



KOBA SANDSTONE BOWAL, DALABA PREFECTURE

ABSTRACT

The site at Koba represents the largest populations of *Mesanthemum tuberosum* and *Raphionacme caerulea* in the Fouta Djallon and is a good example of high altitude sandstone bowal. This is a pure sandstone outcrop and is unlike some other bowal areas in the Fouta which are iron based bowal. *Mesanthemum tuberosum* is endemic to the Fouta Djallon and although present in many areas in small numbers, there is no other site at present with such a concentration.

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TIPA Assessment: Koba sandstone ‘kapété’, Dalaba prefecture.

IPA criteria under which the site qualifies: A (i,iii), C (iii)

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IPA assessment rationale

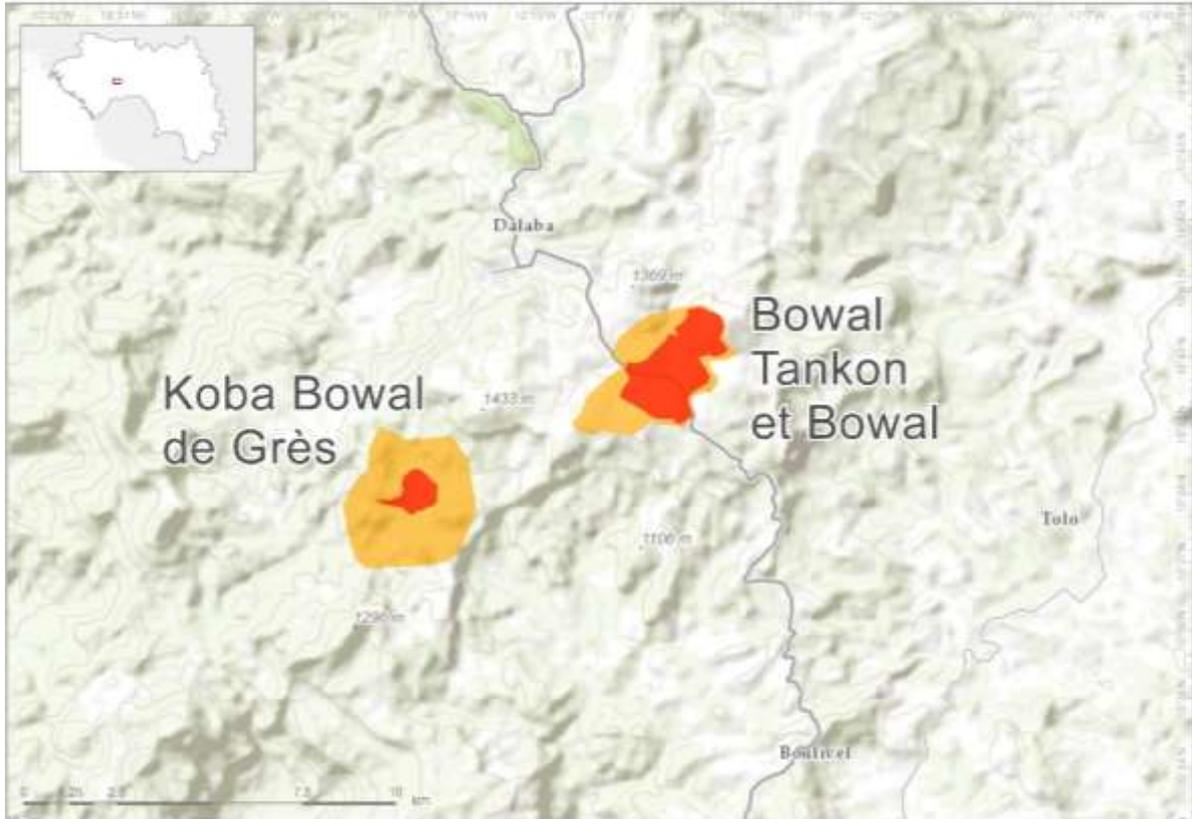
The site at Koba represents the largest populations of *Mesanthemum tuberosum* and *Raphionacme caerulea* in the Fouta Djallon and is a good example of high altitude sandstone bowal. This is a pure sandstone outcrop and is unlike some other bowal areas in the Fouta which are iron-based bowal. *Mesanthemum tuberosum* is endemic to the Fouta Djallon, and although present in many areas in small numbers, there is no other site at present with such a concentration.

Site overview

Site Name: Koba sandstone Kapété	
Country: Republic of Guinea	Administrative region: Dalaba
Central co-ordinates: 10°37'59"N, 12°16'43"W	Area: 1 km ²
Altitude minimum: 1050 m	Altitude maximum: 1130 m

Site Description

Sandstone outcrop and bowal, known locally as ‘kapété’, with shallow and medium depth soils, close to the village of Koba, c. 7km south west of the town of Dalaba. Grassland with trees in the deeper soils or growing through cracks in the rocky outcrop. The outcrop is part of the high altitude plateau of the Fouta Djallon and is between 1050m and 1350m altitude and c. 1km² in area.



Map showing the proposed area for protection as an TIPA. Core area in red, buffer zone in yellow.

Botanical significance

The flat, plain area has the largest population of *Mesanthemum tuberosum* (rediscovered in 2017) found in the Fouta Djallon area. It also has a population of *Raphionacme caerulea*. This is a good example of high altitude sandstone bowal in the Moyenne Guinee region. It is considered likely that revisiting the site at different seasons (e.g. Oct), will result in additional threatened species being identified.

General habitat and geology description

High altitude sandstone bowal grassland, dominated by *Elymandra subulata* with many herbs present including *Mesanthemum tuberosum*, *Buchnera bowalensis*, *Cyanotis arachnoidea*, *Cyanotis lanata*, *Tephrosia platycarpa*, *Crotalaria lathyroides*, *Fimbristylis schweinfurthiana*, *Nemum spadiceum*, *Raphionacme caerulea* and *Platycornye paludosa*. In the deeper soil pockets, trees and shrubs of *Dichaetanthera echinulata*, *Vismia guineensis* and *Psorospermum febrifugum* and *Ficus* sp. can be found. There is a river to the south west of the site with riverine species present.

This area is part of the Oundou series of interbedded quartzitic sandstone and dolomitic clays with Mesozoic intrusions of dolerite or gabbro-dolerites. (Source: Carte des Mineraux Utiles de la Republique de Guinee, 2006).

Conservation issues

The area is used for grazing cattle and goats and this could cause problems for some species from grazing and trampling. Also, increased nitrification of the soil may lead to enrichment and a decrease

in species diversity. It has been observed that the *Raphionacme caerulea* plants do not seem to make it to seed dispersal stages – plants viewed in flower and GPS marked, could not be refound in the fruiting season (Couch, pers. Obs. 2017).

Protected area status and Management

This area is included in any protected area at present.

Threats

Pastoral farming: The area is used for grazing cattle and goats and this could cause problems for some species from grazing and trampling.

Threat level: Medium

Criterion A: Threatened Species

Criterion A taxon present	IPA subcriterion	IUCN redlist assessment	Site contains...			Entire global population (single-site endemic)	Species is of socio-economic importance	*Abundance at site
			≥ 1% of global population	≥ 5% of national population	Is 1 of 5 best sites nationally			
<i>Raphionacme caerulea</i> E.A. Bruce	A(i)	EN	⊙	⊙	⊙			Infrequent
<i>Mesanthemum tuberosum</i> Lecomte	A(i,iii)	VU	⊙	⊙	⊙			Frequent
<i>Cyanotis ganganensis</i> Schnell	A(i,iii)	EN	⊙	⊙	⊙			Infrequent
<i>Dichaetanthera echinulata</i> Hook. f.	A(i)	EN	⊙	⊙	⊙			Infrequent

Key: IUCN category: CR Critically Endangered, EN Endangered, VU Vulnerable. Abundance: Abundant, Common, Frequent, Infrequent, Scarce, Unknown

Criterion B: Botanical Richness

Insufficient information for this criterion

Criterion C: Threatened Habitat

*Habitat type	IPA subcriterion	IUCN redlist assessment	Site contains...		Estimated area at site (if known)
			≥ 5% of national resource (for C(i) and C(ii))	≥ 10% of national resource (for C(iii))	
High altitude sandstone bowal	C(iii)		⊙	○	1km

Bibliography

IUCN Red List of Threatened Species: www.redlist.org

Lisowski, S. 2009. Flore (Angiospermes) de la République de Guinée. Scripta Botanica Belgica.

Couch, C; Magassouba, S; Rokni, S; Cheek, M. (2018) Threatened plants species of Guinea-Conakry: A preliminary checklist. PeerJ Preprints. <https://doi.org/10.7287/peerj.preprints.3451v2>

Field reports:

C Couch, Oct 2016. TIPAs Guinea Darwin Project report: Field expedition to Fouta Djallon

C Couch July 2017. TIPAs Guinea Darwin Project report: Field expedition to Fouta Djallon

Site in pictures



Koba sandstone Kapété in June 2016. Photo: C. Couch ©RBG Kew



Koba sandstone Ka Pété in June 2016. Photo: C. Couch ©RBG Kew



Mesanthemum tuberosum Lecomte Photo : M. Cheek ©RBG Kew



Raphionacme caerulea E.A.Bruce Photo : C. Couch ©RBG Kew



Grazers on Koba sandstone kapété Photo: C. Couch ©RBG Kew