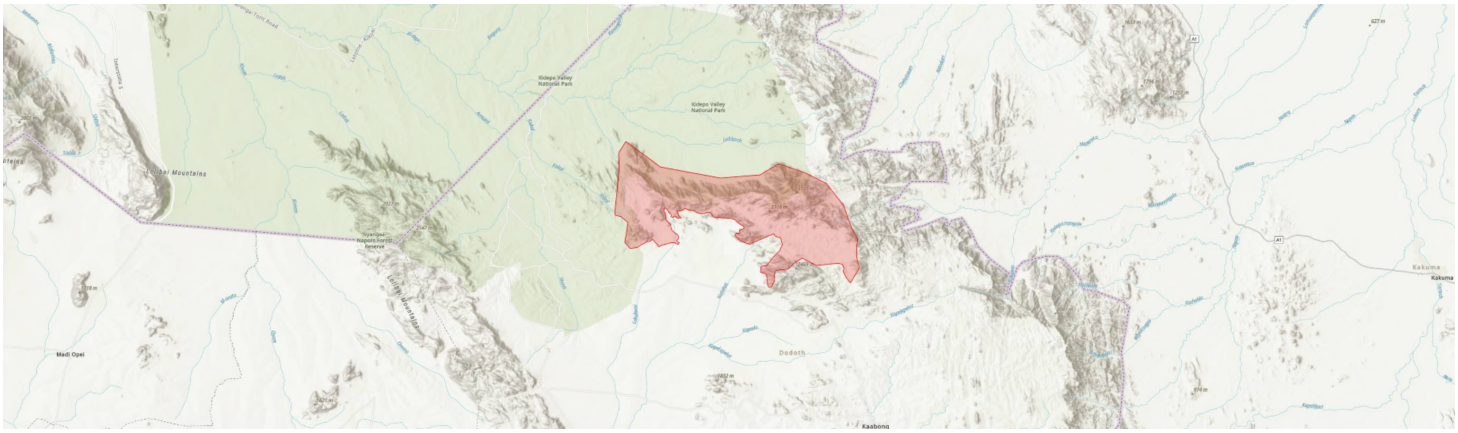
Mount Morungole

Morungole Central Forest Reserve (Test version)

UGATIPA38



Country: **Uganda**
Administrative region: **Northern (Region)**
Central co-ordinates: **34.83670 N, 34.01511 E**
Area: **342km²**

Qualifying IPA criteria

A(i), A(iv), B(ii)

IPA assessment rationale

Morungole CFR qualifies as an IPA under criterion A(i) triggered by the presence of the Endangered Aloe lukeana for which this is the most important site globally, and the Vulnerable Aloe tweedieae. It also qualifies under criterion A(iv) due to the presence of a population of the range-restricted Aloe canarina, which is currently assessed as Data Deficient but is likely to be threatened. Lastly, it is one of Uganda's top 13 richest sites for endemic plant species, triggering criterion B(ii).

Site description

Morungole Central Forest Reserve (CFR) is located in between Karenga and Kaabong districts, north-eastern Uganda. The reserve lies approximately 35 km north of Kaabong town and forms part of the south-east boundary of Kidepo National Park (Davenport & Howard 1996). The mountain top is home to a minority indigenous community of the “Ik” people who have a unique culture different from that of the neighbouring Dodoth Karamojong.

Botanical significance

Whilst the flora in Morungole CFR is not especially diverse, it is characterised by a reasonable number of rare and/or restricted-range species of which some are of conservation importance. A total of 185 tree and shrub species were recorded in this reserve (Lwanga 1996). The botanical significance of this IPA is likely to increase with additional surveys of other plant lifeforms. Nonetheless, it is the principal site globally and type locality for the Endangered Aloe lukeana; a montane species occurring at 2300-2750 m in elevation on grassland with many herbs on rocky slopes, which is abundant on the upper reaches of Mt Morungole (Cole 2015; Cole & Forrest 2017; Richards et al. 2022). This taxon has otherwise also been recorded on the South Sudan side of the Imatong Mountains. So far, there is no documented evidence on the use of this species for medicinal purposes (Anywar et al. 2022).

Popluations of two further rare Aloe, A. tweedieae (VU) and A. canarina (DD), have recently been discovered on the foothills of Mt Morungole in the extreme southeast of the CFR (Cole 2015; T. Cole, pers. comm. 2023). Aloe tweedieae was noted to be common on rock outcrops and open grassland on the road north of Kaabong whilst A. canarina was noted to be occasional. This latter species is highly range-restricted and uncommon and is facing increased threats from tree cutting for firewood and increased frequency of burning to clear dried grass within its Ugandan range (Cole & Forrest 2017), hence the species is likely to be reassessed as globally threatened in the future. Plumptre et al. (2018) designated Morungole as a Key Biodiversity Area (KBA) on the basis of Aloe wrefordii, which has recently been reassessed as Endangered (Richards et al. in press) but this record is believed to be erroneous. This IPA contains Dry Afromontane Forest which is a Vulnerable (and highly range-restricted) habitat in Uganda but it does not trigger IPA status as the area of forest is not large enough (only c. 5 km2, which is 2% of national resource and outside the top five).

Habitat and geology

The vegetation in this IPA may be broadly classified as dry Combretum savannah with Juniperus-Podocarpus dry montane forest at higher elevations, and a high altitude forest/savannah mosaic. Areas adjacent to the peak of Mt Morungole are marked by Juniperus procera, low growing Protea gaguedi, and shrubs, ferns and grass species amongst exposed rock. Thomas (1943) cited by Cole (2015) described the area as "shrubby moorland grading into shrubby grassland at the summit. The Juniperus forest is very luxuriant high on the mountain, with copious mosses and lichen (Usnea longissima) and Cole (2015) noted that in some protected spots, Aloe lukeana and the succulent herb Aeonium leucoblepharum grow amidst orchids, mosses, lichen and other epiphytes high up into the branches of the juniper trees.

Mt. Morungole's origin dates to the Mesozoic and Cenozoic eras associated with volcanic eruptions. Thus, it is an extinct volcano (Cheriberi & Yee 2022). Whilst stoney litho soils occur along the up-warped surface of Mt. Morungole, the other soil types include ferralytic, vertigos and ferruginous tropical soils. Ferralitic soils are in more advanced stages, their productivity depending on favorable rainfall, and adequate depth (UNDP 2014).

The area has a dry savanna semi-arid climate characterized by an intense hot, dry season lasting from November to March each year, with whirlwinds and dust storms. The rainy season is usually from April to August with an annual rainfall of 500–800 mm, with rains erratically distributed. The daily temperatures range from 20°C to 32°C degrees; relative humidity can reach 60% between June and July (UNDP 2014).

Conservation issues

Mount Morungole was designated as CFR in 1948. Some of the northern parts of the Reserve also fall within the boundary of Kidepo National Park. Mt Morongole has been encroached to some extent up to the peak (Rugadya et al. 2010) by the Ik communities who live at various altitudes on the mountain, in settlements referred to as "manyatta" and have associated areas of cultivation of crops such as cassava in the fertile montane valleys (Cole 2015; Richards et al. 2022). There are indiscriminate and uncontrolled seasonal fires on Mt. Morungole but the Aloe lukeana plants are not killed and regeneration after fire is evident from numerous seedlings observed (Cole 2015).

Site assessor(s)

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Date of first assessment:
16th Aug 2024

Reviewed by:
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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
Aloe lukeana T.C.Cole	A(i)	✓	✓	✓	–	–	Abundant
Aloe canarina S.Carter	A(iv)	✓	✓	✓	–	–	Scarce
Aloe tweedieae Christian	A(i)	✓	✓	✓	–	–	Scarce

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
Afromontane dry forest (CR)	C(iii)	–	–	–	4.96
Dry Combretum wooded grassland (VU)	C(iii)	–	–	–	233

General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Dry Forest	35	Major
Savanna - Dry Savanna	55	Major
Grassland - Subtropical/Tropical High Altitude Grassland	–	Minor
Rocky Areas - Rocky Areas [e.g. inland cliffs, mountain peaks]	–	Minor

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Nature conservation	50	Major
Forestry	–	Minor
Tourism / Recreation	–	Minor
Agriculture (arable)	–	Minor

Threats

THREAT	SEVERITY	TIMING
Agriculture & aquaculture - Annual & perennial non-timber crops - Shifting agriculture	Low	Ongoing - increasing
Biological resource use - Logging & wood harvesting - Intentional use: large scale (species being assessed is the target) [harvest]	Low	Ongoing - increasing
Agriculture & aquaculture - Livestock farming & ranching - Small-holder grazing, ranching or farming	Medium	Ongoing - increasing
Natural system modifications - Fire & fire suppression - Increase in fire frequency/intensity	Medium	Ongoing - stable
Residential & commercial development - Housing & urban areas	Low	Ongoing - increasing

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Morungole Central Forest Reserve	Forest Reserve (conservation)	protected/conservation area matches IPA	342
Kidepo Valley National Park	National Park	protected/conservation area overlaps with IPA	2

Management type

MANAGEMENT TYPE	DESCRIPTION	YEAR STARTED	YEAR FINISHED
No management plan in place		–	–

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