern Cape Parks Board. The rest is communal land under the jurisdiction of tribal authorities and various municipal authorities. The current environmental knowledge of these last mentioned authorities is extremely low.

Many issues are affecting the prospects of a viable future for the ecological survival of the PCE, including population pressures, unsustainable subsistence agricultural practices through lack of knowledge, insufficient policing of protected areas, illegal logging, unsustainable wild plant harvesting and harvesting of natural resources, inappropriate development proposals by local and regional government and authorities and private concerns e.g. proposals to mine dunes for minerals in the heart of the PCE, a tolled highway through the centre of the PCE, (which in all likelihood, considering the dearth of suitable environmental controls will open up the region for further inappropriate development) monoculture by agribusiness e.g. timber plantations, biofuel production, damming of estuarine rivers etc etc.

The challenge, as far as SWC is concerned, is to provide local communities with opportunities to lead productive and meaningful lives, within an awareness of the unique environment of which they are custodians so that they may learn to both value and live 'sustainability within' as well as 'from' the unique environment. We believe that this can only happen by engaging directly with communities that currently live in the area through consultation, environmental education and providing suitable opportunities for a better life within the constraints of the ecological limits, while simultaneously working at national and regional level to introduce appropriate land management and legislation to ensure adequate protection of the area. In this way communities would learn to become the 'custodians' of the land.



*'wall to wall' holiday resort development on neighbouring Kwazulu Natal's South Coast*