

A landscape in Angola showing a herd of cattle near a watering hole in a semi-arid area with scattered trees. The scene is captured in a wide-angle shot, showing a sandy, dry plain with several trees, some of which have yellowish-brown leaves. In the foreground, a herd of cattle is gathered around a shallow, muddy watering hole. Some cows are standing on the sandy bank, while others are partially submerged in the water. The background is filled with more trees and a clear, bright sky. A dark, semi-transparent text box is overlaid on the right side of the image, containing the title in white text.

*O vegetal na área de colonização
portuguesa - Angola*



Colonial Landscape in the 19th century Angola. Useful Plants in László Magyar's and Mbundu Village Chiefs' Records

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Introduction

Although there were several scientific surveys about Angolan plants made by biologists from the second part of the 19th century (Welwitsch, Ficalho and others) the main concern was to identify, classify and name species. Concurrently, biologists had not conducted research on cultural context, such as the knowledge of their informants about all sets of the plants, the different African names for the useful parts of the plants and their economic use. This approach has been continued even in the 20th century collections held in Herbaria (mainly those of Lisbon, Coimbra, Kew and the National History Museum of London) where in the vouchers the collectors had occasionally recorded the common name of the plants and very rarely completed it with its economic and medicinal use. Only from the second part of the 20th century biologists interest to record the African name or names of the plants given by different ethnic groups emerged (Gossweiler, 1953). Finally, at the end of the 20th century did the biologists begin to distinguish the names of different parts of the same species (Bossard, 1996). From the 21st century a new wave of recording emerged intending to record all the African names used in Angola for a species (e.g. Figueiredo-Smith, 2012). Even today, in the work of biologists, the cultural context of the plant continues to be a task to be carried out. The cultural contextualization was initially carried out in the field of anthropology.

An American anthropologist, (Hambly, 1934) during his fieldwork conducted between February 1929 and February 1930 in Angola made the first survey about "all the most common trees which are of economic importance". He recorded African names and their economic use and still added another list with their medicinal use. He tried to reproduce the proper pronunciation of each African name, not forgetting to put the respective and precise prefix to each species. His fieldwork had been carried out in the first decades of the 20th century, that is, at the beginning of the effective colonial era when the traditional health practitioners (medicine-man, diviner, sorcerer, witch-doctor) still could exercise their task to heal the body and the spirit of the people in a unit. His main informants were men more involved with traditional activities to contribute to the household, such

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as hunting game, fishing and collecting honey which gave them permanent contact and knowledge concerning the useful trees found in nature around their village¹. Therefore Hambly's list of 39 trees of economic use is still the best comparative record with the 19th century collection revealing a traditional knowledge which gradually has disappeared under the effect of colonial interference in Ovimbundu's everyday life. He gave a very important contribution concerning the strong influence of the African religious system and its practice on the everyday life connected with the benign influence of the ancestors². The role of missionaries had a special influence in the deterioration of traditional knowledge about useful plants. Due to the prohibition of practices of the traditional African religion all kinds of healers were hindered from continuing their work. Consequently, the accumulated historical experience and knowledge about the environment and herbal medicine diminished or even might have been completely lost.

This article aims to contribute to the field of historical herbal knowledge of trees with economic and medicinal uses. The divergence is based on the purpose with the trees and on the source, or more precisely, who recorded the information and with what kind of objective. These two sets of plant records come from the everyday knowledge of the Ovimbundu and Ambundu people. There is still a hidden and almost extinct lore of the traditional healers to be explored.

Presentation of the two historical sources about economic plants

The first set is a collection of the Hungarian traveler and explorer, László Magyar, among Ovimbundu in the middle of the 19th century. As part of a succinct and brief monograph on Bié, one of the paramount kingdoms of Ovimbundu, he described a list of the most common trees with their African names, sometimes with their scientific names and their applications (timber, fiber, dye, medicinal use, food, ornamental, shade, and so on).

Before dealing with the trees recorded in the Central Plateau of Angola, it is useful to look at who the author was of this detailed list of trees made in the second half of 19th century. His contemporary travelers, e.g. Silva Porto or explorers as Serpa Pinto, Capelo and Ivens had no intention to make any kind of survey of plants, and they just mentioned some of them that they found during their journey.

Magyar was a mixture of a traveller for his own self-realization (like Mungo Park) and a man of mission (like David Livingstone). A naval officer by education, he had the distinction of marrying the daughter of the African ruler of the Bié province where he settled. His residence in Ovimbundu society and family life benefited his long-term fieldwork and the publication of his primary sources in a manuscript was carried out by the Hungarian Academy of Sciences in 1859 in Hungarian and German. Magyar's book provides two interlinked accounts. The first focuses on an adventurous travel report of a Hungarian ex-naval officer who participates in an African-organised caravan journey, his settlement, his marriage with the daughter of the ruler of Bié. The second narrative provides

1 "I was easily able to collect a list of fifty birds which are readily distinguished by boys (who shoot them with blunt wooden arrows), and all men seemed familiar with forty species of trees, whose timbers, barks, and fruits were distinguished and named." (W. D. Hambly. *The Ovimbundu*, 1934, p. 125).

2 "... a close connection has existed between the sacred and the profane in Negro tribes is well known, and the influence of spiritual beliefs and magical acts in every department of economic life, including agriculture, hunting, fishing, and handicrafts, has been established. But how durable is this dependence of economic life on magical acts and ancestral benediction?" Hambly, W. D. (1934a) *Occupational ritual, belief, and custom among the Ovimbundu*, *American Anthropologist*, Vol.35: 1.

an ethnographic monograph plus a sketch about the effective colonisation of Angola. The last includes the navigability of rivers, a language guide of Umbundu and a demographic overview of all Ovimbundu kingdoms.

In his book he had a double vision as European and as a man who adopted the African way of life and who was well-accepted by his African community. Thanks to these conditions, his book is rich in data about the land, demography, navigability of the rivers, natural sources, etc., plus an eye-witness' chronicle of daily events of his African life.

Another nineteenth-century explorer, Richard F. Burton, valued Magyar's work more than the work of famous explorers³. The historian Linda Heywood, expert in Ovimbundu history, considers Magyar and Silva Porto as the main nineteenth-century chroniclers who carefully describe Ovimbundu everyday life⁴.

One of the merits of his book is the identification of the landscape with the respective African names. Before entering into a detailed presentation of Magyar's observation of Southern Angolan plants it is worth mentioning the toponyms recorded with their respective African names. It provided a relevant contribution to Angolan history because Magyar recorded even small settlements which have disappeared or moved elsewhere named after their ruler, or another named after the new ruler. However, the main concern of this article deals with the identification of the 19th-century vernacular names of flora of the Ovimbundu kingdoms of the Central Plateau of Angola, with their scientific names. Magyar confesses that he has no books about Angolan flora and requests his father to send him some basic literature. He identifies Ovimbundu flora and fauna according to his former experiences in the American continent, using their scientific names to similar Ovimbundu species. Magyar provides a rare systematic collection of the flora and fauna of Bié. Other 19th century traveller-explorers record some species without providing a systematic description.

Economic trees as landmarks in the collection of Mbundu village chiefs

Between 1986 and 1988 I carried out fieldwork in northeastern Angola among Ambundu village chiefs and lineage heads in whose possession I came across declarations of village chiefs dating from the 18th to the 20th centuries written in Portuguese. These writings deal with lineage migration and history, lineage land tenure and boundaries, land sales and claims. All have been carefully preserved by the main custodians of traditional knowledge. They were and still are considered "sacred writings" representing the exclusive privilege of village chiefs, and they are part of the regalia of power. These collections serve to reinforce the identity of the paramount aristocratic first land occupiers' lineage, warranting a given lineage's power and jurisdiction until our days. They are treated like landcharters and can serve as decisive proof in legitimation actions. One repetitive element of the lineage history is the demarcation of the conquered land in the 18th century

3 "Cazembe. Trieste, Sept. 3, 1873. In a notice of the Lands of Cazembe (*Athenaeum*, August 30, 1873), translated by me [Richard Burton], and lately published by the Royal Geographical Society, I [Richard F. Burton] read these words: "Gamitto's book is of interest throughout, and might, we think, be with advantage translated in full some future time. The narrative of Ladislaus Magyar is, however, still of more importance, since it describes vast regions of south-western Africa, where Livingstone himself has never been." *The Athenaeum* n.º 2394, 13 September 1873, p. 340.

4 "For the precolonial period, the diaries and published writings of the Hungarian László Magyar and the Portuguese António Francisco da Silva Porto were invaluable. Both of these Europeans resided among the Ovimbundu for fifty or more years, beginning in the 1830s, and were astute observers of and participants in the politics of several of the Ovimbundu Kingdoms." Heywood 2000: xvii.

that had been made by the action of natural elements (trees and stones of important measure) and some local products, pieces of iron or pots in the river bed. From the 19th century the landmarks were exclusively trees. With the help of biologists, the African names among Mbundu village chiefs and lineage heads were uncovered.

Discussion

The economic and medicinal use of the trees recorded in these two sources highlight some important common features. In the case of Mbundu village chiefs' tree records beside their African name and their function as landmark there is no other data added to them. In Magyar's records the trees are not only mentioned by their African name but with an attempt to identify them by their scientific name. Magyar completes his brief description of their physical appearance with some data about their use. However, on the basis of the African names it is possible to try to find explanations concerning their use. Basically both of the tree collections contain trees for construction (timber, fiber) and for medicinal use. What is outstanding in this small Angolan database of trees is that a significant part belongs to the major family called Leguminosae of the Angola flora characterized by healing properties and their use in the traditional medicine.

According to a current investigation (Catarino *et al.*, 2019), the three most effective healing plants, *Pterocarpus angolensis* DC, *Erythrina abyssinica* DC, *Bauhinia thonningi* Schum. (Leguminosae) are landmark trees in Kwanza Norte Province. Moreover, some of these landmark trees were identified within *in vitro* trials as potential, natural anti-malarial drugs. The most outstanding tree is *Bauhinia thonningi* Schum. (Leguminosae), the current Kimbundu name is mulolo, in the 18th century text Muxaxa kixi (Simon, 1976: 110) was mentioned as an effective plant against fever. Another plant to malaria was *encaça*⁵ [nkassa], *Albizia gummifera* (J. F. Gmel. (Leguminosae), in the 18th century it was collected by Joaquim José da Silva in service of the Portuguese government (Figueiredo, 2015: 137) as an effective plant to cure fevers; in the 19th century publications the intermittent fever was called "carneirada" (Magyar, 2012: 75; Dias, 1981: 358), and the current 21st-century investigations in Angola detected it again for its effective antimalarial use among the population.

There is an interesting difference between the two collections. According to the international plant databases all of the landmark trees have medicinal properties and the majority is even used against malaria. Magyar's records are more characterized by their economic use for timber, fiber, forage, dye, food or shade, eventually for fish poison or rituals. It seems that the landmark trees were chosen by the Mbundu village chiefs because of their healing traits and Magyar's records may reflect more his personal interest for the economic and less for the medicinal one. In summary, these two sets are representations of two distinctive approaches to the nature. One view is African, which puts a community necessity, the healing trees in another social context, namely the living delimitation of the village boundaries by landmark trees. The other approach, that of Magyar, is colonial, and European view about the utility of nature for export.

We may question the relevance of these two historical sets in the 21st century. A major concern in the African healthcare that is addressed in this study is how to obtain the right

5 According to Catarino (2019), the bark of *Albizia gummifera* is used as an antimalarial natural drug in the 21st century among the Angolan population to treat malaria. The same tree (*Albizia gummifera*) appears by another Kimbundu name, "kituenze", among the historical landmark trees in the Ambundu villages.

price for medicines which are costly, and why current anti-malaria drugs have proved to be ineffective in the treatment of malaria. The main question is how the historical records can contribute to these current problems in healthcare and to find new anti-malarial agents. The 21st century fieldwork researches proved that all plants recorded by Magyar and by village chiefs have economic and/or medicinal properties according to the current informants and some of them have been studied *in vitro* in laboratories and identified as useful for drug preparation. In parallel, there are attempts for example in Lubango to teach traditional healers methods for the proper administration of the medicinal plants and to introduce their application in the children's hospital. There is a relevant example on how the ancient indigenous medical knowledge based on herbs can contribute to overcome current lethal diseases as malaria. A recent Nobel prize, in 2015, was given to the Chinese physician Tu Youyou who utilised Chinese written and oral herbal traditional sources on how to overcome fevers. She conducted *in vitro* and *in vivo* trials with her research group at the Chinese Academy of Traditional Medicine and in a well-known plant, qinghao⁶, found artemisinin which is the basic component of the artemisinin-based combination therapies which proved to be very effective for decades all over the world. Curiously the discovery of the component artemisinin in the plant qinghao occurred thanks to one ancient description which not only mentions the part of the plant with the medicinal component but also describes an unusual healing preparation. Instead of boiling the leaves in hot water, the old prescription was to put the leaves into cold water. This unusual ancient practice helped the Chinese research group to find the component artemisinin in the leaves of the plant qinghao. In the recent years artemisinin resistance to the most dangerous kind of malaria, *P. Falciparum* emerged in several countries of Asia and Africa which obliges the scientists to find a plant with a new anti-malarial component and hopefully the indigenous herbal knowledge recorded or still preserved in memory could give a contribution in this struggle. This outstanding Chinese achievement again calls attention for the need to investigate scientifically the healing plants mentioned in the historical records and knowledge handed down and still in use by the population.

Conclusion

This article aims to study ethnobotanical knowledge of two different regions of the 19th century Angola. The Hungarian explorer provides a list of the most common trees of economic and medicinal use with their respective African names. Though he was vastly experienced, he was additionally helped by the information provided by his fellow African travellers. His intention was to apply an European methodological approach to planned colonial exploration of Africa. Also the records of trees made by the village chief is mentioned in their cultural context as landmarks between villages without any further information about their economic or medicinal use. Therefore, these landmark trees have exercised two roles at the same time. They indicated the borderline between the villages

6 The term "qinghao" is a general synonym in Chinese for the herbs in the Artemisia family. *Qinghao* is one of the most common herbs that have been prescribed in traditional Chinese medical practice for over two thousand years. In Chinese medical terms, it offers the functions of clearing deficient heat, cooling and detoxifying blood, eliminating osteopyrexia and fever, freeing from summer heat, ceasing the recurrence of malaria fevers, removing jaundice, etc. Although the herb *qinghao* was documented in the traditional Chinese medical literature, however, few details were given on either the species or the effective parts of the plant when clinical application was mentioned. ...Relief of malaria symptoms, i.e. periodic fevers using *Qinghao* was first recorded by Ge Hong in *A Handbook of Prescriptions for Emergencies*, the East Jin Dynasty, around 317–420 A. D.). Tu Youyou (2015) *Artemisinin—A Gift from Traditional Chinese Medicine to the World*. Nobel Lecture, December 7, 2015.[Online]. [Consult. 15 oct.2019]. Available at: <https://www.nobelprize.org/uploads/2018/06/tu-lecture.pdf>.

and they serve as a “Living Pharmacy” for the population. Coincidentally, László Magyar records the most common trees in the Central Plateau of Angola which reveal a similar feature, i.e. that all the well-known trees have medicinal and/or economic use. It is likely that these trees served besides their economic use as some kind of mark of orientation along the caravan route for the travelers and/or as helpful signs for the hunters and honey collectors in the forests of Bié.

The current research based on fieldwork and databases of Herbaria point the way to detect traditionally used plants and from their components produce new natural drugs for public health, and to providing low cost medicine at the primary healthcare centres for the population. The hidden or forgotten memories in the historical records would give an important contribution in this exploratory process. The current research of scientific identification of the trees with economic effect is an urgent task because some of the already identified ones are on the lists of extinct plants or those near to extinction. On the basis of their African names, identification is carried out at the Herbarium LISC in Lisbon which holds nearly 70 000 records of specimens from Angola. A similar result of the medicinal effects of these trees appears in the research publications of the national health research centre (CISA) in another part of the North. This encapsulated knowledge highlights the past healing of some paramount diseases such as malaria⁷, and is presently⁸ useful in the struggle of the *Plasmodium falciparum* drug resistance. Interestingly the *in vitro* laboratory trials in some paramount University Centres in Ethiopia, Ghana, Uganda and Nigeria have arrived at a similar conclusion about the antimalarial effect of the landmark trees in Angola. The current Angolan interest to make a national inventory of the healing plants, treatments, the mobilization and monitoring of the traditional healers is a work to be carried out for Public Health at the national and local level and is supported by several NGOs such as FOMETRA - Forum of Traditional Medicine - with about 59 thousand traditional healer members recognised by the National Council of Natural Medicine of the Angolan government and Angolan research centres. At the same time the traditional practitioners are recorded (currently 6,200 in all Angola), monitored and supported by the Public Health Centres, mainly in the administration of the traditional drugs, and at the same time the traditional medicine is introduced in hospital treatments in the southern capital of the scientific researches, Lubango. The objective is to provide a better and accessible health service in the Public Health Centres by connecting the traditional healing knowledge with that of western medicine and the collaboration of their respective institutions, with the transfer and use of the knowledge in both directions. There is an urgent need to call for the protection of the rich biodiversity of the Angolan flora against the increasing destruction caused by the “slash and burn” agricultural methods and the production of coal. Unfortunately there are several plants in these two sets that are on the so called redlist (IUCN Red List of Threatened Species) which are already extinct or near to extinction. Finally, it is significant to note that preserving and using knowledge of the healing plants of the past contributes to solving contemporary problems of drug resistance and to reducing costs in health service.

7 “90 % of the malaria cases in 2016 were in the WHO African Region (194 000), followed by the WHO South-East Asia Region (7 %) and the WHO Eastern Mediterranean Region (2 %).” [Online] [Consult. 10.oct.2019]. Available at: <https://www.afro.who.int/media-centre/events/world-malaria-day-2018>.

8 World Health Organization; Geneva: Jan. 2014. Status report on artemisinin resistance.[Online]. [Consult. 10.sept.2019]. Available at: http://www.who.int/malaria/publications/atoz/status_rep_artemisinin_resistance_jan2014.pdf.

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