TIPA ASSESSMENT:

KOUNOUNKAN MASSIF AND PLATEAU, FORÉCARIAH PREFECTURE

ABSTRACT

The Kounounkan Massif is home to more than 30 threatened plant species including nine point- endemic species that are globally unique to Kounounkan. There are significant threats to the species and landscape from increased population pressure resulting, in areas being cleared for subsistence farming. The Kounounkan forest is the largest remaining intact lowland forest in Guinee Maritime. It is a significant habitat for many animal and bird species, in addition to its globally important plant diversity.

Martin Cheek, Charlotte Couch, Xander van der Burgt and Pépé Haba

TIPA Assessment: Kounounkan Massif and Plateau, Forécariah Prefecture.

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

Assessed by: Martin Cheek, Charlotte Couch, Xander van der Burgt (RBG Kew) and Pépé Haba (Guinée Biodiversité)

IPA assessment rationale

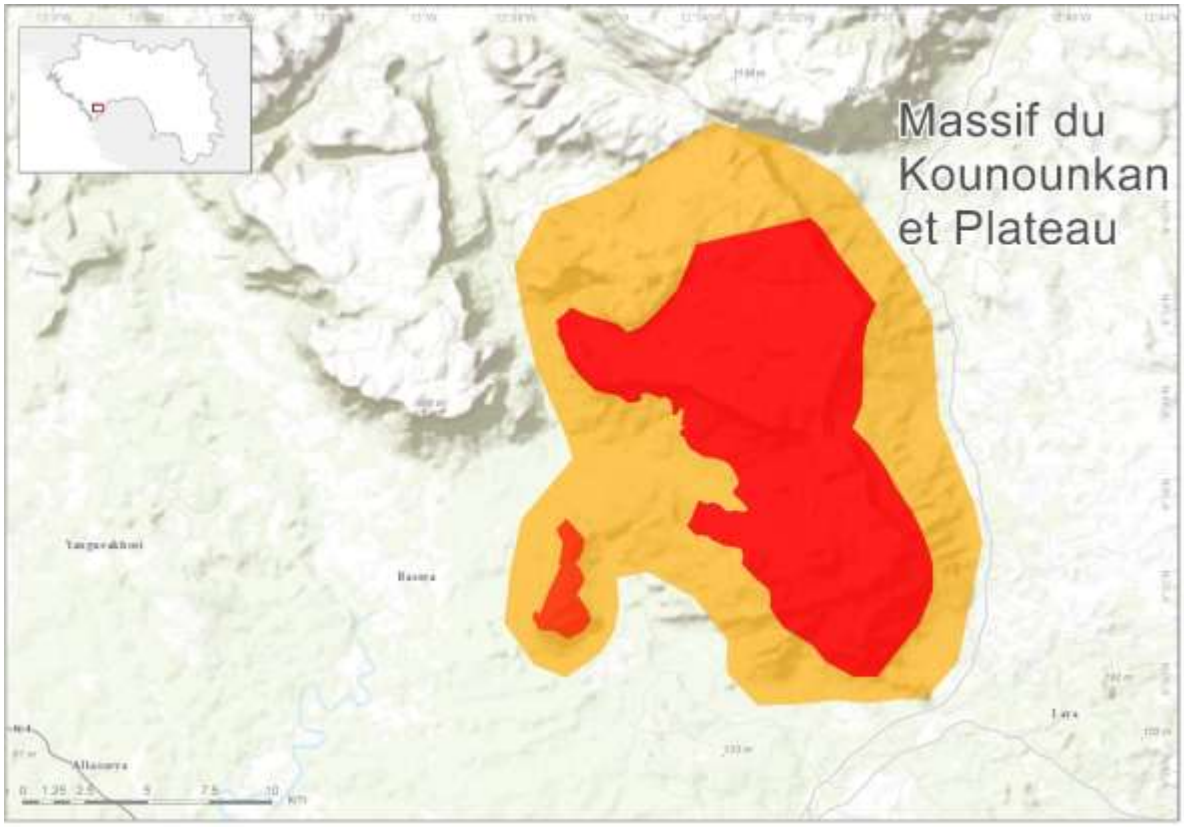
The Kounounkan Massif is home to more than 30 threatened plant species including nine point-endemic species that are globally unique to Kounounkan. There are significant threats to the species and landscape from increased population pressure resulting, in areas being cleared for subsistence farming. The Kounounkan forest is the largest remaining intact lowland forest in Guinee Maritime. It is a significant habitat for many animal and bird species, in addition to its globally important plant diversity.

Site overview

Site Name: Kounounkan Massif and Plateau	
Country: Republic of Guinea	Administrative region: Forécariah
Central co-ordinates: 09°33’59’’N, 12°52’09’’W	Area: 39.55 km^2
Altitude minimum: 100 m	Altitude maximum: 1180 m

Site Description

The Kounounkan Massif consists of the southernmost extension of the Fouta Djallon highland area. It comprises a series of several barely connected sandstone table mountains with sheer cliffs falling hundreds of metres, with few and difficult access routes to reach the summit plateaus. In colonial times, this part of Kounounkan was known as Mt Benna. The southernmost tip is uninhabited but elsewhere pastoralists occupy the seasonal summit grasslands. Further east, outside the TIPA, the talus slopes and lowlands are intensively cultivated for Riz de Pays (Oryza glaberrima), Cajanus, and Capsicum. To the west, the talus slopes are forested and descend intact into large areas of lowland evergreen forest, both pristine and secondary, due to intermittent collapse of the cliffs above. Much of the surface is boulder strewn, but despite this it is being cleared for smallholder agriculture.



Map showing location of TIPA. Core area in red, buffer zone in yellow.

Botanical significance

The Kounounkan Massif is the location for 31 globally threatened species. It is the sole global location for Caillella praerupticola (EN) (Melastomataceae), Mesanthemum bennae (EN) (Eriocaulaceae), Ternstroemia guineenis (EN) (Theaceae), a newly described species in 2019, and five other species. The sandstone plateau has the greatest concentration of high-altitude sandstone bowal endemic species in Guinea and is the most ecologically intact area. The species-rich submontane sandstone bowal grassland in the southern part is pristine, compared to the northern part. The sandstone cliffs below the plateau are also home to several endemic threatened species, some of which occur nowhere else. Kounounkan is only 65km inland from the coast and has the largest surviving lowland 'maritime' forest in Guinea. This contains the largest global populations of several threatened species, such as Diospyros feliciana (EN) (Ebenaceae) and Vepris felicis (CR) (Rutaceae). It also possibly contains the largest area of intact submontane forest in this zone (c. 10km²). This transition of lowland evergreen to submontane forest also occurs at Simandou and Ziama in Guinée Forestière, but those have different species compositions. In the faulted valleys on the plateau, good quality undisturbed submontane gallery forest can be found in the southern part, though this is not the case in the northern part where it is disturbed by cattle farmers. Further investigation is required in this area. Lowland forest, submontane forest, sandstone cliffs, and high-altitude sandstone bowal are all recognised threatened habitats in Guinea.

General habitat and geology description

Ordovician quarzitic sandstone overlying metamorphic rock, this is the part of the outcrop that extends north to Pita. Thin soils on the plateau with some rock outcrops. On the lower slopes, the soils are deeper and humus rich. In areas of the south and west the soils can be thinner and rockier, as indicated by the presence of *Guibourtia copallifera*.

Conservation issues

The lower slopes of the forest are under threat from clearance for agriculture with large farms of hill rice mixed with other crops. This is largely for smallholder farming or village cooperatives. On the eastern and western flanks there has been some large-scale, village-led forest clearance, though this has currently been stopped by the government. However, due to the lack of protection of this area, it could commence again. The plateau sandstone bowal grasslands are threatened in the northern part from the increased burning regime brought about by cattle herders. It has already been seen that the increase in fire has pushed several threatened species to the brink of existence at the edge of the plateau.

Kounounkan has high potential for village-based eco-tourism that would benefit local communities, giving an incentive for conservation. Kounounkan is a Classified Forest (designated in 1994), but not a formally Protected Area. Eco-guards are present in the area but are unable to patrol all of it. Designation as a National Park is strongly recommended.

Protected area status and Management

Kounounkan (also known as Kamalayah) Forêt Classé (Classified Forest) was created in 1994. It is also recognised as an Important Bird Area (IBA) by Birdlife International. There have been several scientific surveys in the area, but no formal management plan has been written.

Threats

Agriculture:	Clearance of large areas for fields.
Pastoralism:	Cattle grazing, increased unseasonal fires across grassland.
Wood cutting and harvesting:	Wood cutting on a subsistence level.
Non forest timber products:	The fruits of *Beilschmiedia mannii* are harvested every year for sale by the local population.

Threat level: Medium

Criterion A: Threatened Species

			Site contains…					
Criterion A taxon present	IPA subcriterion	IUCN redlist assessment	**≥ 1% of global population**	**≥ 5% of national population**	**Is 1 of 5 best sites nationally**	Entire global population (single-site endemic)	Species is of socio-economic importance	*Abundance at site
Anisotes guineensis Lindau	A(i)	EN	⊙	⊙	⊙			Frequent
Apodiscus chevalieri Hutch.	A(iii)	EN?	⊙	⊙	⊙			Frequent
Caillella praerupticola Jacq.-Fél.	A(i)	EN	⊙	⊙	⊙			Frequent
Cincinnobotrys felicis (A.Chev.) Jacq.-Fél.	A(iii)	EN?	⊙	⊙	⊙			Infrequent
Diospyros feliciana Letouzey & F.White	A(i)	EN	⊙	⊙	⊙		⊙	Frequent
Dissotis leonensis Hutch. & Dalziel	A(i)	EN?	⊙	⊙	⊙			Common
Dissotis splendens A.Chev. & Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙			Common
Droogmansia montana Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙			Unknown
Fleurydora felicis A.Chev.	A(i)	VU	⊙	⊙	⊙		⊙	Frequent
Genlisea barthlottii S.Porembski, Eb.Fisch. & Gemmel	A(i)	VU	⊙	⊙	⊙			Abundant
Gladiolus chevalieranus (A.Chev.) Marais	A(i)	EN?	⊙	⊙	⊙			Unknown
Gladiolus sp nov	A(i)	CR?	⊙	⊙		⊙		Scarce
Heterotis pygmaea (A.Chev. & Jacq.-Fél.) Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙			Infrequent
Impatiens. bennae Jacq.-Fél.	A(i)	EN	⊙	⊙	⊙	⊙		Unknown
Keetia susu Cheek	A(i)	EN	⊙					Scarce
Kotschya micrantha Harms	A(i)	VU	⊙	⊙	⊙			Infrequent
Kotschya uniflora (A.Chev.) Hepper	A(i)	EN	⊙	⊙	⊙			Frequent
Dilophotriche occidentalis Jacq.-Fél.	A(i)	VU	⊙					Frequent

Mesanthemum bennae Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙	⊙		Infrequent
Neolemmoniera clitandrifolia A.Chev.	A(i)	EN	⊙	⊙	⊙			Frequent
Rhytachne perfecta Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙	⊙		Infrequent
Dichaetanthera echinulata (Hook.f.) Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙			Common
Schizachyrium radicosum Jacq.-Fél.	A(i)	EN?	⊙	⊙	⊙			Scarce
Stylochaeton pilosus Bogner	A(i)	EN	⊙					Infrequent
Ternstroemia guineensis Cheek ined.	A(i)	EN?	⊙	⊙	⊙	⊙		Infrequent
Tessmannia baikieaoides Hutch. & Dalziel	A(i)	VU	⊙	⊙				Infrequent
Vepris felicis Breteler	A(i)	CR	⊙	⊙				Unknown
Virectaria pepehabai Cheek ined.	A(i)	EN	⊙	⊙	⊙	⊙		Scarce
Cola lorougnonis Aké Assi	A(i)	CR	⊙	⊙	⊙			Scarce

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

Criterion B: Botanical Richness

B(i) exceptional botanical richness within a defined habitat			B(ii): exceptional number of species of conservation importance - site recording table (from nationally agreed list)		B(iii): exceptional number of useful / culturally valuable species (from nationally agreed list)	
*Habitat code and name	**Site is part of the top 10% of the national resource**	**Site is one of the 5 best sites nationally for that habitat**	**Site contains ≥ 3% of the species on the national list**	**Site is one of the 15 richest locations nationally**	**Site contains ≥ 3% of the species on the national list**	**Site is one of the 15 richest locations nationally**
	○	○	⊙	⊙	○	○
	○	○				

*Criterion B taxon present	Sub-criterion under which species qualifies	For B(i) – indicator of habitat	*Abundance at site
Anisotes guineensis Lindau	B(ii)		Frequent
Apodiscus chevalieri Hutch.	B(ii)		Frequent
Baphia heudelotiana Baill.	B(ii)		Infrequent
Caillella praerupticola Jacq.-Fél.	B(ii)		Frequent
Cincinnobotrys felicis (A.Chev.) Jacq.-Fél.	B(ii)		Infrequent

Diospyros feliciana Letouzey & F.White	B(ii)		Frequent
Dissotis leonensis Hutch. & Dalziel	B(ii)		Common
Dissotis splendens A.Chev. & Jacq.-Fél.	B(ii)		Common
Droogmansia montana Jacq.-Fél.	B(ii)		Unknown
Fleurydora felicis A.Chev.	B(ii)		Frequent
Genlisea barthlottii S.Porembski, Eb.Fisch. & Gemmel	B(ii)		Abundant
Gladiolus chevalieranus (A.Chev.) Marais	B(ii)		Unknown
Gladiolus sp nov	B(ii)		Scarce
Heterotis pygmaea (A.Chev. & Jacq.-Fél.) Jacq.-Fél.	B(ii)		Infrequent
Impatiens nzoana subsp. bennae (Jacq.-Fél.) Grey-Wilson	B(ii)		Unknown
Keetia susu Cheek	B(ii)		Scarce
Kotschya micrantha Harms	B(ii)		Infrequent
Kotschya uniflora (A.Chev.) Hepper	B(ii)		Frequent
Dilophotriche occidentalis Jacq.-Fél.	B(ii)		Frequent
Mesanthemum bennae Jacq.-Fél.	B(ii)		Infrequent
Marsdenia exellii C.Norman	B(ii)		Infrequent
Monocymbium deightonii C.E.Hubb.	B(ii)		Unknown
Neolemmoniera clitandrifolia A.Chev.	B(ii)		Frequent
Rhytachne perfecta Jacq.-Fél.	B(ii)		Infrequent
Dichaetanthera echinulata (Hook.f.) Jacq.-Fél.	B(ii)		Common
Schizachyrium radicosum Jacq.-Fél.	B(ii)		Scarce
Stylochaeton pilosus Bogner	B(ii)		Infrequent
Ternstroemia guineensis Cheek ined.	B(ii)		Infrequent
Tessmannia baikieaoides Hutch. & Dalziel	B(ii)		Infrequent
Vepris felicis Breteler	B(ii)		Unknown
Virectaria pepehabai Cheek ined.	B(ii)		Scarce

Key: Abundance: Abundant, Common, Frequent, Infrequent, Scarce, Unknown

Criterion C: Threatened Habitat

			Site contains…		
*Habitat type	IPA subcriterion	IUCN redlist assessment	**≥ 5% of national resource (for C(i) and C(ii))**	**≥ 10% of national resource (for C(iii))**	Estimated area at site (if known)
Maritime lowland evergreen forest	C(iii)			⊙	Unknown
Submontane forest	C(iii)			⊙	c.10 km²
Sandstone cliffs	C(iii)			⊙	Unknown
High altitude sandstone bowal	C(iii)			⊙	Unknown

Bibliography

IUCN Red List: www.redlist.org accessed Dec 2018

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Site in pictures

Kounounkan forest near Gbara village (Photo: © Xander van der Burgt, RBG Kew)

Kounounkan forest near Samayah (Photo: © Xander van der Burgt, RBG Kew)

Kounounkan submontane forest near Gbara. (Photo: © Xander van der Burgt, RBG Kew)

Kounounkan Massif Plateau. (Photo: © Xander van der Burgt, RBG Kew)

Kounounkan Massif Plateau in the distance, showing cultivation on lower slopes. (Photo: © Xander van der Burgt, RBG Kew)

Rock slide seen in October 2016. (Photo: © Xander van der Burgt, RBG Kew)

Cailliella praerupticola (Melastomataceae) EN - endemic to the Kounounkan Massif A(i). (Photo: © Xander van der Burgt, RBG Kew)

Tessmannia baikieoides (Leguminosae) VU A(i). (Photo: © Xander van der Burgt, RBG Kew)

Fruits of *Diospyros feliciana* (Ebenaceae) EN - endemic to Guinea A(i).
(Photo: © Xander van der Burgt, RBG Kew)

Dactyladenia sp. nov. Chrysobalanaceae - a new species to science A(i). (Photo: © Xander van der Burgt, RBG Kew)

Dissotis leonensis EN (Melastomataceae) A(i). (Photo: © Xander van der Burgt, RBG Kew)

Fleurydora felicis (Ochnaceae) VU endemic to Guinea A(i). (Photo: © Xander van der Burgt, RBG Kew)


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