

Cusseque - Use of Woody Plants

Inhabitants of the Cusseque core site make use of a large number of natural resources. This section describes the use of local woody species by the communities in this core site. The results were obtained using eight group free-listings, two in each *kimbo* (Cahololo, Sovi, Cusseque, and Calomba). A total of 55 people were involved in these sessions and both women and men (24M : 31F) took part. Interviewees were asked about which plants they use for the following categories: construction, food, medicine, dyes, and spiritual practices. They were allowed to speak freely, comment and discuss inside the group, and name as many plants as they wished.

Cusseque core site land users were able to recall 61 different tree species used for the *a priori* defined use categories. These species were then sorted by their importance in accordance to the number of times they were mentioned in total. Plants mentioned at least 5 times were defined as key species, resulting in a total number of 21 species. Subsequently, specimens of the mentioned species were collected for the herbaria at ISCED Lubango and at the University of Hamburg and the scientific names were determined (Tab. 1). These woody plants represent the set of the most relevant ones used for the *a priori* defined usages.

As many as 13 out of the 21 key species are used for health and medicinal purposes, foremost *Julbernardia paniculata* (5), *Burkea africana* (5), cf. *Eugenia* sp. (5), and *Securidaca longipedunculata* (5). Half of the species, 11 out of 21, serve for construction and food. For construction these are mainly *Erythrophleum africanum* (6), *Cryptosepalum exfoliatum* ssp. *pseudotaxus* (6), *Brachystegia spiciformis* (5), *Julbernardia paniculata* (5), and *Bobgunnia madagascariensis* (5) (Fig. 1 and 2). For dyeing purposes, seven different species were mentioned, with *Guibourtia coleosperma* and *Burkea africana* standing out with 3 citations. Finally, only two species were said to be used for spiritual purposes, specifically to avoid ghosts: Musokua (cf. *Eugenia* sp.) was mentioned as many as seven times.

Erythrophleum africanum (mentioned 12 times in total) was the only key species used for all mentioned purposes. It is a tree species often found both in recent fields and in non-disturbed forest. The species cf.

Eugenia sp. and *Julbernardia paniculata* are the next most cited species (12 and 11 times respectively) and are also multi-purpose as they are collected for 2 and 3 different usages. However, these species were not found to be very abundant.

The use of the free-listing method revealed a wealth of traditional ecological knowledge on useful plants amongst Chokwe people at the Cusseque core site. Previous studies on different rural communities in Africa have shown an interdependency between communities and their local forest resources (Rasethe et al. 2013; Lykke 2000; Obiri et al. 2002; Shackleton et al. 2007; De Beer & Van Wyk 2011; Houehanou et al. 2011). For instance, good knowledge on wild fruit trees has been related to a better nutrition than in other rural communities with a more narrow knowledge base (Goenster et al. 2011). Another example is the traditional use of wild plants for medicinal purposes (Maroyi 2013; De Wet et al. 2013; Abdillahi & Van Staden 2013). Our results show that in the Cusseque core site, where communities have little access to cash, wild forest trees do not only play an important role from a nutritional perspective but also from a medical one. Thus, forests are a key contributor to health in the Cusseque core site.

Excluding cf. *Eugenia* [FNR 135873], Rubiaceae [FNR 135866], and cf. Rubiaceae [FNR 135872] due to the incomplete species identification, all key

species were looked up in the IUCN Red List and only *Brachystegia bakeriana* has already been assessed, being categorized as Vulnerable since 1998 (Phiri 1998). This demonstrates the lack of data regarding conservation status of tree species in the Cusseque area as well as in other parts of Angola and south-central Africa. Therefore, further research in the area is critical for efficient conservation of these species.



Fig. 2: The bark of *Brachystegia spiciformis* being harvested for beehives, which usually kills the tree (photo: M. Finckh).



Fig. 1: Hen houses made from the bark of *Brachystegia spiciformis* (photo: M. Finckh).

Table 1: The twenty-one most important woody species, resulting from eight group free-listings with 55 interviewees in the Cusseque core site. This table shows how many times each plant was mentioned by the interviewees in relation to the defined usage category.

Family	Scientific name	Chokwe name	Construction	Food	Medicinal	Dyes	Rituals	Number of different usages	Frequency of citation
Anisophylleaceae	<i>Anisophyllea boehmii</i> Engl.	Mufungo		5				1	5
Chrysobalanaceae	<i>Parinari curatellifolia</i> Planch. ex Benth.	Mutongo	1	6				2	7
Combretaceae	<i>Terminalia brachystemma</i> Welw. ex Hiern	Mueya	1		4	2		3	7
Ebenaceae	<i>Diospyros chamaethamnus</i> Dinter ex Mildbr.	Mujongolo		2	3			2	5
Ebenaceae	<i>Diospyros pseudomespilus</i> Mildbr. ssp. <i>brevicalyx</i> F.White	Muchicala		6				1	6
Fabaceae	<i>Bobgunnia madagascariensis</i> (Desv.) J.H.Kirkbr. & Wiersema	Mutete	5		1			2	6
Fabaceae	<i>Brachystegia bakeriana</i> Burt Davy & Hutch.	Chikungo	4		1			2	5
Fabaceae	<i>Brachystegia spiciformis</i> Benth.	Mumanga	5		1	1		3	7
Fabaceae	<i>Burkea africana</i> Hook.	Mussesse			5	3		2	8
Fabaceae	<i>Cryptosepalum exfoliatum</i> De Wild. ssp. <i>pseudotaxus</i> (Baker f.) P.A.Duvign. & Brenan	Mukue	6					1	6
Fabaceae	<i>Dialium englerianum</i> Henriq.	Mussala		5	3	1		3	9
Fabaceae	<i>Erythrophleum africanum</i> (Welw. ex Benth.) Harms	Mukosso	6	2	2	1	1	5	12
Fabaceae	<i>Guibourtia coleosperma</i> (Benth.) J.Léonard	Muchi	2		2	3		3	7
Fabaceae	<i>Julbernardia paniculata</i> (Benth.) Troupin	Munhumbe	5		1	5		3	11
Melastomataceae	<i>Warneckea sapinii</i> (De Wild.) Jacq.-Fél.	Muzele	1	6				2	7
Myrtaceae	cf. <i>Eugenia</i> sp. [FNR 135873]	Musokua			5		7	2	12
Polygalaceae	<i>Securidaca longipedunculata</i> Fresen.	Muchacha			5			1	5
Rubiaceae	Rubiaceae sp. [FNR 135866]	Mussole	1	5				2	6
Rubiaceae	Rubiaceae sp. [FNR 135872]	Mujindo		6				1	6
Strychnaceae	<i>Strychnos cocculoides</i> Baker	Mukolo		6				1	6
Strychnaceae	<i>Strychnos pungens</i> Soler.	Muhuma		5	1			2	6

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References

- Abdillahi, H., Van Staden, J. (2013): Application of Medicinal Plants in Maternal Healthcare and Infertility: A South African Perspective. – *Planta Medica* **79**: 591–599. [CrossRef](#)
- De Beer, J., Van Wyk, B. (2011): An ethnobotanical survey of the Agter-Hantam, Northern Cape Province, South Africa. – *South African Journal of Botany* **77**: 741–754. [CrossRef](#)
- De Wet, H., Nciki, S., van Vuuren, S. (2013): Medicinal plants used for the treatment of various skin disorders by a rural community in northern Maputaland, South Africa. – *Journal of Ethnobiology and Ethnomedicine* **9**: 51. [CrossRef](#)
- Goenster, S., Wiehle, M., Kehlenbeck, K., Jamnadass, R., Gebauer, J., Buerkert, A., Wesonga, J., Kahane, R. (2011): Indigenous Fruit Trees in Homegardens of the Nuba Mountains, Central Sudan: Tree Diversity and Potential for Improving the Nutrition and Income of Rural Communities. – *All Africa Horticultural Congress* **9**: 355–364.
- Houehanou, T., Assogbadjo, A., Kakai, R., Houinato, M., Sinsin, B. (2011): Valuation of local preferred uses and traditional ecological knowledge in relation to three multi-purpose tree species in Benin (West Africa). – *Forest Policy and Economics* **13**: 554–562. [CrossRef](#)
- Kgathi, D., Kniveton, D., Ringrose, S., Turton, A., Vanderpost, C., Lundqvist, J., Seely, M. (2006): The Okavango; a river supporting its people, environment and economic development. – *Journal of Hydrology* **331**: 3–17. [CrossRef](#)
- Lykke, A. (2000): Local perceptions of vegetation change and priorities for conservation of woody-savanna vegetation in Senegal. – *Journal of Environmental Management* **59**: 107–120. [CrossRef](#)
- Maroyi, A. (2013): Use of weeds as traditional vegetables in Shurugwi District, Zimbabwe. – *Journal of Ethnobiology and Ethnomedicine* **9**: 60. [CrossRef](#)
- Obiri, J., Lawes, M., Mukolwe, M. (2002): The dynamics and sustainable use of high-value tree species of the coastal Pondoland forests of the Eastern Cape Province, South Africa. – *Forest Ecology and Management* **166**: 131–148. [CrossRef](#)
- Phiri, P.S.M. (1998): *Brachystegia bakeriana*. IUCN (IUCN Red List of Threatened Species), Version 2013.1, Gland. Available from <http://www.iucnredlist.org/> [accessed September 2013].
- Rasethe, M., Semanya, S., Potgieter, M., Maroyi, A. (2013): The utilization and management of plant resources in rural areas of the Limpopo Province, South Africa. – *Journal of Ethnobiology and Ethnomedicine* **9**: 27. [CrossRef](#)
- Shackleton, C., Shackleton, S., Buiten, E., Bird, N. (2007): The importance of dry woodlands and forests in rural livelihoods and poverty alleviation in South Africa. – *Forest Policy and Economics* **9**: 558–577. [CrossRef](#)

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