

Kalinzu Central Forest Reserve

UGATIPA9

Country: **Uganda**

Administrative region: **Western (Region)**

Central co-ordinates: **-0.40806 N, 30.05998 E**

Area: **140.6km²**

Qualifying IPA criteria

A(i)

IPA assessment rationale

Kalinzu CFR meets sub-criterion A(i) of the IPA criteria, with seven Endangered and seven Vulnerable taxa known from this site. [Any additional info about how it compares to other sites re: richness in threatened species/ C(iii) info]

Site description

Kalinzu Central Forest Reserve is located across Bushneyi, Rubrizi and Mitooma Districts of Western Region along the Albertine Rift escarpment, 20 km east of Lake Edward. This site occupies a landscape of undulating hills dominated by mid-elevation, deciduous forest and is an important conservation corridor, connecting the Queen Elizabeth National Park complex of protected areas to the west with Kasyoha-Kitomi in the east. This site was visited in 2023 as part of Uganda TIPAs fieldwork.

Botanical significance

Kasyoha-Kitomi is an important site for national and Albertine Rift endemics, many of which are threatened. Of great importance is *Diospyros katendei*, a Critically Endangered tree that is endemic to Kasyoha-Kitomi and is only known from a single individual. Searches have been undertaken to locate this species in recent years but there have been no further individuals found and, as a *Diospyros* species, it is highly likely to have been targeted for its high-quality timber (IUCN SSC East African Plants Red List Authority 2013). Another threatened tree species *Ficus katendei* (EN), similarly named after the Ugandan botanist Anthony Katende, may have also been extirpated from this site. While this species is found at one other site, Bwindi-Impenetrable National Park, the only known individual at Kasyoha-Kitomi was felled to build a bridge (Gereau et al., In prep.). However, there are large areas of Kasyoha-Kitomi that have yet to be searched for either of these species and, therefore, it is possible that they are still extant at this site. Further research is urgently needed, particularly given the threats to this site, to understand whether

there is an opportunity to conserve *D. katendei* and *F. katendei* here; particularly for the former of the two which may be saved from extinction through conservation at Kasyoha-Kitomi.

This IPA is also of great conservation importance for several other threatened species. *Kasyoha-Kitomi* is, for instance, the only site nationally from which *Aframomum spirologulatum* is known and one of only two protected areas globally in which this species occurs. In addition, another Endangered species *Uvariadendron magnificum*, was described as a “dominant understorey tree” when collected in 1969 (Synott #540) and has been collected more recently in 2017. This species is endemic to Uganda and Kasyoha-Kitomi likely represents the most important site for this species nationally. This IPA is also an important site for *Brachystephanus roseus*, an Albertine Rift endemic known from only two other protected areas in Uganda.

Six Vulnerable species are known from this IPA. One of these species, *Musanga leo-errariae*, was collected during 2023 fieldwork by the Uganda TIPAs team at this site. This tree is an Albertine Rift endemic and occurs occasionally in recently opened gaps in the canopy at Kasyoha-Kitomi. Another Vulnerable species recorded on fieldwork is *Rinorea tshingandaensis*, this species was uncommon at this site and globally only known from Uganda and eastern D.R. Congo (Kalema & Beentje, 2012). Two other Vulnerable species, *Crotalaria adenocarpoides* and *Vernonia parapetersii*, were collected in 1970 on Lubare Ridge in rocky, grassland habitats (Lye #5473, 5480). In recent decades, large areas of this grassland have been replaced by forest plantation and some small-scale agriculture (Google Earth 2023). Some small areas of Lubare Ridge continue to support grassland and so it is of great importance that further surveys are undertaken to ascertain whether these grassland species persist within this IPA.

Vulnerable timber tree *Mimusops bagshawei* was likely observed on fieldwork in 2023 for the Uganda TIPAs project, although it was not possible to collect leaf or fertile material to confirm this determination. This fieldwork did, however, find a new record of *Massularia acuminata* for both Uganda and the Flora of Tropical East Africa region. There are likely several more plant species that are of botanical significance at this site. Further research is needed, particularly in harder to access sections, to fully categorise its biodiversity importance.

Rytigynia bagshawei var. *lebrunii* was collected during fieldwork by the Uganda TIPAs project in 2024. This species was previously only known from the Central Africa floral region (D.R. Congo, Rwanda and Burundi), although this species was collected at Itwara during the same fieldwork. Further surveying will likely reveal additional interesting species from this site.

Habitat and geology

Kalinzu Central Forest Reserve lies on the edge of the Albertine Escarpment and, with neighboring Maramagambo, occupies a continuous forest gradient across over 900 m in altitude. This is of great significance for conservation of the forest species as the ecosystem likely has some resilience against climatic changes. Kasunju Hill represents the highest point in the reserve and a collection of the Endangered species *Pavetta ankolensis* was made on this hill. The forest overall is underlain by gneisses and schists, with some prominent quartzite ridges, with deep red loamy soils (Howard 1991; Howard, Davenport & Baltzer 1996).

Kalinzu CFR is categorised as median altitude moist evergreen forest. Parts of the reserve are dominated by *Parinari excelsa* while areas of mixed forest consist of species such as *Drypetes* spp., *Strombosia scheffleri* and *Funtumia africana* (Hashimoto & Tashiro 1999). The Vulnerable tree species *Musanga leo-errerae* is a common pioneer at this site (Kalema & Hamilton 2020) and its presence defines a distinct type of secondary forest at the site, described by Hashimoto & Tashiro (1999) as “Musanga-dominated secondary forest”, although such areas are mixed in nature with other species such as *F. africana* similarly abundant.

Kalinzu Eco Lodge was under construction during the Uganda TIPAs visit to the site in 2023. The site was accompanied by a new access road of around 0.5 km. We observed the growth of invasive species such as *Lantana camara* and *Solanum* sp. growing on the newly created forest margins here. While the presence of an Eco Lodge may well provide sustainable livelihoods and offer greater security from threats such as logging and encroachment, care is needed to ensure that further disturbance to the ecosystem is limited.

Conservation issues

The site has previously been targeted by pitsawing, and some illegal logging continues today (CUPTD Workshop 2023; Lwanga 1996). For instance, the area designated as a Nature Reserve within Kalinzu, west of Kasunju Hill, has previously been heavily exploited for timber (Howard 1991). To address this issue, a collaborative forest management group, the Ndangara and Nyakiyanja Parishes Tutungukye Group, was established at Kalinzu following an initiative led by the National Forest Authority and the World Wide Fund for Nature (WWF 2016). The group has been designated a 350 ha area of land within the north of the forest reserve for planting trees, beekeeping and plots for food cultivation. Alongside this they are also able to collect non-timber forest products from part of the forest (WWF 2014). In turn, the CFM group has agreed not to extract timber or poach animals elsewhere in the forest and report others coming to the reserve to undertake illegal activities. Further support for tree planting in communities surrounding Kalinzu CFR, in the parishes of Rubirizi and Mitooma, has been delivered through the Trees for Global Benefits initiative, led by Ecotrust and Plan Vivo. The initiative is a carbon offsetting scheme which links carbon markets to rural livelihoods through planting of native tree species, including threatened species, and small-scale use of species for provision of fuel and timber to reduce pressure on protected areas such as Kalinzu (ECOTRUST 2020).

Kalinzu also benefits from a significant chimpanzee population, the conservation of which helps support the protection of the entire forest ecosystem. The site has been recognised as a Key Biodiversity Area due to the presence of this species (Plumptre et al. 2019).

IPA criterion A species

SPECIES	QUALIFYING SUB-CRITERION	≥ 1% OF GLOBAL POPULATION	≥ 5% OF NATIONAL POPULATION	1 OF 5 BEST SITES NATIONALLY	ENTIRE GLOBAL POPULATION	SOCIO-ECONOMICALLY IMPORTANT	ABUNDANCE AT SITE
<i>Brachystephanus roseus</i> Champl.	A(i)	✓	✓	✓	–	–	Unknown
<i>Dasylepis eggelingii</i> J.B.Gillett	A(i)	✓	✓	✓	–	–	Common
<i>Globimetula kivuensis</i> (Balle) Wiens & Polhill	A(i)	✓	✓	✓	–	–	Unknown
<i>Tiliacora latifolia</i> Troupin	A(i)	✓	✓	✓	–	–	Unknown
<i>Kylicanthe bueae</i> (Schltr.) Farminhão, Stévert & Droissart	A(i)	–	✓	✓	–	–	Unknown
<i>Polystachya hastata</i> Summerh.	A(i)	✓	✓	✓	–	–	Unknown
<i>Polystachya laurentii</i> De Wild.	A(i)	✓	✓	✓	–	–	Unknown
<i>Polystachya nyanzensis</i> Rendle	A(i)	✓	✓	–	–	–	Unknown
<i>Prunus africana</i> (Hook.f.) Kalkman	A(i)	–	–	✓	–	✓	Occasional
<i>Pavetta ankolensis</i> Bridson	A(i)	✓	✓	✓	–	–	Unknown
<i>Pavetta bagshawei</i> S.Moore var. <i>leucosphaera</i> (Bremek.) Bridson	A(i)	✓	–	–	–	–	Unknown
<i>Psychotria bagshawei</i> E.M.A.Petit	A(i)	✓	✓	✓	–	–	Unknown
<i>Zanthoxylum mildbraedii</i> (Engl.) P.G.Waterman	A(i)	–	✓	✓	–	–	Occasional
<i>Mimusops bagshawei</i> S.Moore	A(i)	–	–	✓	–	–	Unknown
<i>Musanga leo-errerae</i> Hauman & J.Léonard	A(i)	✓	✓	✓	–	–	Frequent
<i>Polystachya meyeri</i> P.J.Cribb & Podz.	A(i)	–	✓	✓	–	–	Unknown

SPECIES	QUALIFYING SUB-CRITERION	≥ 1% OF GLOBAL POPULATION	≥ 5% OF NATIONAL POPULATION	1 OF 5 BEST SITES NATIONALLY	ENTIRE GLOBAL POPULATION	SOCIO-ECONOMICALLY IMPORTANT	ABUNDANCE AT SITE
<i>Brazzeia longipedicellata</i> Verdc.	A(i)	–	✓	✓	–	–	Unknown

IPA criterion C qualifying habitats

HABITAT	QUALIFYING SUB-CRITERION	≥ 5% OF NATIONAL RESOURCE	≥ 10% OF NATIONAL RESOURCE	1 OF 5 BEST SITES NATIONALLY	AREAL COVERAGE AT SITE
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General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Moist Montane Forest	–	Major
Forest - Subtropical/Tropical Moist Lowland Forest	–	Major
Artificial - Terrestrial - Plantations	–	Minor
Artificial - Terrestrial - Arable Land	–	Minor

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Nature conservation	–	Major
Agriculture (arable)	–	Minor
Tourism / Recreation	–	Major
Forestry	–	Minor
Harvesting of wild resources	–	Minor

Threats

THREAT	SEVERITY	TIMING
Transportation & service corridors - Roads & railroads	Low	Past, not likely to return
Agriculture & aquaculture - Annual & perennial non-timber crops - Small-holder farming	Low	Ongoing - stable
Agriculture & aquaculture - Wood & pulp plantations	Medium	Ongoing - stable
Invasive & other problematic species, genes & diseases - Invasive non-native/alien species/diseases	Low	Ongoing - trend unknown
Human intrusions & disturbance - Recreational activities	Unknown	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Kalinzu Central Forest Reserve	Forest Reserve (conservation)	protected/conservation area matches IPA	141

Conservation designation

DESIGNATION NAME	PROTECTED AREA	RELATIONSHIP WITH IPA	AREAL OVERLAP
Kalinzu	Key Biodiversity Area	protected/conservation area matches IPA	141

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