

Forest-Culture Relationship in Nso and Mbiame Fondoms: Case of the Montane Forests of Ngongbaa, Kovifem and Kovkinkar, North West Cameroon

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Abstract:- The study was designed to investigate the link between forest and cultural practices linked to it in the Ngongbaa, Kovifem and Kovkinkar forests. Data and/or information collected for this study comprised literary, questionnaire, interview, observation and focused group discussions. Information was sort from persons directly involved in the management of forests in the 18 villages of the study including *afon*(Kings), landlords, village heads, traditional medical practitioners, carvers, wood harvesters, wild honey extractors, bee farmers etc. The findings show a strong inextricable win-win link between the Nso and Mbiame people and their forest. Some portions of the forest are carved out as shrines and sacred forest. Which host spirits of ancestors, where *afon* and/or landlords (*ataangvem*) perform sacrifices as a form of respect and homage to their ancestors in exchange for peace, health, abundant harvest and harmony in the family and community. The rich biota of the Ngongbaa, Kovifem and Kovkinkar forests, with more than 405 endemic plant species, approximately 77 species of mammals, 150 species of birds with 53 species, has contributed enormously to the rich and diverse culture of the Nso and Mbiame. The nature of cultural activity is determined to a large extent by the type of forest resources linked to it. Some cultural activities are sustainable due to the existence of related resources in the forest, while others have declined to their lowest ebb due to the depletion of related forest resources. The paper suggests that the state should assist the local communities to fence the forest and reintroduce extinct wildlife species, to sustain cultural practices dependent on them. The state and environmental interest groups could also reform the forestry/wildlife policy to integrate the quasi-statutory land tenure policies and support local initiatives designed to restore degraded forests to maintain biodiversity, preserve and perpetuate indigenous Knowledge and culture.

Keywords:- Forest, Culture, Shrines, Sacred Forest, Relationships, and Montane Forest.

I. INTRODUCTION

Where ever people live, they must depend on the natural environment including forest. They therefore build complex bodies and systems of knowledge, know-how, practices and representations accumulated through long experience in a particular place, landscape or ecosystem including the Nso and Mbiame people. The importance of vegetation in general and forest in particular to man cannot be underestimated. Vegetation constitutes a principal base for source of food, building material, and raw material for

industries, fuel wood, medicine and abode of the gods (spirits). The livelihoods and cultures of these people largely depend a lot on the forest. Agenda 21 of the UN in its principle 22 recognises the important role of indigenous people and communities in environmental management and development, (Pickering and Owen, 1994). This organisation recommends that states should recognise and duly support indigenous peoples' identity, culture, and interest and facilitate their effective participation in the effective achievement of sustainable development because of their holistic knowledge. The Ngongbaa, Kovifem, and Kovkinkar forests contribute variously in the build-up and perpetuation of tradition and cultural practices of the Nso and mbiame Fondoms. Forest products are used to make cultural artefacts, symbols, farming tools, hunting tools, building materials, dresses, dancing mask and instruments etc. Forest also plays an important roles in marriages, dances, rituals, sacrifices, diets, taboos, myths. The Nso constitute one of the largest ethnic groups in the North West Region of Cameroon and the largest of the three ethnic groups in Bui Division. A succession conflict at (Kovifem) (Kokefem) (Oku appellation) by 1500, where Ngonsno established the Nso dynasty about 1394, between the Nso princes led to division of the group into the Nso, Oku and Mbiame fondoms. However, Lantum (2000), stressed that the rivalry between princes occurred rather at Kimbaw some 19 kilometres (12 miles) from Kovifem, resulting in two Nso princes asserting themselves to found the Mbiame and Oku fondoms in 1892. For this reason the Mbiame culture and language draw a lot from that of Nso, but the Oku culture draws a lot from the Ntur indigenous group which the Nso Prince, Tatah and his people played a trick and overran the Ntul, their host ethnic group without any fight. This research paper attempts to investigate the relationship between forests and culture in Nso, Mbiame fondoms.

II. THE STUDY AREA

The Ngongbaa forest (Ngongbaa Kov) is Forests are located on the west of Bui Division on the Bamenda Highlands of Cameroon. Ngongbaa Forest known locally as is located on the east-facing slopes of Mount Oku between latitudes N6°11' and N6°14' north of the equator and between longitudes E 10°31' and E 10°35' 50' east of the Greenwich meridian. The Kovifem and Kovkinkar sacred forests are located on the eastern part of Bui Division. Kovifem sacred forest is located in Nkum subdivision between latitude N06°16'29'' and N06°18'0'' and longitudes E10°46'15'' and E10°47'18'' and extends to the summit of the hill in Kovifem Forest at an elevation of 2147m (GPS data, 2012). Meanwhile, the Kovkinkar Sacred Forest is

located in Mbven Sub-division some 11km southeast of Kovifem Forest between latitudes N6° 12'0" and N6° 13'0" north of the equator and longitudes E10°47' and E10°54'0" east of the Greenwich Meridian.

III. RESEARCH METHOD

We interviewed stakeholders and members of institutions directly involved in the management of land in Nso, and Mbiame including landlords, the *Fons*, *Nwerong* sacred cult (through its members), the fons of Nso, and Mbiame, *manjong* groups. We carried out survey in 18 villages comprising 11 villages in Ngongbaa area, 4 villages in Kovifem area and 3 villages in Kovkinkar area. In Ngongbaa Forest area, villages included Simonkov, Fonmboh, Mbontovi, Buh, Tadu, Mbonyar Taashem, Vekovi, and Ntur. Study villages in Kovifem, Forest area included Kovifem (Shuukov), Ndzevru, and Waikov. For the Kovkinkar Forest area, study villages included Rifem, Tamborong and Shukov (Sangere). Documentary sources of information were also consulted in libraries, internet and Xerox copies of books, and journals. The questionnaire was used to collect descriptive survey data, using a systematic random sampling procedure from the 2005 household population Resource persons such as the Fons of Nso and Mbiame, landlords, *village heads* (*faays* and *ashuufaay*, *manjong* group leaders, village councils. tradition religious priests (*ataa sho-oh*) were also interviewed on forest-culture related issues. Guided visits and Overt (participant) observation were effected in the field. The data is presented using tables, figures percentages, and photographs.

IV. RESEARCH FINDING AND DISCUSSIONS

Our findings revealed a strong inextricable link between the Nso and Mbiame people and their forest. The forest serves as a place where they give respect and pay homage to their ancestors and for socio-economic and cultural fulfilment. The rich biota of the above forest is a replica of the rich and diverse cultural practices in the study site. The nature of cultural activity is determined to a large extent by the type of forest resources linked to it. Some cultural activities are sustainable due to the existence of related resources in the forest, while others have declined to their lowest ebb due to the depletion of resources on which they depend. To better understand the forest-culture relation, it is important to have knowledge of forest resources on which the culture of the local people rely.

A. Biodiversity of the Ngongbaa, Kovifem and Kovkinkar Montane Forests

We observed in the field that there is an inextricable physiographic similarities between the Oku montane ecology and that of the sacred forests of Kovifem and Kovkinkar. Most of the biodiversity types found in Ngongbaa and Oku (Kilum) forests are in Kovifem and Kovkinkar as summarised on tables 1, 2, 3, and 4. Mountain habitats can be subdivided into afro-montane zones below 2800m and sub-Afro-alpine zones above 2800m (Letouzey, 1985 and Enchaw, 2009). Following this altitudinal classification, Mount Oku and Mount Cameroon are the only two mountain habitats in West Africa that host sub-

Afro-alpine zone above 2800m (Letouzey, 1985, ENGREF, 1987, Macleod, 1987; (Duncan, Tame and Asonganyi (1995) and Enchaw, 2009). Following this classification criterion, the sacred forests of Kovifem and Kovkinkar that extend to altitudes of 2147m and 2167m respectively belong to the afro-montane forest category with biodiversity similar to that of true Afro-montane forest zones in the contiguous Ngongbaa-Kilum Forest.

a) Flora Species of the study area

Field survey and data from the Kilum Ijim Forest Project (KIFP) plant list by (Duncan, Tame and Asonganyi (1995) and Enchaw (1987) show that the Ngongbaa, Kilum, Kovifem and Kovkinkar forests possess more than 405 endemic plant species. These flora species include tall/short tree species, climbers or lianas, shrubs, herbs, epiphytes, bulbs, tubers, succulents and grasses. The Ngongbaa, Kovifem and Kovkinkar forests are mosaics of forests and grasslands¹ that together constitute rich biota of a wide variety of plant species that are of vital importance for the socio-economic and cultural development of the local people. These forests constitute habitats for tree species such as *Prunus africana*², *Carapa grandifolia*, *Croton macrostachyus*, *Ficus oreodryadum*, *Ricinus communis* etc. as depicted on plate 1. The *Podocarpus latifolius*, *Podocarpus mannii*, *Acropacus mannii* and *Erithrina* are exogenous species were introduced in Ngongbaa and Kilum forests by the Kilum Mountain Forest Project (KIFP) Tatah Banadzem (2004, 2010, and 2018). These exogenous species were introduced in Kovkinkar by CENDEP³ and ANCO⁴. These forests are also rich in herbs such as, *Glometula oreophila*, *Dracaena deisteliana*, and *Sansevieria trifasciata*, *Comelina cameroonensis*, *Gnoglissum lanceolatum* etc. These forests also have many mushrooms Species known variously in local parlance as (*Kirim*, *Kiwo-oh*, *Kikur* etc.).

¹Grasslands in the Ngongbaa, Kilum, and Kovifem and Kovkinkar forests are restricted to portions of the forest

²*Prunus africana* also referred to as *Pygaem africana* and /or *Sola* is an endemic species characteristic of the montane forests of the Western High Plateau of Cameroon and Mount Cameroon.

³ Apiculture and Nature Conservation Organisation (NGO)

⁴ Centre for Nursery Development and Eru Propagation (NGO)

Nso Name	Scientific Name	Family Name	Life Form	Habitat	Major uses
Dzeng	Gnidia glaucus, Lasiosiphon glaucus	Thymelaeaceae	T	SC	CA;FR;HO
Femen	Milletia coraui	Papilionaceae	T	SC	C;FB;HO
Fang	Trema orientalis=guineensis	Umaceae	T	SC	CA;FW;AG
Kibai	Dombeya Ledemanni	Sterculiaceae	T	SC	CA;FW
Kidzem	Ficus oreodryadum	Moraceae	T	FO	CA;MD;FE
Kintsei kekovki or Ke kiwaah	Cassipourea sp	Rhizophoraceae	T	FO	CA;MD
Kighven	Carapa grandifolia Entandrophragma sp.	Melaceae	T	FO	FW;TB;CA
Kighiy	?	?	T	FO	FW;CA
Kighve-e	?	?		FO	FW
Kijam	Croten macrostachyus	Euphorbiaceae	T;ST	FO;SC	CA;FW; MD
Kirah	Prunus Africana	Rosaceae	T	FO	FW;MD
Kiwaiy	Schefflera manni or kebonglengos	Araliaceae	T;ST	FO;SC	CA;HO;AG
Kimbuuchum	Crassocephalum manni	Compositae	T	SC;FO	AG
Kiwuv/kijooh	Albizia gummefera	Mimosaceae	T	FO	CA;TB;FW
Kirarah, Kibongringoi	Schefflera abyssinica	Araliaceae	T	FO	CA;TB
Kilun	Solanum dasyphyllum	Solanaceae	T	SC	MD. FE
Korin	Tephrosia vogelli	Papilionaceae	T	SC	AG; fW
Kirum	Bridelia speciosa	Euphorbiaceae	T;ST	FO;SC	FW;FE
Kitong	Psychotria peduncularis	Rubiaceae	T	FO	CA
Livf	Clausena anisata	Rutaceae	T	FO	MD;IN
Luunjang	Polysias fulva	Araliaceae	T;ST	FO;SC	CA
Mbaiti	Aguria salicifolia	Ericaceae	T	FO;SC	MD
Ntov	Ficus vogeliana	Moraceae	T	FO	CA;FW
Nwaiy	Markhamia tomentosa	Bignoniaceae	T	FO	FW
?	Maesa lanceolata	Myrsinaceae	T	FO;SC	MD;FW
Seejav	?	?	T	SC;FO	MD;IN
Shinjaang	Ricinus communis	Euphobiaceae	T	SC;FO	MD;AG
Shuaay	Nuxia congesta	Araliaceae	T	FO	CA;FW;HO
Shwaan	Paveta hookeriana	Rubiaceae	T	FO	F
?	Voacanga Africana	Apocynaceae	T	FO	MD
Vighaiy	Syzygium guineense ssp. Bamendae	Myrtaceae	T	FO	FW
Yir	Sesbania sesban	Papilionaceae	T	SC	AG;FW

Table 1: Tree Species of the Ngongbaa, Kovifem and Kovkinkar montane forests ecology

Source: Fieldwork 2010 and adaptation of Latin names from Kilum Ijim Forest Project Plant List by Duncan Thomas and Simon Tame; and Asonganyi (1995); and Mbinkar (1991).

HABITAT: FO=Forest; SC=Scrub; GR=Grassland; AQ=Aquatic; CT=Cultivated.

LIFE FORM: ST=Short tree; TT=Tall tree.

USES: CA=Carving; FB=Fibre; HO=Honey; IN=Insecticide; CR=Craft; FW=Fire wood;

AG=Agroforestry; MD=Medicine; TR=Traditional; FE=Fencing; TB=Timber

There are also termites, tap poles, insects, and wild vegetable specie known locally as *kifom*. Some of the animals found in these forests include mammals, reptiles, birds and invertebrates. In spite of the anthropogenic activities carried out in the contiguous Ngongbaa-Kilum forest between 1975 and 1987, Kovkinkar since 1962, and Kovifem since 1984, which depleted these forests, their flora species are still intact (Tatah Banadzem, 2018).

There are also epiphytes like *Bulbophyllum cochleatum*, *Cyrtorchis ringens* as well as lianas including *Basela alba*, *Comelina Cameroonensis*, *Soreindeia sp*, etc. with high medicinal value as depicted on table 2.

Nso Name	ScientificName	Family Name	Life Form	Habitat	Uses
Banen	<i>Adenostem mauritanum</i>	<i>Compositae</i>	HB	SC;GR	MD
Biybiylam	<i>Glometula oreophila</i>	<i>Loranthaceae</i>	EP	FO ;SC	MD
Fungo'oh (Ntomngo'oh)	<i>Lobelia Columnaris</i>	<i>Lobeliaceae</i>	HB	SB;GR	MD;IN
JooH	<i>Locosifala</i>		SB	AQ	PWC
Kikeng	<i>Dracaena deisteliana</i>	<i>Agavaceae</i>	SB	FO;CT	TR;MD
kingoilang	<i>Sansevieria trifasciata</i>	"	HB	SC;GR	MB
Kiku'u ke nyuy	<i>Amorphophalus abyssinicus</i>	<i>Araceae</i>	BB	AQ;FO	MD
Kiman	<i>Marattia fraxinea</i>	<i>Marattiaceae</i>	SB	AQ;FO	MD
Kinsaase	<i>Euphorbia kamerounensis</i>	<i>Euphorbiaceae</i>	HB	SC;GR	MD
Kinstei ke nsaiki	<i>Sorindeia Sp</i>	<i>Anacardiaceae</i>	BB;LN;SU	FO;SC	MD
Kituur (yuuh labam)	<i>Kalanchoe Crenata</i>	<i>Gassulaceae</i>	HB;SU	SC;FO	MD
Kiwoiy	<i>Comelina cameroonensis</i>	<i>Comelinaceae</i>	HB;LN	FO;SC	
Long kigha'a	<i>Emilia coccinea</i>		HB	SC;GR	MD
Mbanatur	<i>Gnoglossum lanceolatum</i>	<i>Boraginaceae</i>	HB	FO;SC	MD
Mbor ruuh	<i>Peperomia fermandopoiana</i>	<i>Piperaceae</i>	HB	FO;AQ	MD
Mbor kichi	<i>Peperomia molleri</i>	?	EP	FO	MD
Ntuuh	<i>Glodialus psittacinus hook</i>	<i>Iridaceae</i>	HB;BB	GR	MD
Ror	<i>Basella alba</i>	<i>Bassellaceae</i>	LN	SC;CT	TR;MD
Shijiy	<i>Satureja robusta</i>	<i>Labiatae</i>	SB	SC	MD
Ta-ambav	<i>Chasalia laikomensis</i>	?	SB	FO	MD
Sarrnkam	?	?	EP	FO	MED

Table 2: Some Species of Herbs and Shrubs in the Study area

Source: Fieldwork, 2010 and adaptation of Latin names from Kilum Ijim Forest Project Plant List by Duncan Thomas and Simon Tame; Asonganyi (1995) and Mbinkar (1991)

HABITAT:FO=Forest; SC=Scrub; GR=Grassland; AQ-Aquatic; CT=Cultivated

LIFE FORM:SB=Shrub; HB=Herb; LN=Lianas; EP=Epiphyte; SU=Succulent; BB=Bulb/Tuber **USES:**IN=Insecticide; MD=Medicine; TR=Traditiona

b) Fauna species of the Ngongbaa, Kovifem and Kovkinkar Montane Forests

a. Mammals Species

Approximately, 77 species of mammals recorded in KIFP area are small-bodied species of *insectivores*, *Chiroptera* and *Rodentia*. The animals are also found in Kovifem and Kovkinkar. According to the local people, before the intensification of anthropogenic activities in the Mid 1970s, significant populations of both large and small mammals were living in these forests. These animal species include lions (*panther Leo*), gorillas, buffalos, leopards (*panther pardus*), baboon, deer, antelope, bush dog (fox), "Tamir" (porcupine-like animal) white antelope (*Shisir*), tree squirrel (*bunshing*), "Nguruuh", Bats (*Kiliim*) Deer (Ncha'a), *Ndzeey* (wildcat), "seeng" etc. (table 3).



Plate 1: Some Plant Species of the Ngongbaa, Kovifem and Kovkinkar Montane Forests

Plate 1A: *Polycias fulva*, Plate 1B: *Chasalia laikomensis*. Plate 1c: Castor oil plant (*Ricinus communis*). Photos by Tatah Jean-Louis Banadzem, January 2010 and august, 14, 2012

The African Preuss monkey (*Nghii*) is an endemic and endangered species of monkey found in these forests. These forests also host rat species including giant rat, cane rats, "Kiruv" (reddish brown-coloured rat), Golden Mole rat (*Chrysochloris balsaci*) (*Mbav Nsai* and *Feh ntieh*), mouse, shrew etc. There are also amphibians including snakes such as pythons, cobra, toads, and frogs.

Lamnsso Appellations	Common Names	Scientific Names	Current Status
Baa	Leopard	Panther pardus	Extinct in the wild
Bun	Squirrel (chipmunk)	?	Abundant
Dan	?	?	Rare
Ghve-ey	Chameleon	Chamaeleonidae	Rare
Jaah	Night frog	Astylosternus ranoides	Abundant
Jer	Brown rat	Rattus norvegicus	Rare
Kai	Zebra mouse	Lophuromy dieterleni	Abundant
Kan	Preuss Guenon monkey	Cercopithecus preuss	Rare and endangered
Kifyi	Viper	Vipera aspis	Rare
Kibu	Chimpanzee	Pan troglodyte	Extinct
Kiliim	Bat	Pipistrellus eisenteraiti	Abundant
Kingum kembong	Porcupine	Lycaon pictus	Rare
Kishov	Dog, African wild	Lycaon pictus (also Canis mesomelas)	Rare
Kisham	Toad	Xenopus laevis	Abundant
Kishuey	mouse shrew	Myosorex Okuensis	rare
Kuv	Rock hyrax	Procavia ruficeps bamendae	Rare and endangered
Lum	Giant rat	Praomys hartwigi	Scarce and Endangered
Mbai	Honey badger	Mellivora capensis	Extinct in the wild
Mbawnsai	Golden Mole rat	Chrysochloris balsaci	Endangered (tabooed)
Mbui	Baboon	Papio ursinus	Extinct
Ncha'a	Klipspringer	Oreotragus oreotragus	Critically endangered
Ndzei	Wildcat (Caffre cat)	Felis sylvestris	Extinct in the wild
Nghii	Preuss monkey	Cercopithecus thoestipreussi	Critically endangered
Mbo'o	Cutting Grass	?	Endangered
Nga-am	Wolf Spider	Tarantula of family Theraphosidae	Rare (tabooed)
Ngav	Antelope	Aepyceros melampus	Extinct in the wild
Nyar	Buffalo (oxen)	Bubalus bubala	Extinct
“Nyuywan”	?	?	
Shingor	Aethosciurus (paraxerus cooperi)	Cooper's mount squirrel	Abundant
“seeng”	?	?	Rare (tabooed)
Shishuiy	Antelope(Pronking Springbok)	Antidorcas marsupialis	Extinct in the wild
Shiyuv	African wood mouse	Holomyscus grandis	Abundant
Shiyuv	Mount Oku mouse	Lamottemys Okuensis	
Suu suu yoh	Green Mamba	?	Rare
Waangaa	White-tailed Jackrabit	Lepus townsendii	Rare
Yoh mbam	Black cobra	Dendroaspis polylepis	Rare

Table 3: Respondents perceptions on wildlife species and Status types in the study area

Source: Fieldwork 2012-2015 data table for animals, established by (WRI), (IUCN) (UNDP) and the World Bank, 1998-1999, Microsoft® Encarta® 2009. © 1993-2008, Lake Oku conservation Action Plan and CRAUC Project, 2013

Respondents hold the view that buffalos, gorillas and lions are extinct in the area. 63.4% of them are of the opinion that leopards and deer exist today in very small numbers, rare in the wild and critically endangered (table 4). The reduction in the population of these animals is due to the depletion that the above forests underwent since the 1970s. Out of the 77 species of mammals in Ngongbaa, Kilum and Kovifem forests, three species (lions, buffalos, and gorillas) are extinct in contiguous Ngongbaa-Kilum forest representing 3.9% of extinct mammals while four species (lions, buffalos, gorillas and leopards) are extinct in Kovifem and Kovinkar sacred forests representing 5.2% of extinct mammal. This implies that and 92.8% of mammalian species still exist today in Kovifem and Kovinkar sacred forests, although in reduced populations. The last lion (*Panthera leo*) in the Ijim forest area was killed in the late

1940s (Bobe Aboh, pers.com.) as cited by Enchaw, 2009). For leopards (*Panthera pardus*), they still exist in small and rare populations in Ngongbaa and Oku areas of the Oku Mountain. This view is also held by Fai Tanini (*alias Ngong Isaac*) one of the Nso landlords in the Ngongbaa Forest area who stressed that his predecessor and father, Fai Kinga caught two leopards in the vicinity of Simonkov in 1981 and took them to the Fon of Nso. Sannih Thadeus on October 30, 2007, pers.com, also confirmed this view in Aboh-Kom. This Informant gave the view that a leopard (*Panthera pardus*) which was killing sheep in Muteff forest in the Ijim Mountain Forest was killed in April 2007. This therefore rejects the claim by Maisels, Keiming, Kemei, and Toh (2001) that the leopard (*panther pardus*) has not been seen in the KIF for at least 20 years. However, leopards are extinct in Kovifem and Kovinkar forests. The fact that

some villages in the study area derived their names from some significant wildlife species is enough evidence to justify the view that the animals had once existed there. For instance, the Mbonyar village mean the plain of the Buffalo, while Ngongbaa forest refers to the world of the Leopard.

Etymologically, “Mboh” mean plain and “Nyar” mean Buffalo, and “Ngong” mean world, while “baa” refers to leopard in Lamnso (Nso language). The implication is that cultural practices linked to extinct and threatened species are phasing out.

Name of forest	Study villages	Number of respondents	Extinct and rare species of wildlife		
			Extinct animals		Rare animals in the Wild
			Buffalos, gorillas and lions	Leopards	Deer
Ngongbaa	Ntur	1	1	1	1
	Vekovi	100	100	30	50
	Wvem	45	45	10	20
	Taashem	2	2	2	2
	Shuukov	2	2	2	2
	Fonmboh (Tankiy)	5	5	4	5
	Tadu	35	35	10	22
	Simonko	28	28	8	20
	Buh	25	25	10	5
	Mbontovi	6	6	3	4
	Mbonyar	8	8	3	6
Kovifem	Kovifem(Shuukov)	7	7	0	7
	Kuintar	18	18	0	18
	Ndzevru	20	20	0	20
	Waikov	17	17	0	17
Kovkinkar	Shukov (Shangere)	10	10	0	10
	Rifem	43	43	0	43
	Tamborong	6	6	0	6
	Total	278	278	83	258
	Percentage	100	100	28.5	92.8

Table 4: Respondents views on the availability of wildlife in Ngongbaa, Kovifem and Kovkinkar Forests

Source: Field Survey, 2012-2015

Amongst the animal species that still exist in these forests today; some are endemic to the above forests while others are endemic to the Bamenda Highlands and/or the Cameroon montane islands.

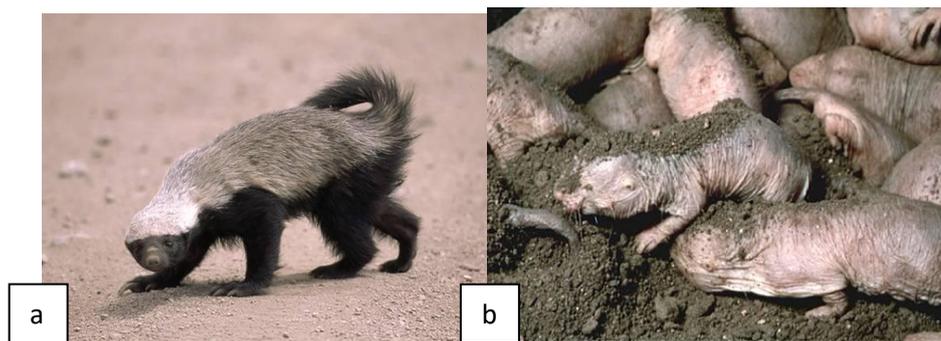


Plate 2: some Endemic wildlife species of the montane forests of Ngongbaa, Kilum, Kovifem and Kovkinkar

Plate 2A: Honey badger (Ratel) (*Mellivora capensis*). Photos courtesy of Encarta Encyclopaedia, Tim Davis photo research, Inc.
 Plate 2 B: Golden Mole rat (*Chrysochloris balsaci*) (Mbav nsai in Nso and Feh ntieh). Photo courtesy of Encarta Encyclopaedia Gregory G. Dimijian/Photo Researcher

Some of the rare endemic animals include the shrew (*Myosorex Okuensis*) (also *Blarina brevicauda*) (kishuey in Nso and Fesong in Oku), Honey Badger (Ratel) (*Mellivora capensis*) (Mbai in Nso and Oku) and the Golden Mole Rat (*Chrysochloris balsaci*) (Mbav nsai in Nso and Feh ntieh in

Oku). These species of rodents are common to the Oku Mountain region and the Bansa (Nso) Plateau which Kovifem and Kovkinkar are integral parts. Some of the endemic species are critically endangered, particularly the rare Honey Badger and the Golden Mole Rat (plate 2). Bee

farmers describe the Honey badger named for its habit of eating honey as “honey thief”, because it has the habit of opening beehives to consume the honey. The Golden Mole-Rat (*Mbav Nsai*) is an African rodent (Encarta Encyclopaedia, 2009), that is very useful in local metaphysical medicinal science. This nearly hairless mole rat, lives underground and is common in wetlands. It has protruding incisors and powerful head that it uses to dig burrow and loosen forest soils and facilitate plant growth. Native to sub-Saharan Africa particularly in central and east Africa, it belongs to the family *Bathyergidae* (Microsoft® Encarta (1993-2008). The Cooper’s mount squirrel (*Shingor* in Nso and “*fichia*” in Oku) is another endemic species that Lives in trees and eats nuts, seeds, and buds. Like many rodents, the squirrel stores some seeds to eat later. The gathering and storing behaviour of the squirrel, helps to disperse seeds of plants in the forest.

b. Avifauna (Birds) common to Ngongbaa, Kilum, and Kovifem and Kovkinkar forests

Birdlife international which has worked in the Oku Mountain region for more than 20 years, identified close to 150 species of birds with 53 species endemic to the montane and sub-montane forest (Fomete and Lachee, 2001). Fifteen montane bird species endemic to Cameroon are found in this forest (Binla 2001). These bird types also exist in the Ngongbaa, Kilum Kovifem and Kovkinkar forests. These birds include King Fisher, bush fowls, dove,

owl, hawk, bat, weaverbird, swallow etc. Four of these bird species today are classified as endangered. The Bannerman’s Turaco (*Tauraco bannermani*) and Banded Wattle-eye (*Platysteira laticincta*) (plate 3) that initially were in large numbers in the Oku montane forest are now classified as critically endangered.

B. SOME CULTURAL PRACTICES LINKED TO FOREST IN NSO AND MBIAME FONDOMS

The royal hunt known as *Ngwa-a* is also organised to hunt animals for the *Fon*. Today, the ritual has become a symbolic ceremony organised during death celebrations in the palaces, in nearby bushes. Animal skins and tree trunks are used to make jujus masks. Dry forest fuel wood extracted from forest is offered to the Fon by every newly crowned *faay* or traditional ruler during a ritual known as *Kinshati ke Fon or Kimbunfon*. This ceremony represents homage-paying to the *fon*. The *afaay* are village-based subsidiaries of the the *Fon*. During, *Kimbunfon*, (*ey Suu Ntok in Oku*), the *faay* greets the *Fon* and does what is referred to as “filling the fon’s bag” (*waykibamkefon* Viy bibam e Fon in Oku) with money. It is after this ritual that the *faay* is recognised as village head and auxiliary to the *Fon*. During this ceremony, people who have never greeted the *fon* can take advantage of the event and fill the fon’s bag or during the fon’s visit to his subjects in or out of his fondom.

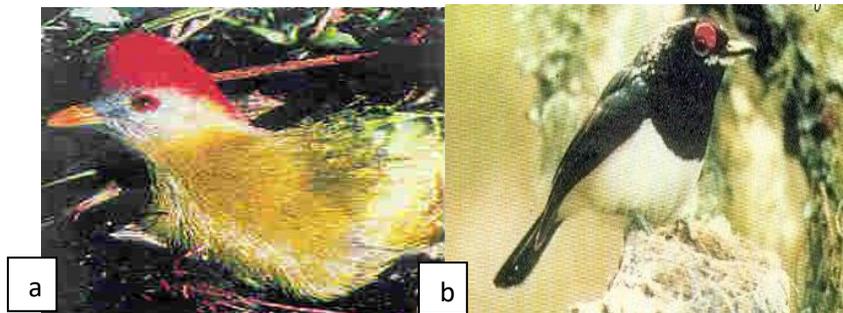


Plate 3: Some Endemic and Endangered Bird Species of the Ngongbaa Kilum, Kovifem and Kovkinkar Montane Forests

Plate 2A: Bannerman’s *Tauraco* Plate 7B: Banded Wattle-eye

Photos courtesy of Enchaw, 2004 and 2009 and the Bamenda Highland Project

The *fon* and other traditional authorities including *faay*, *afaay*, *ayaah* and *asheey menkan* cannot also be saluted by a male or female adult who has never performed the *kimbunfon* ceremony. Greeting the *Fon* by a *faay* is mandatory, a condition sine qua non to attending any public events, like going to the market or drink from traditional cup (made of animal horn or calabash).

C. THE LINK BETWEEN FOREST, ANCESTRAL SPIRITS AND SACRIFICES

There is an inextricable link between forests and location of shrines (abodes of the gods). Most shrines believed to host the bodies and spirits of ancestors are found in forests or in relict forest (remnant forest) in deforested or degraded forest as depicted on plate 29. Sacrifices or libations are performed by the *fon* and landlords in Nso, Mbiame and Oku. Sacrifices constitute ways through which landlord’s and *fons* communicate with their ancestors by requesting on

behalf of the living for peace, good luck, peace, health, rain and abundant harvests.

a) Shrines in Ngongbaa Forest

In the Ngongbaa forest area, 29 family shrines were identified belonging to seven families. Three family shrines were identified within Ngongbaa Forest including *Nyuy wo Kihwooh-Vekovi*, *Nyuy wo Kih Meembvetin Tahkiyah* and *nyuy Yefon* in Mbai forest. The rest of 26 shrines outside the forest are small patches of relict forests in farmed and settled areas as depicted on figure 1. Shrines representing abodes of the gods and sacrificial sites in Ngongbaa Forest Outside the Ngongbaa forest, there is a royal shrine represented by a pool of water at the foot of the River Kidzemin fall in Wvem village where the *Fon* of Nso usually perform sacrifices. This shrine is referred to as *Kovndzejav* or *Kindev ke Fon* that literally mean the *Fon*’s Lake in *Lamnsa*. The shrine is described as a lake because it is symbolised by a pool of

water at the foot of the waterfall (Ntutin Valentine and Ngong Wilfred, pers.com.). The latter who were delegated by Faay Doh Wvem to guide the research team revealed that sacrifices are performed in *Kovndzejav* shrine every year on a day called *Ntangrin*. On the day of the sacrifice, the landlord, Faay Doh Wvem, first carry out his sacrifice in the Doh family shrine just some few meters north of the *Kovndzejav* to signal to the gods of his gods the eminent arrival of the Fon of Nso and to request for a successful sacrifice by the Fon. During the ceremony, the *Chong* and *samba* secret societies accompany the *Fon* of Nso in songs and dances. The *Kidzev Ke Fon* became a shrine when during the Germane-Nso war of 1906, lightening stroke a German soldier at Kam (army camp at Vekovi) and a rainbow was later seen rising from this shrine to the spot where the German was killed by lightening. The Nso interpreted this incident as a strike by the gods of Nso against German invaders. The *fon* is usually accompanied to the shrine site by *ataantoh*. When someone visits this shrine,

he must wash the face in the pool of water in the shrine to cleanse his or herself and benefit from the blessings of the shrine, as the researcher did during a guided visit to the shrine (Plate 4.). Some 300m north of the *Kindev ke Fon* shrine is a shrine found in a cave known as *Mbveh Vifafeyi* that literally mean the cave of food in *Lamnso* and *Mbiame*. This shrine is called *Mbeh Vifafeyi* because during the wars of conquest in the Grassfields of Cameroon and the Germano-Nso and *Mbiame* war of 1906, food and valuable items were kept in this cave to secure them from fire in case of attack. This cave is the habitat for thousands of bats as depicted on plate 5. In addition, the pioneer settlers of Wvem village sought refuge in this cave during inter-tribal wars, *Baranyam* (Fulani raids) and *Barah Ngar* (Germans). For this reason, when a *faay* (ruler of extended compound) dies in Do'oh compound and a new one is installed, the successor to the diseased *faay* performs a sacrifice in this cave accompanied by dancing of the secret male juju society known as *Rum* which usually performs in the night.

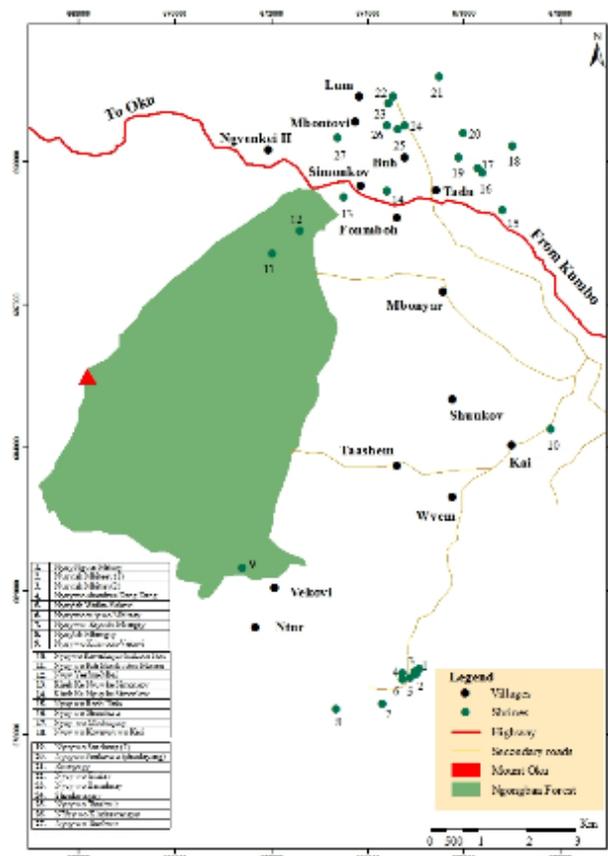


Fig. 1: spatial distribution of shrines in Ngongbaa forest area

Source: Landsat Image of 2015, and update from participatory mapping by Tatah Jean-louis Banadzem, in collaboration with landlords



Plate 4: Kindzev ke Fon in Kovdzejav-Wvem

Plate 4A: from left to right Maimo Valentine (one of the guides to the shrine site) and Tatah Jean-Louis Banadzem, the researcher. Plate 4B: The researcher performing the washing of the eye ritual. Photo by Tatah Jean-Louis Banadzem, on March 6, 2015 at 9: 14 a.m. and 9:18 a.m. respectively

These two shrines harbour some 7 hectares of relict forest with tree diversity such as *Croten macroscota*, *Albizia*, *Prunus africana*, *Schefflera*, *Indian bamboo*, *Carapa*

gradifolia bats etc. The existence of these relict forests is explained by the fact that farming and settlement are proscribed in shrines and sacred places.

Bats hanging on tree branches and rock surface

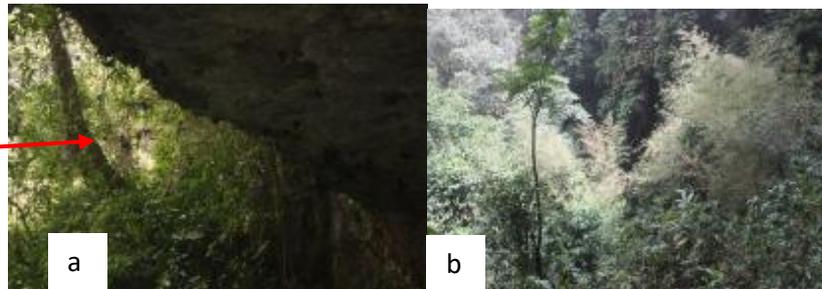


Plate 5: the Cave hosting the Mbeh Viyikir Shrine at Doh family forest at Wvem

Plate 5A: Inner view of Kireh ke nyuy keeh Mbeh Viyikir shrine

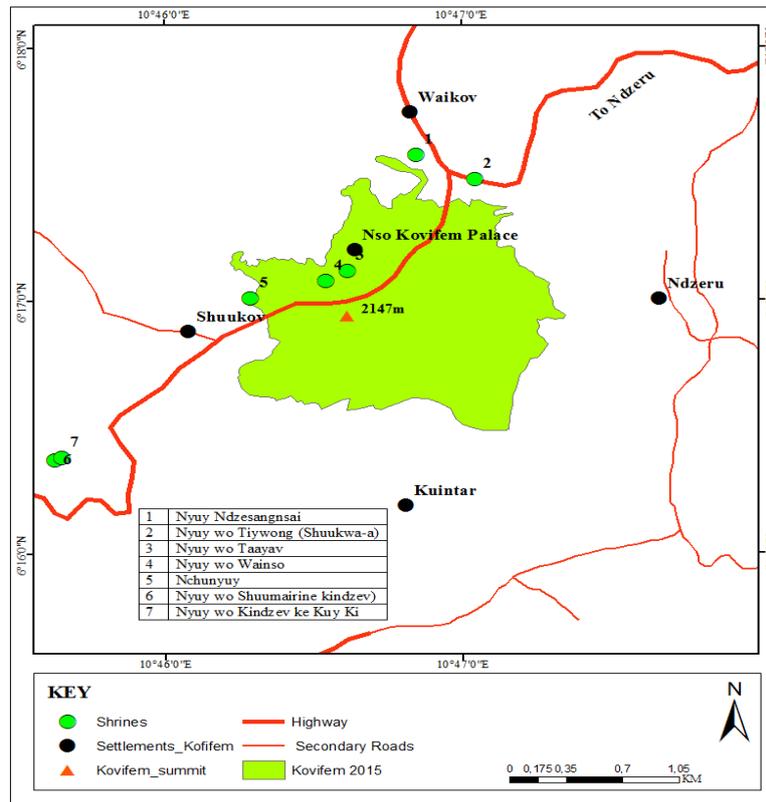
Plate 5B: Outer view of Kireh ke Nyuy ke Mbeh Viyikir Shrine

Photo by Tatah Jean-Louis Banadzem, on March 6, 2015 at 10 a.m. and 9:18 a.m. respectively

The *Nchunyuy* shrine hosts the tombs and spirits of the afonof Nso. Confirming this, Nso (Mbenkum, 1992 added that Kovifem Forest hosts the bodies of 13 Fon (Kings of) of Nso. Sacrifices are performed in Kovifem shrines on a day known in Nso *Ntangrin* (literally sacrifice day). The Fon of Nso is accompanied by *ataawong* when performing sacrifices in these shrines. On the day selected for sacrifice, the first sacrifice is performed in *Nchunyuy* and the ritual continued in the other six shrines and end in the fem (royal burial ground). One of the shrines found out of the forest is Known as *Nyuyndzesangnsai* belong to the landlord of Kovifem. Livelihood activities in these shrines are forbidden thus facilitating the conservation of biodiversity found in these no-go zones.

b) Shrines in Kovifem Sacred Forest

In Kovifem sacred forest area, seven shrines were identified amongst which three were located in the forest as depicted on Figure 2. Of the seven shrines, six were royal shrines where the Fon of Nso are performed sacrifices. These royal shrines include *Nyuy wo Shuukwa* (also *Tiywong*), *Nyuy wo taayav*, *Nyuy wo waikov* (also *WaiNso* and *Mbiame*), *Nchunyuy*, *Nyuy wo Kindev ke fon ke kuiki*, *Nyuy wo Kindev ke fon ke tsenki* (also *Nyuy wo shuu mairine*).



Source: Topographic Sheet Nkambe NB-32-XVII 1:200 000 and update with GPS Field Data by Tatah Jean-Louis Banadzem, 2015

Figure 2: Spatial Distribution of shrines (shrines) in Kovifem

WaiNso (literally forest market) shrine is the spot where the first market was located when the Nso and Mbiame were still resident in Kovifem. Some shrines in Kovifem are covered with grass while some have forest and some harbour both forest and water as depicted on plate 6.



Plate 6: some Shrines representing the homes of gods and sacrificial sites in Kovifem sacred forest

Plate 6a: *Nyuy wo shuukwa (Tiywong)*

Plate 6B: *Nyuy wo Kindev ke fon ke tsenki (Nyuy wo Shuu Mairine)*. Photo by Tatah Jean-Louis Banadzem, March 12, 2015 at 2:41 p.m. and 4:51 p.m. respectively

c) Shrines in Kovkinkar Sacred Forest

In Mbiame, the research team identified four shrines as depicted on figure 3. According to Tatah Banadzem (2018), there are two shrines in Kovkinkar forest, the *Kimbven* and *Milai*. *The milai shrine* is the burial site of the 18 Fons of Mbiame) depicted on photo 1.



Thatched house hosting the graves of 18 aFons of Mbiame

Photo 1: The shrine at Milai Depression hosting the tombs of the 18 Afon (kings) of Mbiame in Kovkinkar Sacred Forest

Photo, courtesy of the Centre for Nursery Development and Eru Production (CENDEP), February 1, 2008

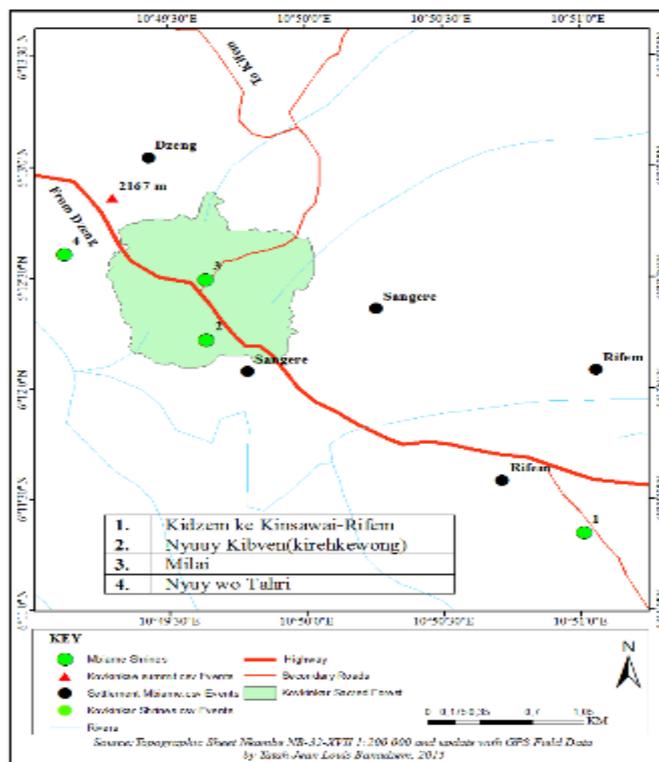


Fig. 3: Distribution of Shrinesrepresentinghomes of the gods and sites of sacrificein Kovkinkar (Mbiame) Sacred Forest

It is only the Fon of Mbiame, *Nwerong*, *Atawong* and *Ayiywong* who are allowed to enter Milai for annual sacrifices Annual Sacrifices on a day called *Kavi*. It is the day when the longest serving Fon of Mbiame, Taashindzev the Great (1927-1988) died and was buried in the Milai *fem*, burial ground). On sacrifice day, the Fon of Mbiame usually start sacrifice in palace, then to *Milai* and end in Kimbven shrine (literally shrine at the bend). The sacredness in the shrines and sacred forests is the fact that they host the bodies of the *afon* (kings) to whom the people pay a lot of allegiance. The full protection of species in these forest groves and the respect of norms attached to them makes the role of forest guards employed by the state irrelevant in these forest. This is justified by the fact that the local people respect the laws related to the shrines without being forced to do so because of the negative ramifications of taboos,

myths and beliefs that may have negative repercussions on them as depicted on table 5. It is generally believed in Nso and Mbiame that people who violate sacred places and traditional holidays or rest days are likely to be affected by illnesses such as stroke (paralysis), filaria, madness, epilepsy, disappearance and/or death in the forest etc. Table 6 summarises the types of violations and associated effects. Taboos are also used in Nso and Mbiame to conserve and protect animals and bird species that are endemic, rare and possess high medicinal properties. To conserve them they are declared sacred and must not be hunted and/or eaten. However, all resources in sacred forests and shrines enjoy full protection. Informants and landlords contacted in the field, confirmed that sanctions and/or negative metaphysical consequences have befallen people who violated traditional Sundays or caught forbidden animals as depicted on table 6.

Nature of violation of forest Regulations		Nature of sanctions and/or negative effects on violators of land and forest regulations	
		Traditional sanctions	Metaphysical effects
1	Cultivating land and and/or harvesting forest resources on traditional Sundays(Ngoilum and Kiloveiy)	-Placement of injunction on piece of land and forest under violation -Fines by village council if it is in the forest	-Ill omen from the gods
2	Harvesting or entering shrines		-Disappearance - Delivery of abnormal child -Illness
3	Entering or harvesting resources in <i>Nwerong</i> or in Ngiri forest	Fine from Nwerong, Ngiri, and/or palace council	Illness and /death
4	Harvesting in sacred forest	Fine from the Fon of Nso and Mbiame, <i>Nwerong</i> and /or palace council	Illness and /death
5	Defecating or urinating in rivers or water catchment areas	Fine from village council, fon and /or palace council	Illness and /death

Table 5: Types of Violations of Land and forest Regulations with Associated Consequences

Source: Conceived from interview data, 2004-2015

In order to save the life of person who are affected for violating land regulation, they are subjected to a cleansing ritual usually performed by the landlord of the land where the violation occurred. Institutional sanctions and metaphysical consequences have affected some forest defaulters as shown on table 1. These toboos, myths and beliefs oblige people to respect land laws without being forced to do so. The Bihkov Community Forest Group at Vekovi, revealed that a man harvested wood in *Kovnyuyshrine* (god's forest) and became mad later. The

cleansing process requires that the affected person to offer a goat, a calabash of wine and a fowl to the landlord who will perform the cleansing ritual (Faay Tanini, pers.com.). Also, some residents of Tadu akin Oku ethnic group who violated the Nso land tenure laws died mystically, while women gave birth to children with abnormalities like Mongols, mystical diseases etc. Some of them have also suffered from the placement of injunction sticks in their farms (plate 7). Once an injunction stick is erected on land, wood or house, the defaulter must abandon the property.

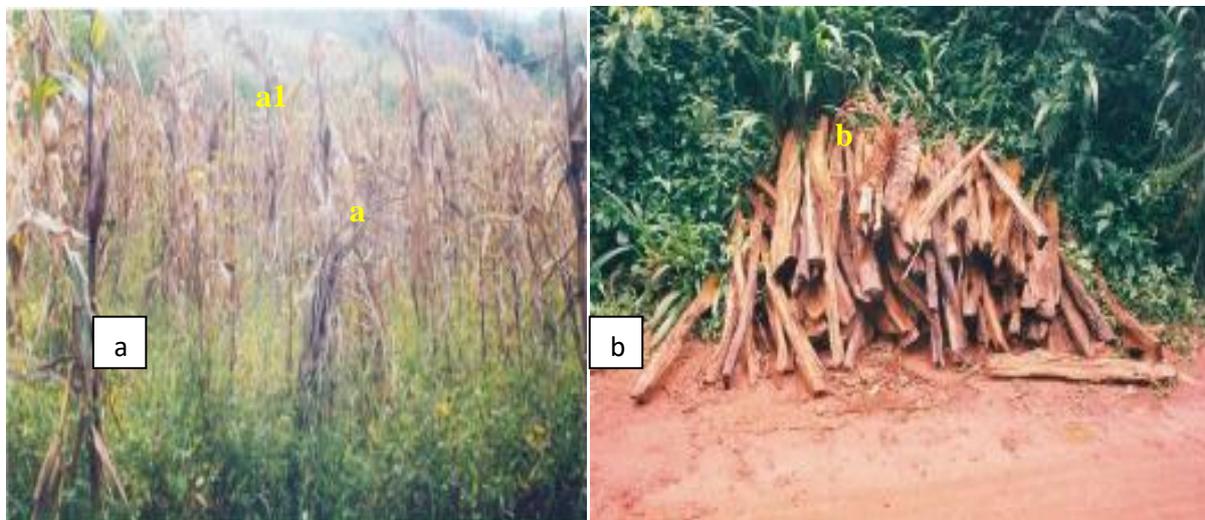


Plate 7: Raffia fans (raffia fronds) representing injunctions against violations of land and forest regulations in Nso and Mbiame

Plate 7a=An injunction stick planted in a corn farm at Fonmboh due to violation of land tenure laws. a1= dry corn plants.
Plate 7B: b=An Injunction stick erected on illegally exploited wood in Kovinkar (Mbiame) forest. Photo by Tatah Jean-Louis Banadzem, October 16, 2004 at 11:15 a.m. and October 30, 2014 at 3:29 p.m

Site of violation	Form of violation of forest Regulations	Nature of traditional sanctions and metaphysical effects negative effects on defaulters	
		Traditional sanctions	Metaphysical effects
Vekovi	A person harvested wood in kovnyuy	None	Madness
	Maliki, a Muslim cleric disregarded tradition and Burnt Kiyoooh shrine and opened his farm	None	Has abandoned the farm and migrated from Vekovi village due to ill omen and illness
	A woman harvested dry wood in Kiyoooh shrine	None	Got mad and got well after returning the wood to the forest and undergoing a cleansing ritual known as Kinsu in Lamnso
Fonmboh-Tadu	-Violation of Nso traditional Sundays by non-Nso residents -violation of landlords rights of tenure	Placement of injunction stick by faay Yunkuiy and nwerong -withdrawal of right of tenure and seizure of land from some defaulters	Some wives of Defaulters gave birth to nwerong-Mongols.
			Sudden Death of some 5 defaulters
			Disappearance and death of 2 Oku people in Ngongbaa forest
			Drying off of water from pipes of Mbonyar water project
			Removal of the roof of G.S.S Tankiy during classes resulting in the hospitalization of students
- Involuntary migration of some 5 families to escape from the problem			
Tajaiy-Buh	Mallam Adamu kenkoh Farmed into Nyuy wo Fonkava-a	None	Got mad and latter his mouth was displacedleft (45°) from its frontal position. he has relocated
	Pupils of G.N.s Tajaiiy strayed into the forest harbouring Nyuy woo Mbohtajaiy	None	Bees came out of the shrine and stung one of the pupils almost to death
Nchiiy community forest	-Exploitation of Prunus on traditional off days	None	Death of a man transporting Prunus africana from the forest on a traditional off day (kiloveiy)
Kovifem	A pupil of catholic school Takuiy entered the Shuumairine shrine	None	The pupil was stung by bees and later affected by filarial
Kovkinkar	Harvesting of dry wood in Kovkinkar	Placement of injunction on the wood	None

Table 6: Examples of violations of traditional forest norms and effects on defaulters in Nso and Mbiame

Source: Compiled from field interview data, 2012-2015

D. TRADITIONAL MEDICINE PRACTICES IN NGONGBAA FOREST AREA

As far as traditional medicine is concerned, it was also observed that the natural environment of Ngongbaa has a direct relationship with the practice of medicine in Ngongbaa, Kovifem and Mbiame Forest area. These Forests is rich in medicinal plants including trees, herbs, roots, xerophytes, epiphytes, lianas, and succulent plants. Of the 40 plant species common in Ngongbaa, kovifem and Kovkinkar forest, 25 of them are used for medicine. These medicinal plants include *Dracaena deisteliana*, *Kalanchoe cretina*, *Commelina camerconensis* etc. In a discussion with Peter Kintati, who is one of traditional doctor's resident in Simonkov village, he gave the view that forest is the main

source of medicine in Nso for all traditional medical practitioners. However, 42.9% of traditional doctors supplement their medicines from other forests mainly remnant and gallery forest near homes and far

E. THE TYPOLOGY OF FOREST-DERIVED ARTEFACTS USEFUL IN THE NSO SOCIETY

Informants in the field revealed that the bulk of forest products are used in making accessories for dancing during cultural events(plate 8). These include drums, xylophones, spears, flutes, trumpets, gong, and various forms of guitar and juju masks. For instance, wood and bird feathers are used for making of juju masks (Tatah Banadzem, 2018).



Plate 8: Forest-derived products used by Jujus in Nso and Mbiame

Plate 6 A, B & C: The Suubi Juju Dance Group belonging to Tatab Nyuyki, at a marriage ceremony in Limbe. Plate 6A: a=Juju captain (kam) with a white basket-head mask backed by dancers, Plate 6B: b=Xylophone, c=Drum. Plate 6C: d=a wooden juju head mask with a human face carrying lizards., Photos by Tatab Jean-Louis Banadzem, on 14 November, 2015 at 4.47 p.m.

Wood is also used carve door posts, stools, chairs, statue of nobles, chairs. Some artefacts derived from wood represent wildlife species of the forest including scorpions, lizards, snakes, Bannerman's Tauraco, buffalos, leopards, lions, chimpanzee etc. These wildlife species may be sculptured on stools, door posts, cups, chairs, beds, juju masks etc. Forest products such as sticks, bamboos, wood are used to build houses with thatch and daub.

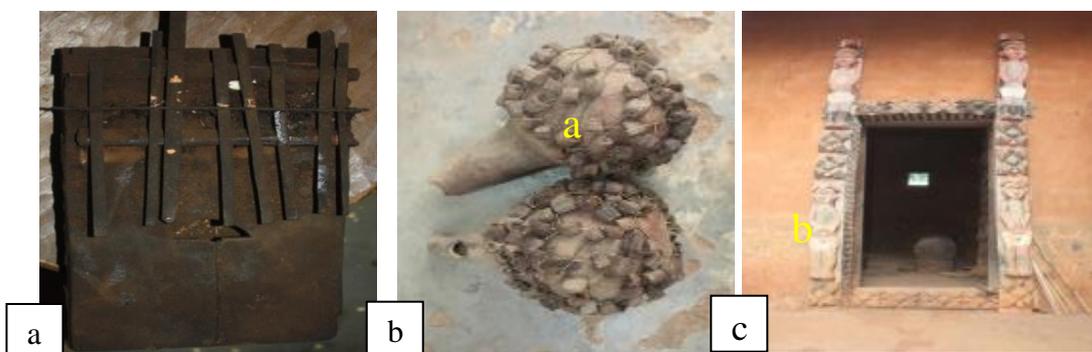


Plate 9: Forest-Derived Dancing and Ornamental Artefacts

Plate 9A: Traditional African guitar (lung); Plate 9 B: a= A Calabash rattles (Mbachah or Mbah), Plate 9 C: b=Wooden door post (Kikur ke Lav) in the Yungkuui with spider and human images carved on it. Photos by Tatab Jean-Louis Banadzem on March 1, 2015 at 2.31 p.m.; March 23, 2015 at 10.40 a.m.; and on March 14, 2015 at 7.38 a.m. respectively.

The Jute plant and *lav Nkom* are used to making traditional bags of the nwerong and Ngiri secret cult. The traditional guitar, "lung" on plate 9 is also used for dances like *kinchemi*, *samba* and *Mentiy*. It is made out of wood and Indian bamboo. The xylophone, "njang" is played and the sounds from it synchronises with sounds from drum (*Nchum*), calabash rattle (*Mbahcha*), gong, "Ngem", trumpet, "kitseyi or kenfung", trumpet "kintseyi" and "Nguh (nguk)", to provide music to dance groups.

The gongs in the past were made with iron extracted from iron ore in Ngongbaa and Kilum forests. Jujus dance to the rhythm of music from xylophone and associated instruments during happy events and death ceremonies. The gongs are manufactured by blacksmiths known as *Taa kilam* and *bahkilam* in Nso and Oku respectively.

F. FOREST AND DIET IN NGONGBAA, KOVIFEM AND KOVKINKAR FOREST

The Ngongbaa, Kovifem and Kovkinkar forest constitute a source of food for the local populations. These forests

harbour flora species including wild vegetable known as *Kifom*, the sulphur mushroom (*Polyporus sulfuratus*) (*Kirim* in Nso), and honey (Tatab Banadzem, 2010).

a. Wild Honey Extraction

In Ngongbaa Forest area, like in Kovifem and Kovkinkar forest, there are two types of wild honey, ground honey known as "dong" in Lamso and honey from hollows on trees and rocks, known as "mfuh." (Tatab Banadzem, 2010). Although any forest user who comes across or identifies wild honey in any part of the forest have the right to harvest, there are however some forest users who have specialised in the extraction of wild honey. In a discussion with Seka Tardzenyuy, of Fonmboh village, an extractor of ground honey, he revealed that in 2008, his honey output was 60 litres, and is falling due to grazing.

b. Mushroom Activities

Mushrooms are non-chlorophyllous plants that do not have roots, and leaves but undergo formation of hyphae sprouting of fruiting bodies Nsuh (forthcoming). Levey et al (1993) defines mushrooms as any of various fungi-shaped like an umbrella, a sponge, or a ball, some of which are edible and others are poisonous (Fig.18). The scientific name of mushroom is *Basidiomycotina*. Information gathered from the local people revealed that apart from the uses outlined above, their natural environment favour the growth of mushroom. The coming of early rains in March give rise to

the sprouting of mushrooms especially the *Agaricus* mushroom species (umbrella-shaped mushrooms) that range in colour from white, brown, to dark-grey and the ear-shaped

sulfur mushroom (sulfur fungus) (Polyporus sulfurreus) that grows on dead trees known as *kirim* and *Kilim* in Nso and Oku respectively (plate 24).

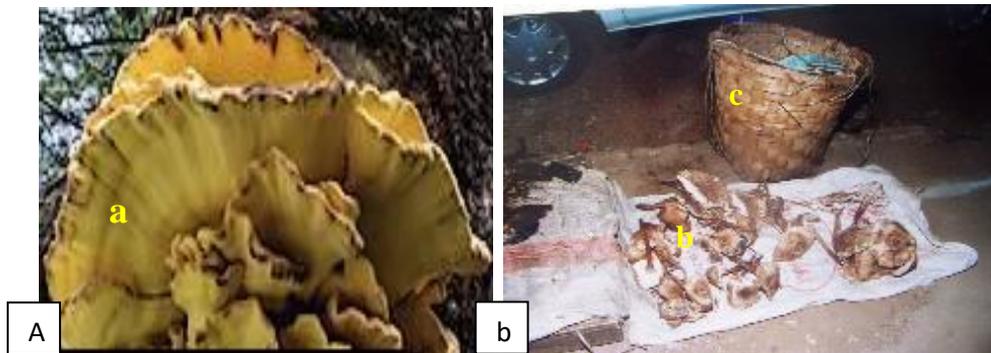


Plate 10: some mushroom species of the Ngongbaa, Kovifem and Kovkinkar Forest

Plate 10a: a=Ear-shaped sulphur fungus on dead wood in the forest. Photo courtesy of Encarta Encyclopaedia Oxford Science films (no date and time) Plate 10B: b=Wild White mushroom species for Sale in the Kumbo Food Market; c=basket for storing mushroom. Photos by Banadzem J.L. Tatak, 2010

The indigenous populations have an unquenchable taste for mushroom because it boasts the immune system. Mushrooms are rich in natural lysine and tryptophan that helps in bone formation and weight amelioration, (Nsuh George, pers.comm).⁵ Harvesting and drying of mushroom takes place during the early rains of March, when mushroom sprouts. (Tatak Banadzem, 2010). This triggers the attention of youths and women that go hunting for wild mushrooms that come out in limited quantities. They harvest using simple baskets and dry them on mats using solar insulation. After drying, they are preserved in calabashes, and non-perforated polythene bags, and are used gradually during peace meal programmes. Market women gather some of the mushroom from small-scale harvesters for sale. The activity helps in conserving the forest, as it is a substitute for meat. Mushroom is of many species, grouped into two main categories (table 7).

⁵Nsuh George is a mycologist who identified samples of mushrooms that were brought by this researcher from the field

Agaricus species	Oyster mushroom species (Plurotus species)	Auriculella(Auriculalia)
Agaricus bisporous sing		
Agaricus basema	Plurotus stratus	Auriculacia auricular
Agaricus campestris	Plurotus sajou caju	Volvacea species
Agaricus lilly (tiny white mushrooms)	Pleurotus pulmonarius	Volvarillia volvacea
White mushroom	Pleurotus sapide	
Agaricus bitoquis	Pleurotus citrinopileatus	
	Pleurotus tremella	

Table 7: Types of Mushroom Species in the study Area

Source: Fieldwork by author and scientific names courtesy of Nsuh George, *Discovery of the Mushroom World (Forthcoming)*.

The *Agaricus* species of mushroom grow on the ground in grassland where grazing of cattle, sheep and goats take place like in Ngongbaa, Kovifem and Mbiame. *Agaricus* mushroom species are umbrella-shaped mushrooms that vary in colour from white to brown, to dark grey. Oyster mushroom species are ear-like mushrooms, harvested from trees.

a. Medicinal Prosperities of Mushroom

Auriculella auriculla specie of mushroom is used for the treatment of malaria, while the *Volvacea species* is used for the purification of blood. The *Volvacea species* is also used to raise the immune system of HIV cases. *Ganoderma* (reddish powder, when crushed, is effective in the handling of diabetes. The local people contacted revealed that although mushrooms are consumed for food and health imperatives, not all mushrooms are consumable, because of their toxicity. The following parameters are used by the local people to differentiate edible from toxic mushrooms.

• Outlook, Smell and Decaying Observation Method

If maggots and flies visit mushrooms, it is signs that it is not toxic. On the other hand, cup-like mushrooms that can hold up to half a glass of water are toxic. Mushrooms with tissues that are hard to tear are also toxic. Implicitly soft tissue and attractive smelling mushrooms are good for consumption.

• Navel -Testing-Method

If one rubs mushroom on the navel and gets an irritation or itching sensation, then it is toxic and non-consumable. Curative fungi is consumable fungi (mushroom)

• Garlic –Testing- Method

With this method, a small quantity of mushroom is boiled with peeled garlic for three minutes, in about two glassed of clean water. If the garlic colour changes to green, black, or red colour, then the mushroom is toxic. If on the other hand, the colour of the garlic is near maintained then mushroom is good for consumption. This knowledge of mushroom accumulated over the years is thanks to the existence of mushroom in the forest. This also shows that the natural environment in Ngongbaa constitutes the energy and food source for the forest people.

G. Suggestions

The paper suggests that the state could assist the local communities to fence the forest limits and reintroduce

extinct wildlife species, to prevent the disappearance of cultural practices dependent on them. The state and environmental interest groups could also reform the forestry/wildlife policy to integrate the quasi-statutory land tenure policies and support local initiatives, financially designed to reforest and restore degraded forest, shrines, sacred forest, to maintain biodiversity, preserve and perpetuate indigenous Knowledge and culture. Also, the state and well-wishers should sponsor the *Ngonso* Cultural Festival during which the *Ngwa-a* ritual and other rich cultural wealth of the Nso and Mbiame fondoms are exhibited.

V. CONCLUSION

The findings showed a strong inextricable win-win link between the Nso and Mbiame people and their forest. The shrines and sacred forest host spirits of ancestors, where *afon* and/or landlords (*ataangvem*) perform sacrifices as a form of respect and homage to their ancestors in exchange for peace, health, and other benefits. The rich biota of the Ngongbaa, Kovifem and Kovkinkar forests, has contributed to the rich and diverse culture of the Nso and Mbiame people. Some cultural activities are sustainable due to the existence of related resources, while others have declined due to the depletion of forest resources.

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