

NYIKA-VWAZA TRUST (UK)

CONSERVATION RESEARCH NOTE No. 1

ORCHID HARVESTING ON THE NYIKA GRASSLANDS

The Nyika National Park, in particular the high-altitude grasslands, supports a wide range of orchids. The Nyika plant book by Burrows & Willis (2005) lists 205 orchid species, of which 158 are ground orchids, most of which have underground storage organs. Some of the grassland orchid species are believed to be endemic, confined to the Nyika Plateau and not found anywhere else in the world. At an international level, the Nyika's unique and extensive grassland flora is probably its most significant conservation interest.

In recent years, a number of species of ground orchids – locally called 'chikanda' – have been targeted as part of a regional, although illegal, trade. The tubers or storage organs of these orchids are rich in easily-digestible starches and are considered a delicacy. They are dug up by rural people, dried, and then traded regionally as well as locally, often into Zambia where the market is said to be strong (Kasulo, Mwabumba & Munthali 2009). This illegal harvesting of orchids is not confined to the Nyika; indeed the Kitulo Plateau in southern Tanzania has suffered particularly badly (Davenport & Ndangalasi 2003; Mapunda 2007; Rondi Salter, pers. comm.). Earlier recent reports from the Nyika (Simkoko 2012) suggested that the main orchids targeted were the larger and attractive *Disa ochrostachya*, *Disa robusta* and (in particular) *Disa satyriopsis*. Other potentially harvestable species of *Habenaria* and *Satyrium* did not seem to be especially targeted. However, a later study (Namoto & Pearce 2017) identified 43 potentially edible species, with five species of *Disa*, three species of *Satyrium*, *Brachycorythis pleistophylla* and *Habenaria clavata* being the most frequently collected in the central areas of the National Park.

Some detailed work has been done by a Department of National Parks and Wildlife employee, Paston Simkoko, on the extent and levels of extraction of orchids from two areas of grassland on the Nyika using 1 km long transects, along with an assessment of the economic benefits and attitudes in two adjacent communities living along the eastern boundary (Simkoko 2012). As well as providing a significant income for some households there, chikanda harvesting appears to be having a negative impact on both the density and frequency (i.e. distribution) of the targeted species. However, it is not clear if this is negatively affecting the conservation status of these orchid species, although it is suspected to be the case.

From a management perspective, it is often assumed that chikanda harvesting is a major problem, but given other pressing issues, its importance in terms of threat and biodiversity loss needs to be clearly understood before valuable resources are allocated to control of the trade.

However, before any clear and effective management interventions are made, we need to have better knowledge on how widely these species are being targeted for harvesting, whether any orchid populations on the Nyika are now under threat, and what other biological or conservation impacts there may be. As part of a longer-term strategy, a basic and simply-executed monitoring system also needs to be established to help inform the Nyika National Park management authorities of the situation on an annual basis. This would probably use annually-monitored but unmarked transects across the main affected areas. Transects would need to be carefully sited, and training given to Park staff or others in basic monitoring techniques.

The main issues on which much more detailed information is needed are:

1. If orchid species other than those already mentioned are being targeted. How many of them are confined to the Nyika or have internationally-significant populations there?
2. Is there any evidence of population decline of the harvested species. Are any threatened with local extinction?
3. Are there other biological or conservation impacts of chikanda harvesting in the Park, perhaps indirect, for example on birds or mammals.
4. Determine if there is any possibility of sustainable harvesting of chikanda in the area, and also looking at control/poaching issues if this was done. This should link in to the work being done under the Darwin project based in Zambia (see below).

This programme or set of projects, which is primarily research-orientated at this initial stage, could be implemented in stages by a range of people from National Parks staff to visiting foreign students or researchers and Malawian university students. Aspects could perhaps even be tackled by local school children.

The Forestry Research Institute of Malawi (FRIM) has received NVT funding to look into some aspects of chikanda, and is also linking in with a Darwin Initiative-funded project based in Kitwe, Zambia looking at the possibilities of propagation of chikanda orchids (see Facebook page at @chikandaorchidconservation).

References:

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