Topography

The Kakuwâ landmass displays a multiplicity of complex geological, hydrological (or water), and edaphic (or soil factors). Much of the area is a fairly uniform plateau punctuated only by the low-lying Yeyi valley in the Southern Sudan. There are also numerous hills and mountains.

Kakuwâ Territories

The whole Kakuwâ territories span from about 3° North to 4° 1" (North) and to about 29° 2" (East) to 31° 2" (East). covering portions of the three countries of Uganda, the Sudan and the Democratic Republic of the Congo. The largest land mass is that of the Yeyi County, followed by that of the Kakuwâ County, while Ko'buko is the smallest of the three. The present international boundaries dividing the Kakuwâ into the three nation-states of Uganda, the Congo and the Sudan, came into being following the *Berlin Conference* of 1884-1885. This conference, attended by the European powers: Britain, Belgium, Portugal, France, Germany, and Spain with the United States as *an observer*, resulted in the consolidation of European hold on, and subsequent division of Africa into "European spheres of influence." As a result, the Kakuwâ were colonized by King Leopold II (and later by the Belgians—known as *Tuku-tuku*, a nick-name given to the these Europeans by the natives in imitation of the sound of the White men's guns when fired). After the death of the Belgian King, the Uganda Kakuwâ were ruled by the British. In the Sudan, the British ruled the Kakuwâ in concert with the Turkish-Egyptians until the *Anglo-Egyptian Condominium* of 1899.

Climate and Weather

Climate is generally defined as the average weather conditions over a long period of time (usually 30 years). Weather is defined as the condition of the atmosphere at any given time and place. In the higher latitudes of the temperate region, 60 to 90 degrees north or south of the Equator, the climate is characterized by the four seasons: winter, spring, summer or the fall. In the lower equatorial regions, however, there are only two seasons: "dry" and "wet" although in much of the tropics the climate is always wet and hot.

Hydrology

The main international boundary dividing the Kakuwâ into *Kakuwa Saliya Musala*, is a natural water-parting area known as the *Congo-Nile Divide (*or *Nile-Congo Watershed).* From here, the rivers flow in opposite directions — east into the Nile in Uganda and the Sudan and—west into the Congo. For instance, the Ugandan rivers in Ko'buko District— ***Dra'bara***, ***Katu***, ***Ore***, ***Apa*** and ***Kochi***—all flow from west to east, and they eventually empty into ***supuri*** (or the Nile). On the other hand, the Kakuwâ County rivers such as, ***A'bu***, ***Kibi***, ***Keri***, ***Kenya*** and ***Kaliga*** flow westwards from the this highland divide as they eventually empty into the ***Congo***, Africa's largest river. The source of the Congo is the ***Kibi River*** which drains much of the County. Also, most of the rivers on the Sudanese side flow from a westerly to a northeasterly direction into the Nile. For example, the source of ***River Kaya*** is *Mount Ati* which also forms the Uganda-Congo-Sudan tripoint. The river empties east into the Nile as a very large and important tributary. Its mouth becomes futile to cross during the rainy season and during the ***Tukutuku*** (or Turkish-Egyptian administration of the Southern Sudan), a ferry is used to run across since the river was too swift, too full, and too dangerous to cross by any other means.

Altitude

The average general altitude of Kakuwâ's territorial expanse is close to 1,000 metres above sea level. Much of the area is a fairly uniform plateau punctuated only by the low-lying Yeyi valley. However, Junker (1971) found that the barometric pressure stood 8 mm lower than on the top of the watershed in the Kinde River whose tributaries drain in a general easterly course into the Yeyi County.

Mountains and Hills

A mountain is generally defined as a feature of the Earth's surface that rises high above the base and has generally steep slopes and a relatively small summit area. Mountains rarely occur as isolated individuals. Instead, they are usually found in roughly circular groups or massifs or in elongated ranges. As a general rule, mountains represent portions of the Earth's crust that have been raised above their surroundings by up warping, folding or buckling, and have been deepened or carved by streams or glaciers into their present surface form. Hills on the other hand, are land forms characterized by roughness and strong relief. However, the distinction between hills and mountains is usually one of relative size or height but the terms are loosely and inconsistently used.

The Kakuwâ landscape is characterized by numerous broken lines of hills and mountains. The mountains are generally convex in shape giving the impression of being volcanic. Apparently, the surfaces have arisen due to exfoliation and peeling off of scale or layers of the gneiss (the course grained metamorphic rock of quartz, feldspar and mica) due to erosion. Such mountains and hills are known to geologists as inselbergs. The most prominent of these hills are the Bala Hills located in the Yeyi County. The highest mountain in the South Sudan is Gumbiri located in Lainya County, Central Equatoria State. Its elevation above sea level is slightly over 1700 meters making it visible as far as Ko'buko District.

The mountains found in the Kakuwâ area are generally convex in shape giving the impression of being volcanic. Apparently, the surfaces have been shaped due to exfoliation and peeling off of scales or layers of the gneiss (the course grained metamorphic rock and quartz, feldspar and mica) due to erosion. Such mountains and hills are known to geologists as inselbergs. The highest Kakuwâ mountain is Mount Liru which, along with its "twin brother", ***Lunyaŋi***, rises to roughly 4,553 feet or 1,388 meters above sea level. The two mountains can easily be distinguished from one another. Looking from the northwest or west shows that Liru is clothed with thick green vegetation while Lunyaŋi is mainly bare at its apex. Mount **Liru** is not at the exact centre of Kakuwâ land geographically. In fact, thanks to the arbitral boundaries created by the colonialists, the southern and southeastern portion of Kakuwâ land is found in the Lugbara areas of ***Aringa*** and ***Terego***. However, ***Liru*** is the focus of all myth and genealogy in much Kakuwâ society.

Seasons in Kakuwâ

A season is the variation of, and interaction between, the sun which designates "dryness" and the rain which designates "wetness." The Kakuwâ land, being about 4 degrees north of the Equator and within the lower latitudes, experiences both semi-tropical and sub-equatorial climatic regimes. The Kakuwâ call the "dry" season ***meli*** and the "wet" season, ***za'be***. These spells divide the year into roughly two halves. It is, however, worth noting that the dry season does not necessarily mean absence of moisture in the air or that during the wet season there is no temperature rise. The two seasons simply conform to the well-known occupational as well as the often anticipated physical characteristics of the landscape in relation to the moisture or heat. In other words, the lives of the Kakuwâ people are tuned to the rhythms of the year in terms of the seasons.

Petezi ti Yapazi ti Kiŋa (The Names of the Months)

- **Kirongole** (the month of January)
- **Pudo** (the month of February)
- **Dirili/Kulumi** (the month of March)
- **Poŋu** (the month of April)
- **Kodruse** (the month of May)
- **Kuma** (the month of June)
- **Yobuwata** (the month of July)
- **Za'be/Kiseri** (the month of August)
- **Ayize** (the month of September)
- **Sunguru (Piro)** (the month of October)
- **Rarawu** (the month of November)
- **Sopa na so** (the month of December)

It is worth mentioning that each month is named in accordance with the ecological and seasonal changes that naturally take place in the surroundings due to the earth's rotation. Also, during the months of March and April, ***nyunyumi*** (the Pleiades), set about an hour after sunset around this season. Other seasonal celestial bodies include: ***Lelego lo Mekora*** 'The Morning Star'; ***Kasiri lo ŋoŋoodu*** 'Meteorites' or 'Shooting stars", ***Lelego*** 'bright Star', ***kolo*** 'sun', ***yapa*** 'moon'***;*** and ***kasiri*** 'stars'

Kudu

Rain is known as ***kudu*** in Kakuwâ. Like other tropical areas, most of the precipitation in the Kakuwâ territories occurs in the form of rain caused by the blowing of the southeast trade winds from across the Indian Ocean. The rain season commences in early March and continues into the later days of November. After the first rains, lush and luxurious vegetation growth occurs. This early vegetation is known as ***leme***, and it is composed mainly of grasses, sedges and shrubs. ***Leme*** provides a much needed and favourable fresh feed and browsing for the goats, sheep and the cows, and a favourable shelter to the multitudes of other animals and insects found in the area.

In Kakuwâ culture, both the cultivation season and the rain season are also referred to as ***za'be*** (***ja'be***). Precipitation from other forms, such as toro or hailstones, is usually minimal. Whereas, over the years no records of the climatic variations in the Kakuwâ land has been kept, Whitehead (1939), did find that the Yei area has a yearly total rainfall of 1,426 mm while nearby Loka has 1,364 mm. In the rest of the Kakuwâ land, however, the annual rainfall totals lie between 1,200 mm and 1,500 mm. These totals are ideal for continuous agriculture exercise for the majority of the year. The months of peak rainfall are July and August, where the accompanying severe thunderstorms, cause the numerous rivers and streams to flood their banks, sometimes causing severe soil erosion and transportation problems. It is fascinating to compare the rainfall models today with those that occurred in the last century.

Rain Types in the Kakuwâ Territory

The Kakuwâ people distinguish assorted types of rains:

- **To'bu** (rain that causes various species of white ants to emerge from their nests or colonies)
- **Wiwiye** (rain for sowing seeds
- **Kudu lo roto ni kapira** (rain that sheds-off flowers)

- **Kudu lo lalayini kulinyi** (rain that washes out ashes)
- **Kudu lo jiye ku kolo ito** (rain that occurs when it is also shining); and
- **Lilima** (drizzle or light rain).

The Kakuwâ Soil Types

The Kakuwâ term for soil is ***kujo*** (*plural* ***kujoto*** and sometimes ***kure***). An area of exceptionally healthy and loamy soil is described as ***kujete***. In its elementary scientific definition, soil is the unconsolidated rock material or substance containing a mixture of organic matter capable of supporting flora and fauna. The presence of soil in any location is a result of the interaction of many variables such as:

- the initial material (bedrock)
- the landform
- the climatic elements
- living organisms
- management or cultural practices, such as agriculture, forestry and animal husbandry; and
- organic matter (really humus) acts as a soil conditioner; this improves soil physical and water holding capacity and the biological (including its microbial population).

Oliver (1958) has made a pedological assessment of the soils of the West Nile Province in Uganda and found that the general basement complex of the Kakuwâ area consists of the schists, gneiss and quartz. These different reddish-brown soils have been grouped together under the general terminology *laterite* (or marram). In Kakuwâ, such soils are known as ***urugu***. These loamy soils occur abundantly in the better-drained parts of the land. The combined alternate action of temperature and rainfall is largely responsible for the development of the laterite soils. The seasonal water-logging and drying under such conditions result in intense lateritic weathering. The actual composition of marram is a cluster of the sesquioxides of iron together with quartz and clay forms. Its reddish colour is mainly due to the iron oxide which tends to solidify the red earth forming a dry and hard reddish-brown pan. In this form marram becomes a sort of limestone which is quarried and used as gravel for surfacing roads. The Kakuwâ people also use marram for plastering, smearing or decorating walls, floors pottery, and crafts.

Because of its abundant rainfall, the Yeyi County is located in an area of relatively high agricultural potential compared to the rest of the Kakuwâ lands, Ko'buko. A fairly detailed description of the soils here has been given for the Zande area surrounding Yambio in the Western Equatoria Province of the Sudan. In fact, the Yambio Agricultural Research Station was set up here in order to study, among other things, local systems of agriculture and methods of improving them. The variation of rainfall patterns in some parts of the Yeyi County has created differences in soil fertility throughout the area. In terms of their potential for cultivation, six "zones" have been theoretically distinguished. These range from *Zone Two* where the rainfall is highest and the soils best, to *Zone Three* where the potential for agriculture is least. This last zone is commonly characterized by infertility, over-cultivation, lack of water, presence of the tsetse fly, the absence of roads, and thin gray soils.

Fauna/Flora

The general name for fauna or animals in Kakuwâ is ***kizakura*** (*singular* ***kizaku***). There are no published works yet which comprehensively describe the Kakuwâ fauna (or aspects of it). For the Kakuwâ, most interest centres on domestic animals: cattle, sheep, goats, chickens, ducks, and a few wild animals, such as reed rats, monkeys, pigs,

guinea fowls, weaver birds, dikdiks (duiks), monkeys, and others. Exotic or non-indigenous species of animals are known to have become naturalized in one or more areas.

Kakuwâ Livestock

All Nilo-Hamites, of which the Kakuwâ form an important component, were originally thought to suffer from "cattle complex" which caused them to "worship" cattle. Today, however, the keeping of large numbers of cattle has been relegated to only a few Nilo-Hamites, and in particular, the Mundari (in the Sudan), the Karamojoŋ (in Uganda), the Masai (in Kenya and Tanzania) etc. Nevertheless, the humped type cattle or ***zebu*** are still available in almost every household of the Kakuwâ in addition to flocks of goats and sheep which normally graze separately.

Su is the collective name for cattle (*singular*, ***kite***) in Kakuwâ. Although the Kakuwâ are essentially peasants today, historical accounts from oral tradition provided by the elders and from the literature reveal that massive numbers of cattle were kept by the Kakuwâ in the past. For instance, while travelling in the Kakuwâ territories in November 1877, Junker (1971) witnessed some of the Kakuwâ prosperity in cattle. He commented: "... the [Kakuwâ sic] cattle tracks gave evidence of riches in stock such as I had seen in no other Negro land. In some places these trodden tracks were like our broad high roads, so that men could march abreast in broad ranks instead of in a single file. The whole scene was one of a peaceful African prosperity for which our predatory expedition [*gwazweh* sic] was out of place." The looted cattle and the ivory were *bet el mir* or Egyptian Administrative Government property. The rest of the animals (including the goats, sheep, and poultry), as well as women, tobacco and hardware, belonged to the robbers and their dependants.

Lidi is the plural for goats (*singular* ***kine***) and most homesteads possess some goats. During the Arab penetration of the Kakuwâ land, there were numerous goats in the area but these, again, succumbed to the invaders. Junker (1971), has described the typical Kakuwâ goats that he came across as being small with short, smooth hair; their hides are all colours, the prevailing being mahogany, black and white, and drab with a dark stripe running along the back. Of course, most Kakuwâ goats today are of all these different colours.

In Kakuwâ traditional culture, goats are sued for various purposes, including:

- **yaŋandru** or sacrifices
- **gbadru** or feast
- **kine na sase** (literally "sister's goat") to be given to ***sase*** (a sister) as part of the ***lunya*** or bride-price payment
- **kine-na-waso** (literally "the aunt's goat") to be given to ***waso*** (the aunt) as part of the bride-price payment process)
- payment of a fine
- performing the ***rusugo*** ritual
- performing the ***ajupe*** ritual

Kebili-zi is plural for sheep and its singular is ***kebilito***. Sheep, like goats, form vital roles in sacrificial activities and for bride-price payment.

Flora (Plants)

There are no published works yet which comprehensively describe the Kakuwâ flora (or aspects of it). Nevertheless, considerable care has gone into establishing and identifying some Kakuwâ flora by consulting appropriate published works and comparing them with received local wisdom, both in terms of scientific classification (with help from the

author's background in Forestry at Makerere University (in Uganda), and his background in the Agricultural Sciences at the University of Guelph (Guelph, Ontario, Canada), and of folklore classification through the Kakuwâ elders. The author is also a keen peasant with strong interest in ecology and astronomy. In addition, several Kakuwâ elders and other experts have been consulted to survey plants and animals in the Kakuwâ landscape. For the Kakuwâ people, most interest centres on agricultural life, especially the cultivation of crops and in forestation activities. Nevertheless, plants considered of *economic* importance (wild or domesticated) have been given common names. Others have been merely described. Where known, such plants are covered in detail in ***Ko'dote*** (the Kakuwâ-English-dictionary). In order to advance knowledge of our indigenous plants, we need immediate preservation, protection and utmost care and enhancement of our flora.

piteyi-ta (***piteyi*** plural) Tamarind (*Tamarind indica*) is a medium to a large evergreen tree reaching 20 to 24 m in height, with a dense rounded crown and dropping branches. It occurs in low altitude woodland, wooded grassland and bush, often associated with termite mounds and most frequently found along rivers in deep alluvial soil. The dry fruit pulp, when freshly prepared, is a light brown colour but it darkens with time. This pulp consists of 8% to 14% tartaric acid and potassium bitartrate, and 30% to 40% sugar. Its medicinal value has been recognized for centuries. It is still used as a laxative and a drink is prepared from it in treating fevers and inflammatory conditions. The leaves, flowers and seeds of the plant can also be eaten. They are prepared in a variety of dishes, while the fruits can be made into jam, preservatives and sweets. When mixed with a determined quantity of water, the solution is added to flavour ***'bolo*** or 'porridge.'

Kakuwâ Vegetation Types

The general altitude, climate, and soil distribution of the Kakuwâ areas have blended together to manifest abundant and diverse vegetation patterns. This bushy nature of the landscape clearly distinguishes the Nilo-Hamitic area from the Sudanic Lugbara area to the east and south. For example, anyone who has ever travelled along the Nyarilo-Arua road can clearly notice the ecological differences between Ko'buko District and Maracha County. Indeed, nearly a century ago, Stingand, travelling along the Congo-Nile divide near the present Maracha area bordering the Kakuwâ clans of Congo, observed: "The frontier highland is well watered, giving birth to innumerable springs ... The difference between the water courses on the two sides of the border is here very marked, for, whereas the eastern or Nile tributaries start in a little swamp of grass or reed, or at most only a little undergrowth protecting them, those on Congo [Congo] side bring the rich tropical growths of that region right up to their sources. ... the banks of the streams on Congo side are particularly well clothed with forest trees; gallery forests, or fluvial avenues, occur ... I have heard the unmistakable cry of the chimpanzee."

Still, today, the streams of the Congolese Kakuwâ contain the largest number diverse species of animals and plants ever found in the Kakuwâ land. The most common plant species is the sedge, *lomi* (*Cyperus papyrus*) found in the rivers such as Keri, Aka, A'bu and Kenya. Nevertheless, only certain sections of these Kakuwâ County rivers are actually covered with the papyrus. It also is interesting to note that Congolese rivers are the only ones in Kakuwâ land that contain papyrus while those streams in Ko'buko District and the Yeyi County contain none The papyrus plant plays a very important part in the lives of the people—including use as a mat, in rope-making and as a cooking salt when its stems are burnt.

Rudu

The Kakuwâ word for forest is ***rudu*** (*plural* ***rudu-wo***). How much of the Kakuwâ land was under forests in the distant past is difficult to ascertain at the present. It is possible that the banks of most rivers have been extensively wooded. This, along with the forests available, and some of the large, still standing trees, shows how extensive forests might have been throughout the Kakuwâ land. Moreover, the continued presence of chimpanzees, and a numerous amount of other monkeys and other tree-dwelling animals, especially along the Congo-Nile divide, attest to massive forestation of this area for a long time. Most importantly, the climatic and soil factors have been generally supportive of massive plant growth in the Kakuwâ territories. The predominant tree species present are the natural hardwoods (angiosperms). There are two types of forests in the Kakuwâ land: forests made of indigenous tree species and forests made of exotic or imported tree species.

Kakuwâ Indigenous Forests

Some of the best ever natural tree species in Africa are located in the Congolese river valleys of A'bu, Kakanya, Keri, Kaliga, Kibi and Kenya, in the Kongo Kakuwâ. The majority of these trees grow on the average, 30 metres in height, with diameters breast height (dbh) exceeding 30 centimetres. Their largely branch-free and thick trunks, are normally covered with ferns, mosses and low herbs. The woody climbing plants of the species, lianas, cover the stems of the savanna trees and compete for sunlight. The common species of epiphytes are *Platycerium andinum* (the staghorn) and *Polypodum ulei*. These plants grow attached to the trunks and branches of the trees and have no contact with the soil. *Platycerium* and *Polypodum* look like giant bird nests and may hold snakes, monkeys and other small animals. Other spots in the forests may be covered by low palms, tree ferns, herbs and shrubs. In general, the forest canopy may be so intense as to cause the forest floor to be bare. It is always a great pleasure to walk in such bare areas where the air is cool and fresh. Only the sounds from the different animals as well as an occasional leaping of a monkey from one tree to another, may be the only scenarios breaking the general tranquillity in the forests.

Forests provide an excellent way of maintaining the delicate, but rich ecosystem (the fauna and flora). Their importance as providers of fuel in the form of firewood and charcoal, is well-appreciated. They also supply the local inhabitants with timber and other building materials. Areas adjacent to forests are often fertile and moist enough to support the growing of rice, sugarcanes, maize, bananas and various vegetables year round. Kakuwâ tradition also strongly emphasizes that certain special forests called laru not be entered into nor any of the trees, mushrooms, honey, or firewood, be removed from them, because they are under the custody of the Bura (the rain-predicting chiefs of the Kakuwâ). In order to gain access to such a forest, a special permission should be obtained from the bura elders or *rain-predictors*. For these reasons and other reasons, the Government of Uganda has designated a tiny central Forest Reserve near Mount Ke-i in the Ko'buko District's area of Ludrara, and a small patch of trees around Mount Liru, as "protected areas." Another small and light natural forest at Ozubu near the Kakuwâ-Aringa border to the east, falls under the same "protected" category.

Kiriyo (*Bamboo* species)

Bamboo plants are known in Kakuwâ as ***kiriyo*** (*singular* ***kiriti***) and they belong to the family, Gramineae. They are generally characterized by a hollow stem but those found in the Kakuwâ land have solid stems. Botanists link the growth of bamboos in an area to good natural watering and a favourable temperature for growing. In Ko'buko, a large natural softwood forest of bamboos is situated just east of Nyarilo, about six kilometres along the road to Nyai, Yumbe and Moyo near the Anyupira, Payimi, Kaliwara and Ombaci clan areas. A portion of this forest also extends into the Lo'bijo stream near the Nyayi Trading Centre. In addition, bamboos cover the entire source of the Katu River in the

A'bele-Dimu-Ombaci clan areas just southeast of Nyarilo. A tobacco leaf buying centre was built in the heart of this bamboo forest in the 1960s, and it has since come to be known as the *Senta* (or Centre) by the Kakuwâ of Ko'buko District.

Uses of Bamboos in Kakuwâ Society

The bamboos practically appear in every aspect of Kakuwâ culture ranging from building, weaving materials and crafts to storage and conveyance of things. For example, mature bamboo plants can be used as poles, beams or reeds for building. The plants are also used in the making of the most popular Kakuwâ food storage facility, ***gugu*** (the granary). Various types of baskets, among them, the popular ***gupa***, are also made out of bamboo fibres. Another popular bamboo product is a container called ***rege*** that Kakuwâ women use for conveying harvests, such as cassava tubers or sweet potatoes from the field to the home or the nearby open air market. A number of grain and legume threshing devices are also made out of bamboo stems. Both women and men utilize the bamboos for different purposes. Perhaps the greatest usage of bamboos by men is in the making of traditional hunting bows. Bamboos offer special advantages in this regard for being easy to work upon, easy to obtain, being flexible (plastic), displaying resistance to termites, decay and the climatic elements. These various and flexible uses of the bamboo have found widespread acceptance throughout the Kakuwâ areas and also among the tribes adjacent to them. Other bamboo uses include fencing and the making of special fishing sieves called ***imbiliŋa***.

Exotic Forests in the Kakuwâ Territories

The colonial regimes of both Britain and Belgium had introduced exotic tree species into the Kakuwâ land in the last one hundred or so years. Most of these trees were extensively planted in plantations. The following are the major existing exotic trees.

karatusi or *Eucalyptus*, belongs to a large genus of evergreen trees of the family Myrtaceae. In the 1960s, the British American Tobacco Company (BATC) introduced a large-scale cultivation of various eucalyptus species throughout the West Nile Province. The artificial forest plantations have since expanded in number, size and location in Ko'buko District. Most such forests averaged hundreds of square hectares in size in 1979. This, of course, was the year the Kakuwâ of Uganda abandoned their valuable land to escape the ***wakombozi*** or "liberators" of Uganda. Among the existing major plantation forest sites in Ko'buko District have been:

- **Apa** (along the **Apa River**, just south of **Dranya)**
- **Loŋira** (in **Ludrara County**, along the **Kochi River**)
- **Payimi** (along the road to **Yumbe** and near the bamboo forest, in the **Kaliwara** areas).
- **Metino (**along the **Apa River**)
- **Kimu** (along the **Atu River**)
- **Lima** (along the **Dra'bara River**)
- **Miloko** (along the **Uya River**)
- **Dranya** (along the **Apa River**)

Among the Kakuwâ of Congo, eucalyptus trees are known as ***kalapuru.*** Unlike the clearly defined economic and ecological uses for which they were intended in Uganda, the colonizing Belgians introduced this tree species in the area without any clear commercial or ecological purpose. Nevertheless, today, Moze (also known as Kumuro), Leyiko Rumi and A'di, are enveloped by eucalyptus trees. Some residents of both Ko'buko District and the Kakuwâ County, have also grown their own eucalyptus trees for local use, especially in building houses.

Another principal exotic tree species found in the Kakuwâ land is the strong, durable and yellowish brown ***tika*** or *Tectonia grandis*. This tree species was first introduced into the area by the Belgians at the turn of the 19th century. It is now extensively grown about two kilometres from the town of Yeyi on the way south to ***Kaya***. Similar teak plantations are also found in and around **Yei** town. Some of the trees have been planted in lined and solitary stands to provide an aesthetic beauty to the town's character. The largest teak plantation is located at ***Kegulu*** which is roughly eight kilometres west of ***Yeyi*** town on the road to *Aba-Lasu-Keliko-Wotoka* areas. Another comparatively large teak plantation exists around the *Yei-Juba Road*, particularly at Loka. Everywhere in the Yeyi County, teak trees are commonly found on private lands and surrounding homesteads. The hard wood is highly valuable in comparison to the eucalyptus trees. Besides being durable, the plant is also beautiful. As such, the plant finds wide usage in buildings, coffin-making, furniture-making.

Other exotic tree species include ***sambiya*** and ***lira***, all of which are normally grown around homesteads and are used in building homes.

Savanna Grasslands

Generally-speaking, the word ***droru*** refers to 'grass' or 'vegetation.' Only very few of the Kakuwâ mountain and hill tops are ever devoid of any vegetation at any given season. Even then, the xerophytic plants, such as the locally known ***legereme*** (aloes) and cacti are usually found in abundance on certain moisture-laden spots of the mountains and hills, and in the rock crevices. Other mountain or hill side grasses like the ***siye,*** are perennially cut, bundled up and expertly made into brooms. Such brooms are traditionally used for sweeping various surfaces, including house floors, grinding stones, school yards and even offices. These grass species include ***tiya*** (the popular spear grass) which is ideally used for thatching roofs of houses, granaries, ***koko*** (or chicken coupes), for lighting fire, as a mulch or as a mat, etc.

Kudi and ***angalaa***, are other grass species—of the Elephant grass variety—used primarily in house and granary roof thatching. Its mature and fresh stems known, as ***indiripi***, are used by Kakuwâ boys as "training" arrows while the dried stems referred to as ***galaka***, are usually gathered and burnt to attract white ants at the height of ***to'bu*** or 'rain that brings forth the white ants.'

Savanna Woodlands

The major characteristics of the savanna woodland trees are that they:

- shade their leaves during the dry season;\
- contain very few lianas or epiphytes but plenty of shrubs and herbs underneath;
- are highly branched, with some like the acacias forming huge umbrellas as they attempt to capture as much sunlight as possible; and
- possess thick and rough barks to withstand the annual fires, animals rubbing themselves upon them or attempting to debark them, and to conserve moisture during unfavourable times, such as the ***meli*** (the dry season).

Some of the most economic savanna tree species found in the Kakuwâ territories include:

Kumuro *(Butyrospermum paradoxum* also known as *Butyrospernum parkii*), and commonly referred to as Shea butter. This plant grows wild in much of the savannah woodlands of the Sudan-Sahellian region of Africa. It is particularly abundant in much of the Kakuwâ areas but the greatest concentration occurs at Mi'digo (near the Uganda-Congo and Sudan border). The fruits of this oil-producing tree, are usually gathered after they have fallen off the branches in the

spring or near the beginning of the rain season. Bats, insects, birds and humans eat the green flesh of the fruit leaving the smooth, hard and oval or chestnut-shaped protective coating of the seed or kernel intact. Parties of women and children then collect the fallen nuts in the bush by searching the ground under the trees. When a large quantity has been gathered, the nuts are brought home in baskets where they are spread out on the compound or on a rock surface to dry in the sun. Next, the dried nuts are broken up, re-dried, roasted and finally, ground between stones by the women.

The resulting black mass is crude and the oil is obtained when this mass is distilled in warm water and then allowed to settle. Some of the European "explorers" in the Southern Sudan, obviously ignorant of the importance of the ***wele-na-kumuro*** or 'Shea Butter oil', in the African culture, described it as being "rancid" and "nauseous." Yet, it was a vital and highly prized scented ointment, and for the slave girls who oiled their heads and bodies to protect themselves against the burning rays of the sun that caused the skin to perch and crack. The Kakuwâ people use ***kumuro*** oil for cooking in addition to being used to perform various smearing, medicinal and spiritual roles. It is in great application as domestic cooking oil, soap manufacture, and cosmetic industry. *Bodyshop* (now *Este Laurier*), the main retailer of natural beauty products in the world, is already the main consumer of Africa's Shear butter.

Wuki or *Borassus flabellioformis*, is a tall and cylindrical plant whose stem is hollowed by the Kakuwâ as a beehive and then hung onto forked-tree branches to attract bees for honey-making. This soft wood also provides valuable poles and pillars for supporting large houses. The fruit of the ***wuki*** plant turn from green to reddish-brown when ripe. After falling off the stem, they are gathered and softened by pounding against a hard surface. This action yields a sugary paste-like substance which is chewed off the fibres and then swallowed. This was sometimes the main lunch for most schooling village and primary school children in Ko'buko in the 1960s. In addition, Kakuwâ women use the parallel-veined leaves of the plant to weave ***gupa*** or baskets, and an assortment of other crafts. ***Yakanye***, the Borassus seedling, is sometimes bolied and eaten as a snack.

Nyungbuli or *Kigiliae spathodae* has sausage-shaped fibrous fruits which hang from the branches. Kigiliae is peculiar to Africa and it plays an important part in the Kakuwâ traditional culture.

Kúlúkú or *Cucurbita maxim* is a creeping plant which is frost and heat resistant. Its fruits may weigh as much as 50 kilos. Its numerous and poisonous seeds are removed by first piercing the mouth of the fruit and then submerging the whole fruit in shallow water to soften and hence reduce the grip of the seeds on the inside of the gourd. The resulting seed-free gourd is further cleaned and dried and even be "perfumed". The gourd is a very old and important storage facility for seeds, fruits, oil, water and milk among the Kakuwâ. It is probably the most useful and versatile traditional cultural fruit known in Kakuwâ society.

Dúlù or *Ricinus communis* has seeds which mature in capsules, and these can be freed of their valuable product ***wele-na-dulu*** or (castor oil) even though its seed coats are poisonous. Castor oil is used as a healing and soothing ointment.

Plants with Soap-Like Properties

Certain wild plants have been identified as having unique qualities for making soap and detergents. These include the leaves of the paw-paw, the roots of the plant known as ***liwu-liwu*** (and quite often also referred to as ***yawa-ti-kuli-kuli***). The fibres of the special tree species, ***teri-ya***, have excellent shampooing qualities against head lice.

Indigenous Fruits, Mints, Resins

- **lomu'da** produces delicious edible fruits
- **konjulu** produces delicious edible fruits
- **malaa** produces delicious edible fruits
- **ula** produces delicious edible fruits
- **konyuke** produces delicious edible fruits
- **piteyi** 'Tamarind'
- **libani** produces delicious a sap that solidifies into a scent
- **muda** produces delicious edible fruits
- **'bito** produces delicious a scent
- **'bule'bule** produces resin
- **karagba** produces delicious edible fruits
- **ajili** produces delicious edible fruits
- **kilikize** produces delicious edible fruits
- **murukukuwe** produces delicious edible fruits
- **yugulidi** produces delicious edible fruits—underground
- **lijiba** produces fibres, and mints
- **likinya** produces delicious edible fruits
- **loruko** produces delicious edible fruits

Exotic Fruits

Like the exotic forests in the Kakuwâ area, various kinds of exotic food crop species have been introduced into the Kakuwâ territories since the slave trade times. These are always grown in the agobu (or backyard) areas close to homesteads. Imported plants have, of course, foreign names, mostly Arabic, English and Kiswahili. Examples: *piripiri* 'hot pepper', *manga* 'mangoes', *lomunu* 'general name for citrus fruits', *ananasi* 'pine apple', payipayi 'paw-paw', ngolo-ngolo or guava, ***bataya*** or water melon etc.

Kakuwâ Medicinal Plants: *Luga*

The Kakuwâ refer to herbal medicines as ***luga*** (singular, masculine ***lugeyi***). To the native Kakuwâ people, lugeyi means far more than the drug to cure a disease; it means also the poison to kill an enemy, the charm carried to ensure a safe journey, or witchcraft and magic with their influences, both good and evil. Some of the healing properties ascribed to parts of trees have been proven, as it has been that others are poisonous to a greater or lesser extent. However, it is certain that much of the healing and many cures claimed are due to faith, either in the doctor or in the reputation of the 'medicine.' Sometimes the use made of a particular part of a tree is associated with a certain property of the tree; for instance, one with milky latex might be used to increase lactation, either in domestic animals or in humans. Even with the advance of Western medicine and the establishment of dispensaries and chemists in rural areas, many African herbalists and witch- doctors continue to flourish, having set themselves up in peaceful opposition to their modern counterparts, or even in a complementary capacity, and drawing their custom from people impatient with the slow treatment they receive in the hospitals.

Certain Kakuwâ medicinal plants are always grown in secret locations throughout the backyard gardens, ***agobu*** (*feminine*). Others are found in among the various bushes. Because of their importance, only the expert herbalists know the specific names of these plants, descriptions and functions. In general, the proper Kakuwâ ***luga*** are perennial bulb-

forming herbs that form the family Amaryllidaceae and commonly called daffodil. The most common amaryllis are found under the genus *Narcissus*. Leaves of daffodils are long-bladed while their flowers are large and yellow with white petals which are fused or united into a larger tube or trumpet. Most herbs may be administered by rubbing (massaging) or by inhaling or by ingestion (swallowing). They perform everything from treating snakebites to inducement of more milk in lactating animals to warding off evils in the home. Other popular but wild ***luga*** *species* include: ***zizingba***, ***lokudu'ba***, ***pilo-pilo***, ***longarudu***, ***walele, toli-lo-gboro***. Still, there are other herbs which are said to have love-portion qualities, potential wealth qualities. Others are believed to enhance child birth. These are collectively termed ***a'diyo***. We obviously need more understanding and protection of these very Kakuwâ plants.

A description of a typical medicinal plant in the Kakuwâ language has been recently given by a respected Kakuwâ medicine-man as follows: *Roro lolu lo kuba mimiye—roro—kuba mimiye, do nyogu le'de lo kedini luŋu adi* ***ukaraki****—suwo ti lepeŋa kine be drorute 'bo, lubo-lubo ka yu, a lotuluru. Do wodru-wodru, muko ŋani nye na joka. Muko ŋani nye na mari do. I waka lo ŋo lo luŋu adi yepingo: do yepingo adi soti-soti. 'Bo giliya kilo a 'dumundra kaseŋa wini-ko, kilo ni, ti yepingo kilo. 'Bo likaŋa lo, kedini lo luŋu adi* ***lukudu'ba****—weweki-weweki, i kedini mugu ni.* ***Pilo-pilo****, lo luŋu adi* ***ruwe*** *ini de lo—potroru. Ilo kedini de, 'do, logu na lepeŋa na gbo ku mugu nonu na naga anyoki. Kedi lo luŋu* ***tititi*** *lo, lubo-lubo, bila 'do, ka. Do 'bokundra kedini ŋani lo. Ki do a 'bokundra, do wodru-wodru lepeŋa. Ku a joka, lepeŋa puru be le–nakpe. Do mozu nye. Ki do a mozu, druga lepeŋa kokok-u.* ***Anyakanya-ta*** *na, a winya: yi suzi kazu lowiya kaya. 'Bo, muko na lepeŋa na, a wini. Do joga-joga. Lepeŋa a bila 'do puru a nakpe.* ***Kumuri*** *lo lepeŋa, bila ku ŋutu lo kikile, 'do, do jojoga. Ki do a joga, nye na matara do. Totodra kile na.* ***Koligi*** *lo, do 'bokundra kukurute na lepeŋa na. Ki do a 'bokundra, bila do joga-joga. Do matadru deŋa.*

Ku'bulu

Ku'bulu are mushrooms (*singular* ***ku'bulu-ta*** or ***ku'bulu-te***), occur as a result of the favourable weather (especially temperature and humidity) and soil conditions, over a dozen species of ***ku'bulu*** or mushrooms have been known to sprout in the Kakuwâ territoritories. Like the various types of insects, each mushroom species has been elaborately described and named. Its size, name, smell, colour, taste, the nature of the antihill from which it sprouts, economic importance are also identified. Among the most important species are:

- ***Maru***, the largest known in the area; it can grow to over 30 cm in height. It is an edible kind of *Agaricus*; usually grows in groups of three to over a dozen.
- ***Drisu*** an edible mushroom species which possesses long stocks and deep roots. It is brown in colour and it sprouts from tiny and almost invisible low-level anthills called ***ji'ba*** which are scattered throughout the Kakuwâ plains.
- ***Karadri*** is, in terms of colour, taste, structure and structure, similar to the species known as ***agbu*** described below. It also sprouts in large quantities from the ***jiba***.
- ***agbu*** resembles ***karadri*** above in many respects but it tends to cover a smaller area compared to the latter. It is always accompanied by a characteristic sandy appearance when sprouting. In addition, it is relatively longer in size and whiter in colour compared to the ***karadri*** species; it is edible.
- ***Moko lo-kuwe*** mainly sprouts in arable lands and solitarily; it is edible
- ***Liyoro*** sprouts in groups, and in areas previously under the occupation of cattle. It appears that cow-dung provides a very valuable natural environment for the mushroom species to grow. Kakuwâ women collect large quantities of the mushrooms for consumption.

Attractions

Ligo in the Adumi Sub-County of the Kakuwâ County contains the notorious former slave prison, known as ***Kanda,*** located close to CECA-20 Church (200 metres west). The name *kanda* is not a Kakuwâ word but was given by the Arabs who had dug a very deep hole in order to hold their captured slaves the 18th century. During that time, only one prisoner was known to have escaped from the *kanda*. His name was ***Baba Di***, and he is said to have sailed from the village of Azu near the present town of Baaze-Kengezi which is located closest to the Congo-Sudan border. Baba's second name, *Di*, was a nickname given to him when he jumped off the high prison wall and hitting the ground making the characteristic landing sound, Diiii!!!

At its peak, the ***Kanda*** occupied an area of some 40,000 square meters as it measured 200 meters by 200 meters. Its rectangular shape contained entries measuring a meter on the western or left side, on the northern or upper side, and on the lower or southern part. The eastern or right side of the prison contained the main entry which was 4 meters wide. In the inner part of the prison, huts were built and there was a hole inside the prison that was 6 meters deep and 4 meters wide. The Kanda should be a great attraction and an important educational historical site.

Another very important tourist site is the cave complex located along the Congo-South Sudan border, between the town of **Kaya** and **Baaze-Kngezi**.

Th ***Mount Ke-i White Rhino Reserve*** in Ko'buko District is also an excellent tourist attraction.

Liru Rural Development Association, Landro Entertainment Club, is a very well-organized cultural group in Ko'buko District, and it provides music, dance, eduction and entertainment to the Kakuwâ people and surrounding areas. The group is lead bby **Aya'ba Isa Arijabau Urisiya**.

Other "modern" Kakuwa artists have sprung up throughout ***Kakuwa Saliya Musala*** and in the diaspora. These need our attention and support.