

BFA SEMINAR SERIES NO. 28

Botanical Survey of the Niassa Reserve, Mozambique Jonathan Timberlake

Held at the Ulwazi Institute, Suburbs, Bulawayo, Thursday 26 March 2004. 24 people attended.

The Niassa Reserve lies on the Mozambique-Tanzania border, south of the Rovuma river in northern Mozambique. At 42,279 km² it is an exceptionally large protected area and comprises a core area (similar in status to a national park, except that 12,000 people still live inside it) surrounded by 6 coutadas (hunting areas). It is managed by a public-private company - the Sociedade para a Gestao e Desenvolvimento da Reserva do Niassa.

In June 2003 five botanists from Zimbabwe, South Africa, UK and Mozambique were invited to carry out the first botanical survey of the area over a 21 day period. Very little previous biological information was available, and no herbarium specimens. The survey consisted of two aerial reconnaissances and plant collecting along a limited range of existing tracks, particularly in the central and eastern parts. We expected to find interesting species on a large massif or inselberg called Serra Mecula, which supports a few forest patches, and East African coastal species along the Rovuma and Lugenda rivers. The objectives of the trip were: (a) compile a preliminary list of vascular plants, (b) build up herbarium collections from the area, (c) do an initial characterisation of vegetation types, (d) carry out a preliminary identification of sites and species of plant conservation interest, and (e) provide recommendations on plant and vegetation conservation.

Five vegetation types were described: (1) moist forest (on Serra Mecula), (2) riverine woodland (Rio Rovuma and Lugenda), (3) deciduous woodland (miombo, *Acacia*, *Millettia*), (4) dambo grassland (principally along the central watershed), and (5) inselberg vegetation. The great majority of the area, over 90%, is miombo woodland, but the area of greatest diversity is Serra Mecula. Riparian woodland is surprisingly limited to few patches, especially along the Rio Lugenda.

The preliminary checklist comprises 326 species, with 7 new records for Mozambique and one species (*Barleria* sp. nova) on Serra Mecula new to science. Other species of interest were found along the Rio Lugenda, in gully woodland on inselbergs, and in dambo grasslands. Very few species typical of the East African coast were found. It is estimated that the Reserve contains a total of 1000-1500 plant species.

From a conservation viewpoint the most important vegetation types are moist forest, riverine woodland and dambos. The major threats are fire, especially on inselbergs and hills, and clearance of vegetation on alluvium along the main rivers. Lesser threats are disruptions to the hydrology in dambos from road building and, possibly in the future, elephant damage to riverine woodland during the dry season. Serra Mecula is the area most under threat - from frequent fire and from encroachment and clearance from the settlements below.

The study is only preliminary. It is recommended, among other things, that (i) an ecological vegetation survey at a reconnaissance scale is carried out, (ii) that detailed habitat / vegetation surveys of Serra Mecula and Rio Lugenda are done, and (iii) particular interesting habitats are targeted for more detailed collecting.