

# Palms and People: *Raphia vinifera* Usage and Cultivation in the Grassfields of Western Cameroon

ARIANE COSIAUX

*Institute of Geography and Sustainability,  
University of Lausanne,  
Lausanne, Switzerland*

*Plant Systematic and Ecology Laboratory, Higher Teachers' Training College,  
University of Yaoundé I,  
Yaoundé, Cameroon  
Ariane.Cosiaux@unil.ch*

AND

THOMAS L.P. COUVREUR

*IRD, DIADE, Univ  
Montpellier, Montpellier,  
France*

*Plant Systematic and Ecology Laboratory, Higher Teachers' Training College,  
University of Yaoundé I,  
Yaoundé, Cameroon  
Thomas.couvreur@ird.fr*

*Raphia* palms are quintessential elements in many sub-Saharan African landscapes. The submontane species, *Raphia vinifera*, mainly grows in the Cameroonian highlands between 1000 and 2000 m. It is a characteristic element of the vegetation of the Grassfields region. In addition, like most *Raphia* species, *R. vinifera* plays a central role in people's daily lives, as well as in the socio-economic and cultural spheres. Yet, little is known about this palm and how people have managed it through time to the present day.

As one ascends from the lowland rain forests into the highlands of western Cameroon, we enter a more open landscape, composed of hilly plateaus, crossed by a chain of high volcanic mountains, stretching from South-West to North-East, whose summits can reach up to 3000 m. This mountainous area, currently overlapping with the West and North-West administrative regions, is well known for its savannah type vegetation referred to as "Grassfields" by European

travellers (first the German then the British) from the colonial period. This landscape is home to countless villages surrounded by farming plots with scattered forest fragments (Fig. 1, Fig. 2). As soon as we reach these plateaus, at around 1000 m in altitude, the palm enthusiast can start to see the submontane species *Raphia vinifera*, known as the "Bamenda raphia" by Anglophone botanists. Compared with its lowland relatives, *R. vinifera* is a rather small palm with a



1 (top). Example of a Grassfields landscape, with villages interspaced with fields, cultivated crops such as banana (forefront), and *Raphia vinifera* occurring in valleys. Near the Sam village, 2016. Photo by Thomas L.P. Couvreur. 2 (bottom). *Raphia vinifera* grove lining a stream (light blueish-green palm). Other palms include *Phoenix reclinata* (darker green cespitose palm) and *Elaeis guineensis* (single stemmed palm at forefront). Fotsem-Lessing, 2017. Photo by Ariane Cosiaux.





3. Habit, note acaulescent habit, with leaves arising from ground. North-West region, 2016. Photo by Ariane Cosiaux.

subterranean stem (Fig. 3). The leaves, reaching up to 10 m tall, rise directly from the ground, forming a large funnel-shaped crown with hanging shaggy-looking leaflets (Fig. 3). It is at the base of these leaves, at around breast height that spectacular large inflorescences appear (Fig. 4), covered with large brown bracts (Fig. 5). This inflorescence will soon become a heavy infructescence, with hundreds of scale-covered fruits (Front Cover), characteristic of the genus *Raphia* and Calamoid palms in

general. In fact, spotting this palm is not hard as it forms dense, nearly monospecific stands clustering along the valleys and water courses that zigzag across the Grassfields (Fig. 2). Beyond the Cameroonian highlands, *R. vinifera* extends to the North-East through the Mambilla Plateau (Nigeria) and in some valleys of the Adamawa (Cameroon). Interestingly, it has also been collected in some localities at lower altitudes in the Central African Republic and South-Sudan towards the east, and





4. Detail of infructescence, note large bracts. Photo by Thomas L.P. Couvreur.





5. Detail of dried partial inflorescence. Photo by Thomas L.P. Couvreur.

towards the west, potentially as far as Mali (Mogue Kamga et al. 2019).

The taxonomic status of this species, “misidentified for far too long”, has recently been clarified by Mogue Kamga et al. (2019). *Raphia vinifera* used to be known in Cameroon and Nigeria under the name *R. mambillensis* Otedoh, but a detailed study of its type material revealed that both names are in fact conspecific (Mogue Kamga et al. 2019). *Raphia*

*vinifera* actually corresponds to one of the first two *Raphia* species ever described, over 200 years ago by Palisot de Beauvois (1804) after his field trip to Nigeria in 1786.

Besides its characteristic hilly open landscape, the Grassfields region is also known for its high population (3.5 million inhabitants in 2005) and its around 150 chiefdoms (or “fodombs”), under the customary authority of *fons* (ruler/king). The Grassfields are also home





6. Landscape of palms with *Raphia vinifera* stand along the valley bottom, bordering by wild date palms *Phoenix reclinata* and surrounded by oil palms, *Elaeis guineensis*. Fondjomekwet, 2017. Photo by Ariane Cosiaux.

to an impressive 50 languages. Seen from above, the Grassfields landscape appears to be the result of complex interactions between people and nature. Villages characterized by scattered settlements easily identifiable by the

corrugate aluminium roofs (Fig. 1), dot the landscape. Sacred groves are found throughout; a few of them are remnant forests, the others are the result of past human practices and of a complex historical legacy



(Salpeteur 2010). In between, a number of farming plots are cultivated by smallholders containing a panoply of cultivated plants (Figs. 1, 2, 6) such as banana, plantain, yam, maize, groundnut, potatoes, njama-njama (*Solanum nigrum*), cocoyam, coffee and a number of other fruiting tree species like the African plum tree (*Dacryodes edulis*).

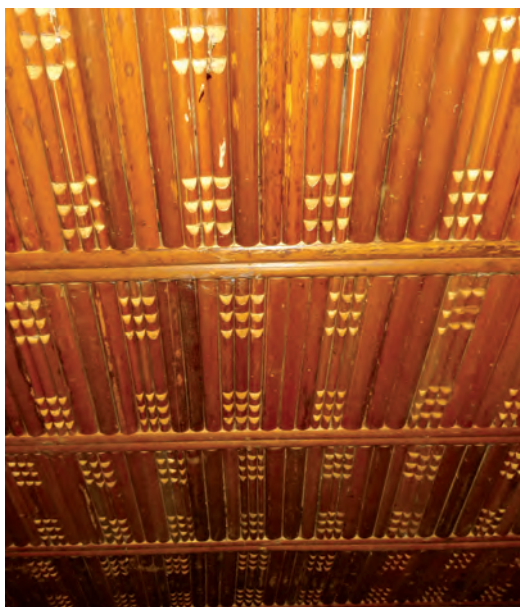
Amongst these crops, *R. vinifera* stands out as one of the most important endogenous species of the region. The *fon* (king) of Oku, His Majesty Sentieh II, told us that “*Raphia* [*vinifera*] is a completely important ingredient in our life style, *Raphia* constitutes our livelihood” (Fumtin and Couvreur 2017). Indeed, this species is one of the most versatile and useful of all *Raphia* species (Mogue Kamga et al. 2020), with dozens of uses of all parts of the palm. The long and flexible petioles (referred to as “bamboo” in the region) and leaves are used for construction, house furniture and weaving different types of mats and baskets (Figs. 7 & 8); the sap or palm wine has a major importance in daily life and customary ceremonies (Fig. 9); the leaf sheath is used as firewood; the trunk, when rotting, is the nesting place of the certain beetles of which the large larvae are prepared as a delicacy; the fibers, extracted from leaflets are mainly used for weaving utilitarian bags or

special bags (Fig. 10), for important people (e.g. a dignitary or a member of secret societies) or specific purposes (e.g. going to a funeral celebration) (Knöpfler 1997). Today, some royal palaces are still built using *Raphia* bamboo (Fig. 7), while the world famous “white Oku honey” comes from beehives traditionally built with *Raphia* material (Fig. 11). Finally, the vital role *R. vinifera* played within older Grassfields societies is illustrated by the fact that this resource was the target of organized raids, documented by the German military lieutenant Franz Hutter during his stay in 1891–1892 at Bali-Nyonga (see map Fig. 12). He noted the frequent conflicts between chiefdoms over this resource, due to shortages of *Raphia* bamboo for construction (Hutter 1902). He wrote: “every tribe jealously guards their [*Raphia*] stands within their sphere of influence”, and adds “Among the Bali, as well as the dominant tribes in general, the gathering of [*Raphia*] bamboo generally becomes a “collection by force” because of their inherent rapacity, which attracts them to foreign territory even when it is not necessary”. Although this practice does not continue today, *R. vinifera* still occupies a place of importance amongst Grassfields societies.

Yet the societal importance of *R. vinifera* and its inescapable presence across the Grassfields landscape contrasts with the little knowledge

7. Palace of Oku chiefdom, partly constructed with *Raphia* petioles (bamboo). Elak-Oku, 2016. Photo by Thomas L.P. Couvreur.





8. Detail of a ceiling made with raphia petioles (bamboo), Bamendjinda, 2017. Photo by Ariane Cosiaux.

that scientists have about this palm in almost all respects. Throughout the western highlands of Cameroon, *R. vinifera* stands are very common and botanists from the 1940s to the 1980s reported the species as cultivated

(Letouzey 1985, 1978, Portères 1946; Russell 1965). Staring into this complex landscape one can ask: what is and has been the role of *R. vinifera* in Grassfields societies? How have people influenced its distribution? What consequences has the management of this vitally important palm had on the dynamics of these landscapes since the end of the 19th century? These questions about *R. vinifera* form part of the PhD project of the first author. The observations presented here are a result of several extensive fieldwork periods of the first author in the western highlands of Cameroon and from a preliminary analysis of written historical sources within her doctoral research.

To date, AC undertook four field trips to western Cameroon (Fig. 12) to study how people of Grassfields societies have interacted with *R. vinifera* and how this relationship has been sustained or has evolved over time (i.e. the field of ethnoecology and historical ecology). Ethnoecological research is based on prolonged stays in the field, allowing the researcher to become part of the society as much as possible, enabling the researcher to acquire a more in-depth understanding of the societal context while also building confidence with people to collaborate. In 2016, two preliminary trips (in total three weeks) were

9. Serving *Raphia vinifera* wine during a ceremony between Elak-Oku dignitaries. The wine is kept in a calabash fruit and served in cow horns. Elak-Oku, 2016. Photo by Thomas L.P. Couvreur.







10. Bag woven with raphia fibers. This special bag is used during dowry ceremonies. Bamendjinda, 2017. Photo by Ariane Cosiaux.

undertaken to the North-West English-speaking region, in particular to the localities of Bamenda, Bafut, Bali-Nyonga, Mbengwi and finally Elak-Oku (of which Mt. Oku (3011 m) is the second highest peak in Cameroon after Mt. Cameroon). These trips resulted in some important preliminary findings such as information on the trade of seedlings between

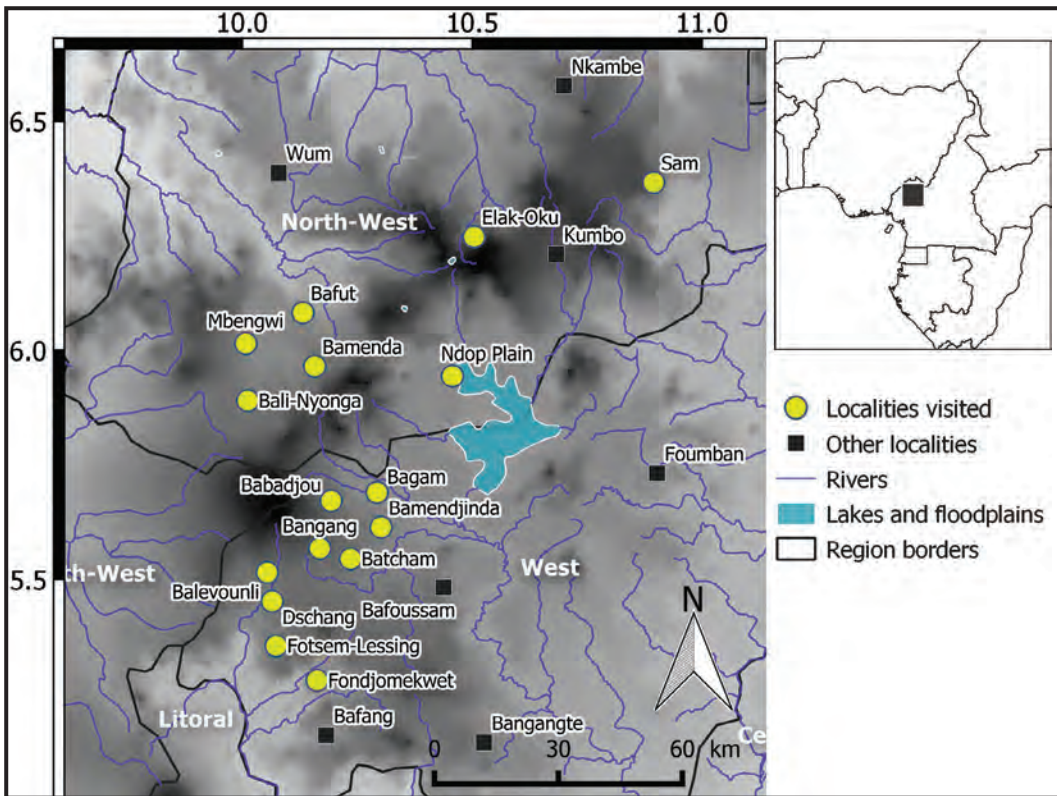
the Ndop Plain and Elak-Oku (Fig. 12). After this, the first long field trip in the West French speaking region took place from mid-July to mid-August 2017. Seven localities were visited during this trip: Fondjomekwet, Dschang, Balevounli, Bagam, Babadjou, Bamendjinda and Fotsem-Lessing. The last fieldwork, lasting three months, focused on the Bamboutos area of the West region from May to July 2019, around the villages of Batcham, Bangang and Babadjou, the last of which is now the main focus of the first author's doctoral research. Since 2017, it is no longer possible to carry out field research in the English-speaking part of the Grassfields due to an armed conflict in the North-West region. Besides AC's trips, we add observations undertaken by TLPC during his own trips in the region (mainly in 2016).

During these field trips, we observed that *R. vinifera* groves are still very common and abundant along humid valleys, easily recognizable by the metallic glaucous green color of the leaves (e.g. Fig. 2). Nevertheless, its distribution is not homogenous throughout the Grassfields. Within the Fondjomekwet chiefdom, to the South-West of the Grassfields, *R. vinifera* stands are found uniquely in valley bottoms, often bordered by other native palms, such as the beautiful wild date palm, *Phoenix reclinata* Jacq. (Fig. 6). On the slopes,

11. Beehive partly made with *Raphia* petioles and fibers. Oku, 2016. Photo by Thomas L.P. Couvreur.







12. Map focusing on the Cameroonian Grassfields, indicating the villages where we undertook our research and other places of importance. The shades of grey represent altitude (black = above 2800 m).

surrounding these *Raphia* stands, we found coffee or cocoa plantations and farming plots with cocoyam, maize, cassava, banana, sweet potatoes in addition to the majestic oil palm, *Elaeis guineensis* Jacq. (Fig. 6).

At Fotsem-Lessing, 12 km to the North-West of Fondjomekwet, the *R. vinifera* stands are also widespread, following streams and bordered by wild date palms, oil palms, *Dracaena arborea*, banana trees and other tree species (Fig. 2). Cultivated plots and fallows directly surround these gallery forests. In contrast to Fondjomekwet, the hilltops are characterized by herbaceous or shrub savannahs, resulting in an open landscape (Fig. 2). In chiefdoms with higher population densities, like Batcham or nearby urban areas (e.g. Dschang), it seems that *R. vinifera* is the mono-dominant species along the valleys, and wild date palms are absent. During the pre-colonial period and up to the beginning colonial times, the trunks of wild date palms were used for the construction of noblemen's houses. In order to have the privilege of enlarging and embellishing one's home through the use of wild date palm trunks,

candidates had to make considerable payments to notables (Warnier 1985).

During our fieldwork, at Elak-Oku and nearby localities, around Bamenda, Bafut, Babadjou, Bagam, Bamendjinda, Bangang and Batcham we were surprised to observe the cultivation of *R. vinifera* both in and outside of humid valleys where it is known to occur naturally, extending now into farming plots. Numerous hillsides were planted with *Raphia vinifera* stands of varying densities, often mixed with other crops such as maize (Fig. 13). On these dry hillsides, we observed either scattered individuals on farming plots (e.g. at Bangang, Batcham or Bamendjinda), or dense stands (e.g. at Babadjou) (Fig. 14). Interestingly, we noted morphological differences between *R. vinifera* individuals cultivated on these hillsides versus the ones found in the humid valleys. The former generally had thinner petioles and in particular shorter leaves leading to a short overall size, no taller than 2.50 m (Fig. 15). In addition, the wine tapped from these hillside growing palms was suggested to have a much better taste. A wine tapper, M. Lalong, from Babadjou told us that: "Tapping wine from down





13 (top). *Raphia vinifera* cultivated on a hillside, among food and tree crops at Babadjou. In the background the Mont Lefo (2534 m), 2019. 14 (bottom) *Raphia vinifera* stands on a hillside, Babadjou, 2019. Photos by Ariane Cosiaux.





15. Detail of a *Raphia vinifera* individual cultivated on a hillside, note the short leaves. Babadjou, 2019. Photo by Ariane Cosiaux.

[in the valleys] and tapping wine from up [on hillsides], it's two different worlds. The [raphia] wine from up [from hillsides] is better" (Fig. 16). Interestingly, these hillside plantations of *R. vinifera* are rarely, if ever, reported in literature by botanists. Without further research, it is hard to say if botanists simply did not mention the cultivation of raphias on hillsides, or whether this is a new practice. Digging a bit deeper, we found only two written sources from Cameroonian geographers mentioning the cultivation of *R. vinifera* outside humid valleys. According to Kuete (2012), farmers planted *Raphia* palms on slopes to increase soil moisture. Kaffo et al. (2013), explain the species was also used as shade-trees for coffee plantations; interestingly they also note the role of women in spreading this species outside humid valleys, despite the management of *Raphia* palms normally being a male activity. However, they do not detail when and in which localities (except Babadjou) this practice emerged, or how it has evolved over time. The cultivation of *Raphia* palms on hillsides was also not reported by the keen eye of the Swiss botanist Carl Ludwig Ledermann (1875–1958),

who travelled across the western highlands of Cameroon in 1908, providing detailed descriptions of landscapes, floristic composition and cultivated species he saw. Indeed, he never mentioned the presence of planted *Raphia* on dry hillsides. Here is one of his descriptions where palms are especially mentioned: "At 10 o'clock we had the forest behind us and entered a prealpine landscape with scattered bushes and scattered trees. (...) Phoenix reclinata rises again on the slopes, *Raphia* palms and *Dracaena arborea* become visible in the galleries (...). The whole water network of the country is in front of us and below us, clearly recognizable by the grey-blue serpentines, which are mainly caused by the raphia stands of the riverbanks" (Ledermann, 1912). Later in the 1940s, the French botanist Roland Portères (1906–1974) was the first to mention cultivation of *R. vinifera* in humid valleys. He also observed at Balatchi (a locality bordering Babadjou) "in the ravines, and overflowing onto the plateaus, the cultivated stands of *Raphia* [vinifera]" (Portères 1946). This could potentially be the first written mention of cultivated *Raphia* outside of the humid valleys





16. Mr. Lalong, a *Raphia* wine tapper, showing a *R. vinifera* palm ready to be tapped, Babadjou, 2019. Photo by Ariane Cosiaux.

and streams. Unfortunately, it is not clear what Portères meant by the word “plateau.” In the other localities he visited across the West region (former French Cameroon), he only mentioned the presence of *Raphia* stands in humid valleys. Perhaps Portères unknowingly witnessed the emergence of a new cultivation practice in some localities.

However, understanding of this landscape should not only be derived from incomplete colonial and botanical observations by foreigners, but also by consulting and working with inhabitants of the Grassfields themselves. Information collected during interviews, informal discussions and visits of *Raphia* groves, confirmed the old but still current



practice of planting *R. vinifera* in humid valleys, either by enrichment of an existing stand or by actively planting *Raphia* where it was previously absent. The most common practice, previously mentioned in the literature is through transplanting seedlings. However, several informants explained that because of intensive wine tapping, which prevents fructification, seedlings are sometimes locally scarce. At Elak-Oku, Babadjou and Bamendjinda, informants told us about the existence of a seedling trade between villages. Knöpfli (2001) also observed seedlings trade in the weekly markets of the North-West region, especially during the peak months of the rainy season (June, July and August). Further studies are needed to document the exchanges of seedlings, and the consequences of these practices on the genetic diversity of *R. vinifera*.

Besides *R. vinifera*, other *Raphia* species are sometimes introduced from the lowlands through immigration. For example, at Fondjomekwet, we noted the cultivation of *Raphia hookeri* G. Mann & H. Wendl. The introduction of this lowland species, together with some of its utilizations and know-how appears to have begun in the last few decades. From the 1950s, populations from the Grassfields, immigrated to the Mungo area, to the South-West of the Grassfields. Some later returned to their villages of origin, bringing seeds of *R. hookeri*, planted them and then started to tap them for *Raphia* wine as they did when they lived in the Mungo area. This, however, was only observed at Fondjomekwet. We also observed the species *R. monbuttorum* Drude planted along the road to Elak-Oku.

Our preliminary observations highlight the significant lack of knowledge that many scientists have on the history of management practices of *R. vinifera* by Grassfields societies. More specifically, information is lacking about how, why, when and who started to cultivate this species along the hillsides, outside of its natural distribution in humid valleys. We can also ask how this species adapted to these drier environments. In addition, we have yet to understand how changes in use have influenced or not the evolution of cultivation practices of this *Raphia* species. Finally, the social and cultural role of this palm is under-documented. The main questions raised by this contribution will be further explored by the first author's doctoral research, using the interdisciplinary research framework proposed by historical ecology (Crumley 2017),

combining ethnography, and the analysis of written sources and aerial images.

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