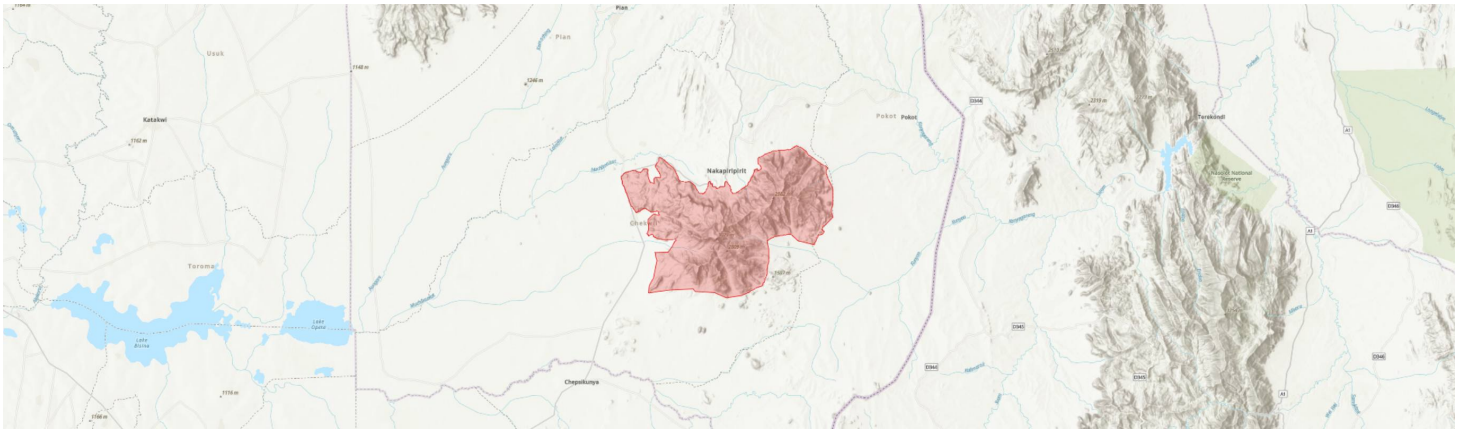
Mount Kadam

Kadama (local), Mount Debasien (colonial) (Test version)

UGATIPA19



Country: **Uganda**
Administrative region: **Northern (Region)**
Central co-ordinates: **1.78245 N, 34.72954 E**
Area: **408km²**

Qualifying IPA criteria

A(i), A(iii), B(ii), C(iii)

IPA assessment rationale

Mount Kadam qualifies as an IPA under sub-criterion A(i) due to the presence of three globally threatened taxa, one Endangered and four Vulnerable. In addition, A(iii) is triggered by two highly range-restricted species, Crotalaria macarantha, which is endemic to Mount Kadam and Bothriocline congesta, known only from this site and Mount Kinyeti in the South Sudanese Imatong Mountains; both are currently assessed as Data Deficient on the Red List. As this site has received little survey effort so far, further collecting would likely yield more species of conservation importance. It also qualifies under criterion B(ii) as it is among the top 13 richest sites for endemic taxa. Finally, this IPA also triggers sub-criterion C(iii), encompassing significant areas of a nationally threatened habitat, Afromontane undifferentiated forest, as the best site nationally for this Vulnerable habitat.

Site description

Mount Kadam IPA is located in Nakapiripirit district, immediately south of Nakapiripirit town in southern Karamoja. Approximately 60 km north of Mt. Elgon, this Miocene volcano is the second highest point in Karamoja, with the highest peak reaching 3063 m (Clark 1969). The boundary of this IPA follows that of Kadam Central Forest Reserve (CFR). The site is not well collected but, from the few collections that exist, there are a number of range-restricted plant species known from this mountain. This site also has the largest area nationally of Dry Afromontane Forest which is limited to the drier montane slopes in the north and east of Uganda and threatened by encroachment at several sites.

Botanical significance

The Forest Department surveys on trees and shrubs as indicator taxa recorded 291 species in this site (Lwanga 1996). Apart from these, there has been little botanical survey effort on Mount Kadam. However, there is a small number of species that are of conservation significance. Crotalaria macrantha is endemic to this mountain and is only known from its type specimen collected in 1959 (J. Wilson #777). As so little is known about this species, it has been assessed as Data Deficient on the IUCN Red List meaning it is unclear whether it is at risk of extinction or not. Although it is likely that this species is still extant as there is intact habitat at this site, urgent survey work is needed to understand the size of the population and whether this species is currently threatened by any of the anthropogenic activities known to occur on Mount Kadam.
A second highly range-restricted species, Bothriocline congesta is known only from this site and Mount Kinyeti in the Imatong Mountains of South Sudan. This species was collected in 1936 near the peak of the mountain and is likely protected from threats such as burning which occur at lower altitudes (IUCN SSC East African Plants Red List Authority 2013). However, further research is needed to establish if this species is threatened with extinction and requires conservation efforts to prevent such an outcome, and so this species is also currently assessed as Data Deficient.
Three Aloe species known from this site are of conservation interest. A. cheranganiensis is endemic to Karamoja and adjacent West Pokot County in Kenya while A. wilsonii has a similar distribution but

is also found on Mount Elgon. The latter species is assessed as Vulnerable as there are potential threats of habitat loss within its range (Baldwin et al. 2022), whilst A. cheranganiensis is considered to be of Least Concern. A third Aloe species, A. tweediae, has been observed to be threatened throughout the Karamoja region, possibly through over-harvesting of plants for extraction of sap (T. Cole, pers. comm. 2024).

One of the other threatened taxa known from this site is Abutilon eggelingii, an Endangered species known only from this site and another collection close to Agaro town in Ethiopia. The latter site is heavily exposed to agriculture and the expansion of townships nearby and, as the only protected area from which this species is known, Mount Kadam is central to preventing the extinction of this species (Wheatcroft 2025). Tricalysia bagshawei subsp. bagshawei, a Ugandan endemic species, is contrastingly found in montane sites of Karamoja as well as forests around Lake Victoria and Murchison Falls, but has also been found to be threatened with extinction. Many of the forest sites around Lake Victoria are threatened by habitat loss and, as such, this species has been assessed as Vulnerable. Similarly, Dicliptera nilotica and Euphorbia magnicapsula var. lacertosa are two taxa also assessed as Vulnerable due to habitat conversion linked with agricultural expansions in particular (Amani et al. 2022; Luke et al. 2015).

Further botanical collecting is needed at this site, as it has so far received little survey effort. Given the number of threatened and rare species known from very few collecting trips, further research would likely produce more records of threatened and rare species.

Alongside species of conservation importance, the site is estimated to host the largest extent of the nationally Vulnerable Dry Montane Forest in Uganda. This habitat type, also referred to as Juniperus-Afrocarpus (Podocarpus) or Afromontane undifferentiated forest, is restricted to drier montane slopes in the northeast and east of Uganda and has shown significant historical declines in northern Karamoja. As the largest site nationally for this threatened forest type, it is important that current threats to this habitat (see Conservation Issues) be reduced in order to conserve what remains of this much reduced habitat.

Habitat and geology

Mount Kadam is an early Miocene volcano with several peaks and ridges that form an L-shape in a west-northwest orientation. Kadam (3,063 m) is the highest peak lying in the centre of the CFR while the other significant peak, Susok (2,650 m) is situated in the east (NFA 2012). At lower altitudes but particularly on south and east-facing slopes, which are presumably drier, Acacia-Combretum savanna habitats dominate (Lwanga 1996), however, there has been some conversion of these areas to arable agriculture. At higher altitudes of around 2,000 m, although reaching lower in ravines and other sheltered areas, forest vegetation dominates (Langdale-Brown et al. 1964; World Resources Institute 2023). Langdale-Brown et al. (1964) characterise this forest as Juniperus-Afrocarpus (Podocarpus), due to the presence of valuable tree species Afrocarpus (formerly Podocarpus) gracilior and J. procera; however, tree species such as Vepris nobilis and Syzygium guineense are some of the other more common species (Lwanga 1996; Thomas 1943). Common understorey shrubs include Dracaena fragrans, Lobelia giberroa and Solanecio mannii (Thomas 1943). These forest habitats are important for Vulnerable Tricalysia bagshawei subsp. bagshawei and the edges of these forests are the only known habitat for site endemic Crotalaria macrantha.

Steep rocky areas at around 2,000 m altitude are dominated by the grass Crinipes longifolius (Thomas 1943). Such rocky and inaccessible areas provide important habitat for two Aloes of conservation importance – A. cheranganiensis and A. wilsonii.

In areas of shallow rocky soils, on the plateau around the peak, are montane grasslands including grassy tussocks of up to 1 m tall. Common species include Exotheca abyssinica, Eragrostis olivacea and Tripogon major (Thomas 1943). On deeper soils, there is a poorly developed Ericaceous heath – this vegetation type is largely confined to over 3,000 m on higher mountains (Hamilton 1974). Within this IPA, this habitat consists largely of Protea gaguedi and Erica arborea shrubs (Thomas 1943).

Conservation issues

Mount Kadam was designated a Central Forest Reserve in 1940 primarily to conserve the valuable timber trees Juniperus procera and Afrocarpus gracilior (Eilu 2014). The reserve is neighboured by Pian Upe Wildlife at its southern boundary and Amudat Community Wildlife Management Area encircles the eastern half. Kadam is one of nine reserves forming a continuous conservation corridor that spans around 300 km in length in southern Karamoja, arcing from north of Mount Elgon to Matheniko Wildlife Reserve.

The site faces numerous threats including charcoal burning and extraction of timber. In addition, Khat (Catha edulis) extraction, the leaves of which are chewed in eastern Africa as a stimulant, is associated with the establishment of temporary shelters and clearing of associated vegetation. Harvesting is thought to lead to tree mortality for the khat trees themselves through harsh cutting of branches (Eilu 2014). It is also likely that Afrocarpus trees are still being targeted within the reserve, for timber or for bark cloth making, which, if too much is removed, will lead to tree death (Eilu 2014).

Another major threat to the site is agriculture, with significant encroachment south of Nakapiripirit. It may well be more beneficial to degazette some of the plains surrounding the mountain as community-use zone, to refocus conservation efforts on the more intact areas of vegetation. However, there are some settlements within the mountains, with evidence of tree cover loss, in the east of the site (Google Earth 2025; World Resources Institute 2023). These may well be pastoralist communities, which are known from other mountains in the area such as Mount Moroto. Burning to promote fresh pasture growth is common during the dry season within this site (Ojelel 2022).

The loss of tree cover on the slopes of Mount Kadam is thought to have caused increased runoff from the mountain, increasing flooding in Nakapiripirit town at the base of the mountain and leading to outbreaks of waterborne diseases (Eilu 2014).

In addition, mining of marble has been reported from this IPA (CUPTD Workshop 2023). The entire Karamoja sub-region is mineral-rich and mining has led to habitat clearance elsewhere and has threatened species with extinction (Rotton, in prep.; Vos 2016). Although mining at this site is likely very small-scale, as it is not clearly visible from satellite imagery as it is on Mount Moroto, there may well be expansion in the future dependent on the amount of resources and socio-economic circumstances.
Despite various threats, the site is in receipt of conservation action through the Kara-Tunga Foundation in partnership with the World Land Trust. The programme involves the purchase of a 5 ha core conservation zone on the reserve boundary, with 3 ha of this hosting ecotourism activities and acting as a hub for coordinating agroforestry and conservation efforts, such as tree planting. Such tree planting will occur within a 2,500 ha community-owned buffer zone surrounding this core zone. In addition, a 1,500 ha area within the CFR will be managed by KTF for reforestation, ecotourism and other conservation activities (World Land Trust 2023).

Site assessor(s)

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Date of first assessment:
29th Oct 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 wilsonii Reynolds	A(i)	✓	✓	✓	–	✓	Frequent
Bothriocline congesta (M.Taylor) Wech.	A(iii)	✓	✓	✓	–	–	Unknown
Crotalaria macrantha Polhill	A(iii)	✓	✓	✓	✓	–	Unknown
Abutilon eggelingii Verdc.	A(i)	✓	✓	✓	–	–	Unknown
Tricalysia bagshawei S.Moore subsp. bagshawei	A(i)	✓	–	✓	–	–	Unknown
Dicliptera nilotica C.B.Clarke	A(i)	✓	✓	✓	–	–	Unknown
Euphorbia magnicapsula S.Carter var. lacertosa S.Carter	A(i)	✓	✓	✓	–	–	Unknown
Aloe tweedieae Christian	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
Afromontane dry forest (CR)	C(iii)	✓	✓	✓	83.22
Dry Combretum wooded grassland (VU)	C(iii)	–	–	–	8.39
Evergreen and semi-deciduous bushland and thicket (EN)	C(iii)	–	–	–	7.21
Vitellaria (Butyrospermum) wooded grassland (EN)	C(iii)	–	–	–	13.48

General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Moist Montane Forest	–	Major
Savana	–	Major
Rocky Areas - Rocky Areas [e.g. inland cliffs, mountain peaks]	–	Minor

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Shrubland - Subtropical/Tropical High Altitude Shrubland	—	Minor
Artificial - Terrestrial - Pastureland	—	Unknown
Artificial - Terrestrial - Arable Land	—	Minor

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Nature conservation	—	Major
Agriculture (arable)	—	Minor
Agriculture (pastoral)	—	Unknown
Harvesting of wild resources	—	Unknown

Threats

THREAT	SEVERITY	TIMING
Residential & commercial development - Housing & urban areas	Medium	Ongoing - increasing
Agriculture & aquaculture - Annual & perennial non-timber crops - Small-holder farming	Medium	Ongoing - increasing
Agriculture & aquaculture - Livestock farming & ranching - Small-holder grazing, ranching or farming	Unknown	Ongoing - trend unknown
Energy production & mining - Mining & quarrying	Low	Ongoing - trend unknown
Biological resource use - Gathering terrestrial plants	Low	Ongoing - trend unknown
Biological resource use - Logging & wood harvesting	Unknown	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Kadam Central Forest Reserve	Forest Reserve (conservation)	protected/conservation area matches IPA	408

Conservation designation

DESIGNATION NAME	PROTECTED AREA	RELATIONSHIP WITH IPA	AREAL OVERLAP
Mount Kadam	Key Biodiversity Area	protected/conservation area overlaps with IPA	307

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