

NYIKA-VWAZA TRUST (UK)

CONSERVATION RESEARCH NOTE No. 5

BIODIVERSITY STUDIES IN THE VWAZA MARSH WILDLIFE RESERVE

Lying near to the Nyika National Park in northern Malawi, but at a significantly lower altitude (1100–1660 m), the Vwaza Marsh Wildlife Reserve covers 986 km². Included within it are the Vwaza Marsh itself, Lake Kazumi, Kapata Hill and the Luwewe and South Rukuru rivers. The main habitats found here are miombo and mopane woodlands along with dambos and wetland grasslands. Unlike the Nyika, the area is well known for the numbers of large mammals that can be found.

Much of what we know on the ecology and biodiversity of the area was summarised in McShane & McShane-Caluzi (1988). More recently, both bird and mammal checklists have been compiled (Dowsett-Lemaire 2014, Engel *et al.* 2012, Happold 2014) and the area is an Important Bird Area (Dowsett-Lemaire *et al.* 2001). There is also a comprehensive plant checklist (Sichinga 2019). Recently, a study of the distribution of small carnivores was completed (O'Sullivan 2019).

Conservation issues in the Vwaza Marsh area are less well known than those of the Nyika plateau. Poaching of large mammals is a threat, compounded by poor infrastructure and access and the low numbers of National Parks staff based there. Human-wildlife conflict on the borders, particularly to the south and south-east, is an increasing concern. Programmes to alleviate this are in development through the Lilongwe Wildlife Trust. The occurrence of human trypanosomiasis is also a severe problem in places. A well-equipped research camp has been constructed near the main park entrance, maintained by the Lilongwe Wildlife Trust and Conservation Research Africa.

The following suggestions are focussed on improving our knowledge on the ecology and conservation issues in the Vwaza Marsh area. It is intended that this improved knowledge will then feed into a wider conservation programme addressing some of these threats.

1. Studies on the condition and ecology of mopane woodland, which is at its most northerly occurrence in Africa. Determine whether the woodlands are in a good state of regeneration.
2. Studies on the movements of large mammal populations – where do they move to/from, at what time of year, and what are the key resources they seek in Vwaza? Do such movements link to seasonal hydrology, and if so how?
3. Studies on localised bird species to determine their conservation status, such as the White-winged Starling (a relict population of a Zambezian endemic) and Swainson's Francolin (the only place it occurs in Malawi, although it is more widespread in the Luangwa Valley).
4. Establish a reserve-wide habitat monitoring system that can be recorded regularly to determine environmental change.

These suggestions, primarily research-orientated at this stage, could be implemented separately by a range of people ranging from National Parks or TFCA staff, visiting foreign students or researchers, Malawian university students and members of the Wildlife and Environmental Society of Malawi. It is intended they will later form the basis for more detailed conservation planning, as well as informing conservation management.

References:

- Dowsett-Lemaire, F., Dowsett, R.J. & Dyer, M. (2001). Malawi. In: *Important Bird Areas in Africa and Associated Islands* (editors L.D.C. Fishpool & M.I. Evans), pp. 539–555. Pisces Publications & BirdLife International, Cambridge, UK.
- Dowsett-Lemaire, F. (2014). The avifauna of Vwaza Marsh Wildlife Reserve, northern Malawi. Unpublished checklist available on the NVT website, https://nyika-vwaza-trust.org/wp-content/uploads/Vwaza-Marsh-bird-checklist_Dec-2014.pdf
- Engel, J.I., Bates, J.M., Weckstein, J.D. & Gnoske, T.P. (2012). Avifauna of Vwaza Marsh Wildlife Reserve, Malawi. *Journal East African Natural History Society* **101**: 223–240.
- Happold, D. (2014). Mammal checklist for the Nyika National Park and Vwaza Marsh Wildlife Reserve. Unpublished checklist available on the NVT website, https://nyika-vwaza-trust.org/wp-content/uploads/Mammals-checklist_Nyika-Vwaza-updated-10.8.19.pdf
- McShane, T.O. & McShane-Caluzi, E. (1988). The habitats, birds and mammals of Vwaza Marsh Game Reserve, Malawi. *Nyala* **12**: 39–66.
- O’Sullivan, R. (2019). *Carnivore presence and spatial distribution in a protected area of Malawi*. Masters Research in Animal Behaviour, University of Sussex. Falmer, UK. 60 pp.
- Sichinga, S. (2019). *Vascular plant survey of Vwaza Marsh Wildlife Reserve*. Report to Nyika-Vwaza Trust (UK), 37 pp. Mzuzu, Malawi. Available at: https://nyika-vwaza-trust.org/wp-content/uploads/Sichinga_Vwaza-plant-checklist_FINAL-2019.pdf