



**TIPA ASSESSMENT:
MOOFANYI INSELBERGS, FORECARIAH
PREFECTURE**

ABSTRACT

The Moofanyi inselbergs are one of the best representatives of coastal inselbergs in Guinea Maritime depicting 9 of the 10 microhabitats for West African inselbergs identified by Porembski et al (1997, 2000). The lowland forest patch on the inselberg has three globally important highly threatened species with two demonstrating high genetic diversity. The inselberg has a population of *Raphionacme caerulea* (EN) and numerous near threatened species and is threatened by past and future quarrying activities.

Charlotte Couch, Martin Cheek, Denise Molmou and Salim Kouyaté

TIPA Assessment: Moofanyi Inselbergs, Forécariah Prefecture.

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

Assessed by: Charlotte Couch, Martin Cheek (RBG Kew), Denise Molmou (HNG/Simfer) and Salim Kouyaté (Simfer)

IPA assessment rationale

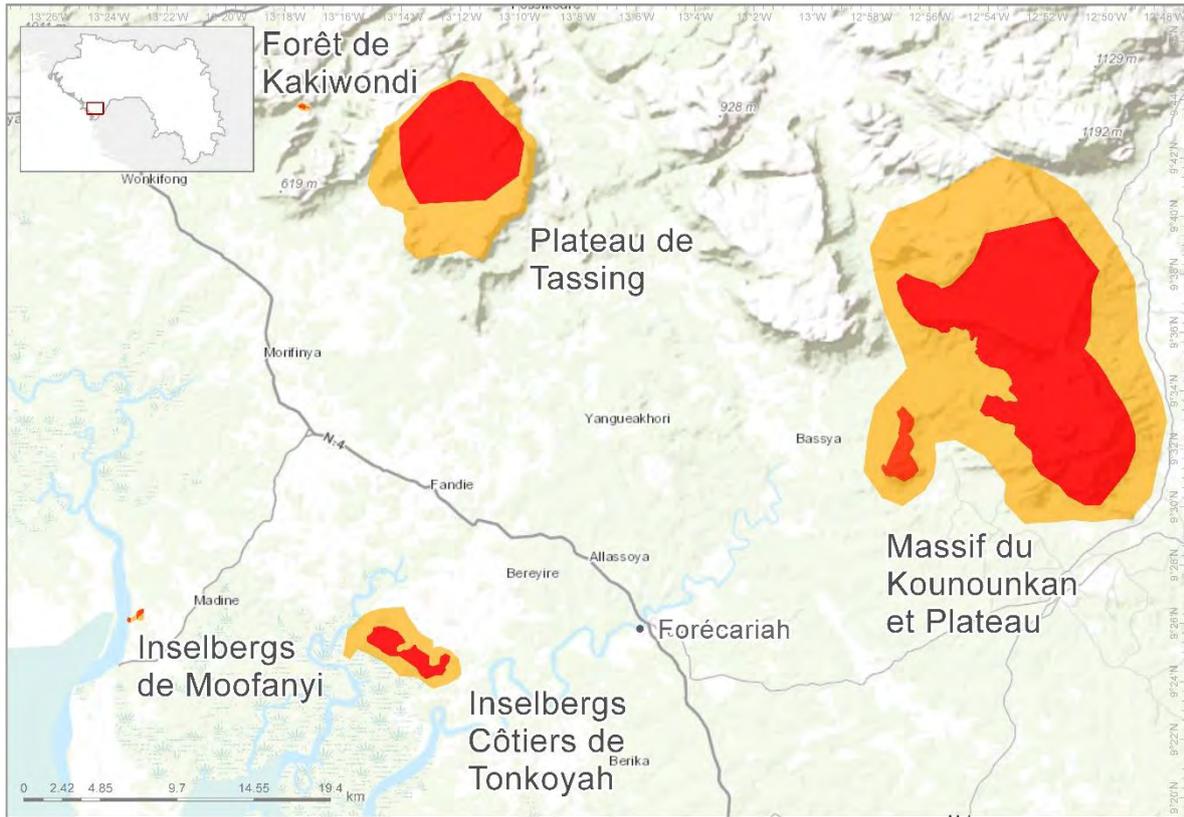
The Moofanyi inselbergs are one of the best representatives of coastal inselbergs in Guinee Maritime depicting 9 of the 10 microhabitats for West African inselbergs identified by Porembski et al (1997, 2000). The lowland forest patch on the inselberg has three globally important highly threatened species *Tarenna hutchinsonii* (CR), *Marsdenia exellii* (EN), *Stylochaeton pilosus* (EN), with the first two demonstrating high genetic diversity. The inselberg has populations of *Raphionacme caerulea* (EN), *Dilophotriche occidentalis* (VU) and *Mesanthemum albidum* (VU), and numerous near threatened species and is threatened by past and future quarrying activities.

Site overview

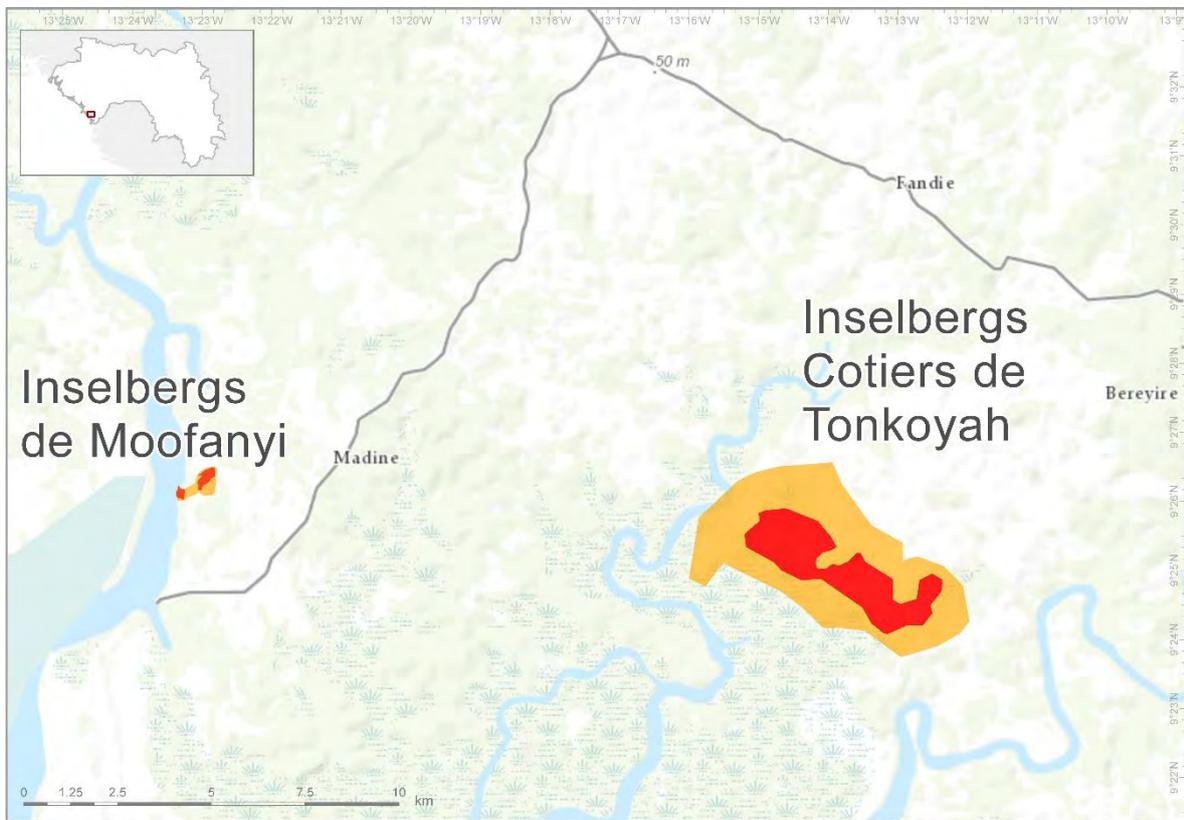
Site Name: Moofanyi Inselbergs	
Country: Republic of Guinea	Administrative region: Forécariah
Central co-ordinates: 07°37'20"N, 08°24'36"W	Area: 0.5 km ²
Altitude minimum: 0 m	Altitude maximum: 35 m

Site Description

Two granite dome inselbergs partly surrounded by mangrove. The larger inselberg (Moofanyi masculine) has a lowland forest patch on part of it, dominated by trees of *Guibourtia copallifera*. The larger inselberg has many microhabitats present which are best distinguished during the wet season.



The proposed TIPA in relation to the wider Guinea Maritime area.



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

Botanical significance

These are coastal inselbergs with a patch of lowland forest. The large inselberg is one of the tallest in Guinée Maritime. Both the large and small inselbergs have a population of *Raphionacme caerulea* (EN). The smaller inselberg, inhabited by the local community until recently, is degraded and less diverse in species and microhabitats. The inselberg lowland forest patch has large populations of *Tarenna hutchinsonii* (CR), *Stylochaeton pilosus* (EN), and *Marsdenia exellii* (EN). The *Tarenna hutchinsonii* population has the highest genetic diversity known in this species. The *Marsdenia exellii* population is also genetically diverse. Nine out of the ten known African inselberg microhabitats are present, including seepage areas rich in *Utricularia* spp, *Xyris* spp. and Eriocaulaceae spp., wet flush vegetation, and *Afrotrilepis pilosa* mats.

General habitat and geology description

Coastal granite-dolerite outcrop amongst recent alluvial deposits. Both inselbergs interface with mangroves. There are several microhabitats present on the inselbergs, giving rise to different species assemblages. Flat areas and shallow depressions are dominated by grasses (e.g. *Loudetiopsis tristachyoides*) and sedges in the wet season with globally threatened small herbs such as *Mesanthemum albidum*, and *Raphionacme caerulea*.

Conservation issues

The inselberg was quarried in the past for building materials. More recently about half the inselberg was destroyed to facilitate port building activities by Rio Tinto/Simfer. In 2013, however the most important part of the large inselberg for plant conservation was conserved, yet there are concerns that this may be degraded or lost if Simfer passes management control to another company.

Deliberate burning of the inselberg vegetation by the local community occurred in 2018. Previously local people would not have entered the forest patch, as it was sacred, but when they acquired the site Rio Tinto/Simfer arranged to deconsecrate it. Since Simfer is not currently active at the site, there is no presence to act as a deterrent to local people accessing the forest. The current status of the inselbergs and forest patch is not clear. Simfer does not have the right to prevent community access to the area (e.g. people traversing the area to get to fields) and the local authorities are not able to provide adequate policing of the area. As a result, burning of the vegetation and illegal wood cutting have taken place. Grazing and trampling of Conservation Priority Species by cattle has also been observed.

In 2018, Sensitization of the riparian community to the protection of inselbergs took place and Involvement of technical services (Water and Forests, Environment, OGUIDAP) and NGOs have begun to implement sustainable conservation measures.

Protected area status and management

Not currently protected.

Managed under the concession rights of SIMFER.

Threats

Quarrying:	Extraction of granite for building materials
Fire:	Setting of fires by disgruntled local community
Pastoral agriculture:	Repeated passage of the cattle on inselbergs

Threat level: High



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>Tarenna hutchinsonii</i> Bremek.	A(i)	CR	⊙	⊙	⊙			Frequent
<i>Marsdenia exellii</i> C.E.Norman	A(i)	EN	⊙	⊙	⊙			Frequent
<i>Stylochaeton pilosus</i> Bogner	A(i)	EN	⊙	⊙	⊙			Frequent
<i>Mesanthemum albidum</i> Lecomte	A(i)	VU	⊙	⊙				Infrequent
<i>Dilophotriche occidentalis</i> Jacq.-Fél	A(i)	VU	⊙					Frequent

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
Inselbergs	⊙	⊙	○	○	○	○

*Criterion B taxon present	Sub-criterion under which species qualifies	For B(i) – indicator of habitat	*Abundance at site
<i>Afrotrilepis pilosa</i> (Boeck.) J.Raynal	B(i)	Granite inselbergs	Abundant
<i>Brachiaria villosa</i> (Lam.) A.Camus	B(i)	Granite inselbergs	Frequent
<i>Ceropegia deightonii</i> Hutch. & Dalziel	B(i)	Granite inselbergs	Infrequent
<i>Chamaecrista absus</i> (L.) H.S. Irwin & Barney	B(i)	Granite inselbergs	Infrequent

<i>Cyanotis lanata</i> Benth.	B(i)	Granite inselbergs	Common
<i>Desmodium linearifolium</i> G.Don	B(i)	Granite inselbergs	Common
<i>Dopatrium senegalense</i> Benth.	B(i)	Granite inselbergs	Infrequent
<i>Drosera indica</i> L.	B(i)	Granite inselbergs	Common
<i>Echinochloa colona</i> (L.) Link	B(i)	Granite inselbergs	Frequent
<i>Eragrostis uniolooides</i> (Retz.) Nees	B(i)	Granite inselbergs	Frequent
<i>Eriocaulon pulchellum</i> Koern.	B(i)	Granite inselbergs	Frequent
<i>Fimbristylis ferruginea</i> (L.) Vahl	B(i)	Granite inselbergs	Common
<i>Lindernia schweinfurthii</i> (Engl.) Dandy	B(i)	Granite inselbergs	Common
<i>Loudetiopsis pobeguinii</i> (Jacq.- Fél.) Clayton	B(i)	Granite inselbergs	Frequent
<i>Loudetiopsis tristachyoides</i> (Trin.) Conert	B(i)	Granite inselbergs	Common
<i>Mesanthemum albidum</i> Lecomte	B(i)	Granite inselbergs	Frequent
<i>Nemum spadiceum</i> (Lam.) Desv.	B(i)	Granite inselbergs	Common
<i>Neurotheca loeselioides</i> (Spruce ex Prog.) Baill.	B(i)	Granite inselbergs	Common
<i>Nymphaea lotus</i> L.	B(i)	Granite inselbergs	Infrequent
<i>Nymphaea micrantha</i> Guill. & Perr.	B(i)	Granite inselbergs	Infrequent
<i>Panicum dinklagei</i> Mez	B(i)	Granite inselbergs	Frequent
<i>Panicum griffonii</i> Franch.	B(i)	Granite inselbergs	Frequent
<i>Panicum subalbidum</i> Kunth	B(i)	Granite inselbergs	Frequent
<i>Panicum tenellum</i> Lam.	B(i)	Granite inselbergs	Frequent
<i>Pennisetum purpureum</i> Schumach.	B(i)	Granite inselbergs	Infrequent
<i>Plectranthus monostachyus</i> (P.Beauv.) B.J.Pollard	B(i)	Granite inselbergs	Infrequent
<i>Polystachya microbambusa</i> Kraenzl.	B(i)	Granite inselbergs	Infrequent
<i>Pycreus capillifolius</i> (A.Rich.) C.B.Clarke	B(i)	Granite inselbergs	Frequent
<i>Scleria interrupta</i> Rich.	B(i)	Granite inselbergs	Frequent
<i>Scleria robinsoniana</i> J.Raynal	B(i)	Granite inselbergs	Frequent
<i>Spermacoce bambusicola</i> (Berhaut) Lebrun & Stork	B(i)	Granite inselbergs	Common
<i>Sporobolus infirmus</i> Mez	B(i)	Granite inselbergs	Frequent
<i>Tephrosia nana</i> Schweinf.	B(i)	Granite inselbergs	Infrequent
<i>Utricularia micropetala</i> Sm.	B(i)	Granite inselbergs	Infrequent
<i>Utricularia subulata</i> L.	B(i)	Granite inselbergs	infrequent
<i>Utricularia tortilis</i> Welw. ex Oliv.	B(i)	Granite inselbergs	Infrequent
<i>Vigna luteola</i> (Jacq.) Benth.	B(i)	Granite inselbergs	Frequent
<i>Vigna venulosa</i> Baker	B(i)	Granite inselbergs	Frequent

<i>Xyris anceps</i> Lam.	B(i)	Granite inselbergs	Frequent
<i>Xyris filiformis</i> Lam.	B(i)	Granite inselbergs	Frequent

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

Criterion C: Threatened Habitat

*Habitat type	IPA subcriterion (automatically populated from habitat look-up table)	IUCN redlist assessment (string automatically populated from look up table)	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))	
Inselbergs	C(iii)		○	⊙	0.5km ²

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View of Moofanyi Masculin from approach road. October 2013. Photo : M.Cheek © RBG Kew

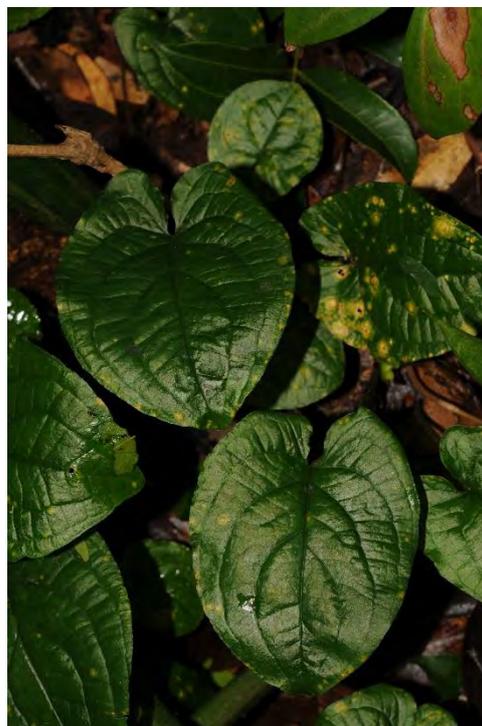


Afrotrilepis mats on Moofanyi masculine. Photo : M.Cheek © RBG Kew

Some of the rare species found on the Moofanyi inselbergs. Photos : M.Cheek © RBG Kew



Raphionacme caerulea E.A.Bruce EN



Stylochaeton pilosus Bogner EN



Hibiscus scotellii Baker f. NT



Tarenna hutchinsonii Bremek. CR



Seepage areas with *Loudetiopsis tristachyoides*. Photos : M.Cheek © RBG Kew



Temporary pool with *Dopatrium senegalense*. Photos : M.Cheek © RBG Kew