Mokoko-Onge

CMMTIPA040

Country: **Cameroon**
Administrative region: **Southwest (Region)**
Central co-ordinates: **4.36000 N, 9.00000 E**
Area: **395km²**

Qualifying IPA criteria

A(i)

IPA assessment rationale

The Mokoko-Onge forests qualify under IPA criterion A(i) as they harbour important populations of numerous globally threatened species. The site may also potentially qualify under criterion B due to the high number of conservation species and also under criterion C due to the importance and rarity of the coastal lowland forest.

Site description

The Mokoko-Onge forests neighbouring the Onge river on the western side of Mount Cameroon are the best preserved of the dense lowland forests once surrounding this huge volcanic mountain (Mwachala & Cheek, 2012). The area demarcated here incorporates the Onge proposed integral reserve and the former Mokoko River Forest Reserve, although these have been largely subsumed within a large logging concession as UFA 11-008 on recent maps of Cameroon's forestry estate (MINFOF & WRI, 2021).The site extends from the villages of Mokoko and Barombi Mokoko in the North, south to Bonjaro and Boa then west of the logging concession to meet the border of the proposed Ndongere National Park and south and east along the coast to the palm oil plantations at Ideanau. East of the Onge river which forms the eastern border of UFA 11-008, the border incorporates the Onge proposed integral reserve and extends north to Bambuko at the northeast tip of the UFA. Although it omits degraded habitat surrounding the Bomana Bakweri-Koto-Bambuko road, this area extending to the western boundary of the Mt Cameroon National Park would best be considered a buffer zone of the National Park and all further development considered subject to the impact on the neighbouring forests and their connectivity.

Botanical significance

This lowland forest site is one of the most important habitats in Cameroon due to the rarity of surviving coastal lowland rainforest, the very high biodiversity specific to the Mt Cameroon area, and its contribution to a surviving gradient of natural vegetation from sea-level forest to sub-alpine summit grassland that is unique in Africa (Cheek et al., 1996; Forboseh et al., 2011). It is part of a zone that has the highest plant species and generic diversity per degree square in tropical africa (Barthlott et al., 1996; Dagallier et al., 2020) and much of this diversity is supplied by the unprotected, dense lowland forests rather than the higher slopes which constitute the bulk of the Mt Cameroon National Park (Cable & Cheek, 1998; Mwachala & Cheek, 2012).
Over 70 globally threatened plants are recorded. Octoknema mokoko (CR), Afrothismia foertheriana (CR) and Mitriostigma bakweri (ined.) are considered globally unique to the site, while Cola cecidifolia (CR) may also be endemic since it is likely to have been lost from the only other known sites, nearby Southern Bakundu and Bimbia Bonadikombo, which have suffered severe degradation (Cheek et al., 2015; Cheek & Lawrence, 2018). Several other taxa are only known from elsewhere in the Mt Cameroon area or from one or two other key sites like Korup National Park.

Habitat and geology

Mount Cameroon is an active volcano and the highest mountain in

West or Central Africa. It is part of the Cameroon Volcanic Line which extends northeastwards from the offshore islands of Annobon, Sao Tome and Bioko, through southwestern Cameroon to the Bamenda highlands and beyond. The mountain is formed of alkali basalt and basanite lavas overlying Cretacious to Miocene (or more recent) sediments which in turn rest on precambrian metamorphic basement rocks (Déreulle et al, 1987; Mathieu et al., 2011). Recent research and dating methods suggest most of the surface lavas appear to be relatively recent (

Conservation issues

The Bambuko-Balundu Native Authority Reserve was originally demarcated in 1936-7 and gazetted in 1952 by the colonial authorities as a timber reserve, with a secondary aim of watershed protection (Acworth et al., 2021). It became the Mokoko River Forest Reserve in the 1970s. To the north and west, the "Boa plain", approximately 30,000 ha of secondary forest on floodplain, was targeted by colonial farmers for plantations and later reverted to the state to be leased to the Cameroon Development Corporation (CDC). Although by the mid 1900s only c.2500 ha had been actively planted by the CDC and another 4000 ha "illegally" squatted by small-scale farmers, planting of oil palm has intensified in the last decade (Mbom, 2009). Population pressure is high with 50,000 people estimated to live on these plains, mostly in fishing villages on the coast but with c.90% of households actively farming the land. High levels of migration due to fertile soils and employment opportunities in the CDC plantations, along with the confused colonial legacy of land tenure and the lure of logging profits, have created complex relationships between those competing for resources (Acworth et al., 2021). Intentions of the MCP, funded by the UK and German governments, to promote sustainable resource use in the Mokoko reserve gave way to involvement in more urgent processes at the "farm-forest" interface of the Boa plain area, which acts as a protective belt for the Mokoko reserve itself. Although the MCP eventually managed to assuage mistrust of some groups and promote sustainable management of the forests in a participatory context, and organisations like the Mokoko Wildlife Management Association (MWMA) have formed to promote sustainable wildlife management within the forests, the MCP withdrawal in 2002 threatened to leave a void. Cheek & Prance (2015) report that although logging was occurring in the Onge forests, this has not proceeded as fast as was once feared, while much feared privatisation of the CDC and associated acceleration of plantation development has not occurred. However, efforts to establish an Onge integral forest reserve have yet to bear fruit, and most of the habitat connecting the slopes of Mt Cameroon with the lowland forests has been severely degraded, only leaving a precarious remaining wildlife corridor. In the Bomana area, conservation efforts have also met opposition from from local interests keen to strike deals with logging firms (Acworth et al., 2021).
Most of the heart of the IPA forms a 160 km2 section of production forest unit, UFA 11-008 which has two further disjunct units northwest and southwest of Bakossi National Park and is leased to the Cameroonian company SEPFCO. Forest monitoring suggests 553 ha of forest were lost between 2001 and 2018, with disturbance mainly in the northwest part (OpenTimberPortal, 2021).
Local organisations ERUDEF and Ecological Balance have implemented a project to replenish stocks and protect existing trees of the commercially valuable Microberlinia bisulcata (Zebrawood) in the Mokoko forest where it has been the subject of heavy logging (ERUDEF, 2021; Truscott, 2021).

Site assessor(s)

Assessed by:

Bruce Murphy, Royal Botanic Gardens, Kew

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
Belonophora ongensis S.E.Dawson & Cheek	A(i), A(iii)	✓	✓	–	–	–	
Hoplestigma pierreanum Gilg	A(i), A(iii)	✓	✓	✓	–	–	
Psychotria bimbiensis Bridson & Cheek	A(i)	✓	✓	✓	–	–	
Cola metallica Cheek	A(i)	✓	✓	✓	–	–	
Chlorophytum petrophilum K.Krause	A(i)	✓	✓	✓	–	–	
Microberlinia bisulcata A.Chev.	A(i)	✓	–	✓	–	–	
Piptostigma longepilosum	A(i)	✓	✓	✓	–	–	
Cryptosepalum korupense Burgt	A(i)	✓	✓	✓	–	–	
Tessmannia korupensis Burgt	A(i)	✓	✓	✓	–	–	
Dactyladenia mannii (Oliv.) Prance & F.White	A(i)	✓	✓	✓	–	–	
Cola praecuta Brenan & Keay	A(i)	✓	✓	✓	–	–	
Cola cecidiifolia Cheek	A(i)	✓	✓	✓	–	–	
Gastrodia africana Kraenzl.	A(i), A(iii)	–	–	–	–	–	
Dactyladenia cinerea (Engl. ex De Wild.) Prance & F.White	A(i)	✓	✓	✓	–	–	
Psychotria elephantina Lachenaud & Cheek	A(i)	✓	✓	✓	–	–	
Floscopa mannii C.B.Clarke	A(i)	–	–	–	–	–	
Sabicea xanthotricha Wernham	A(i)	✓	–	✓	–	–	

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
Anopyxis klaineana (Pierre) Engl.	A(i)	–	–	✓	–	✓	
Diospyros crassiflora Hiern	A(i)	–	–	–	–	✓	
Angylocalyx talbotii Baker f. ex Hutch. & Dalziel	A(i)	–	–	✓	–	–	
Nothospondias staudtii Engl.	A(i)	–	–	✓	–	–	
Ancistrocladus letestui Pellegr.	A(i)	–	–	–	–	–	
Vepris lecomteana (Pierre) Cheek & T.Heller	A(i)	✓	–	–	–	–	
Deinbollia maxima Gilg ex Engl.	A(i)	–	–	✓	–	–	
Salacia volubilis Loes. & H.J.P.Winkl.	A(i)	✓	–	✓	–	–	
Leeuwenbergia letestui Letouzey & N.Hallé	A(i)	✓	✓	✓	–	–	
Sabicea medusula K.Schum. ex Wernham	A(i)	✓	✓	✓	–	–	
Begonia preussii Warb.	A(i)	✓	–	✓	–	–	
Lophira alata Banks ex Gaertn.f.	A(i)	–	–	–	–	✓	
Drypetes staudtii (Pax) Hutch.	A(i)	✓	–	✓	–	–	
Drypetes preussii (Pax) Hutch.	A(i)	✓	✓	✓	–	–	
Garcinia kola Heckel	A(i)	–	–	–	–	✓	
Salacia lenticellosa Loes. ex Harms	A(i)	✓	✓	✓	–	–	
Afrofittonia silvestris Lindau	A(i)	✓	–	✓	–	–	
Brillantaisia lancifolia Lindau	A(i)	✓	✓	✓	–	–	
Eurypetalum unijugum Harms	A(i)	✓	✓	✓	–	–	

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
Loesenera talbotii Baker f.	A(i)	–	–	✓	–	–	
Hugonia macrophylla Oliv.	A(i)	✓	✓	✓	–	–	
Strychnos staudtii Gilg	A(i)	–	✓	✓	–	–	
Psychotria camerunensis E.M.A.Petit	A(i)	✓	–	–	–	–	
Psychotria podocarpa Petit	A(i)	✓	✓	✓	–	–	
Dicranolepis polygaloides Gilg ex H.Pearson	A(i)	✓	✓	✓	–	–	
Cuviera talbotii (Wernham) Verdc.	A(i)	✓	✓	✓	–	–	
Strychnos elaeocarpa Gilg ex Leeuwenb.	A(i)	✓	–	✓	–	–	
Medusandra richardsiana Brenan	A(i)	✓	✓	✓	–	–	
Rinorea thomasii Achound.	A(i)	✓	✓	✓	–	–	
Gaertnera letouzeyi Malcomber	A(i)	✓	✓	✓	–	–	
Psychotria asterogramma O.Lachenaud	A(i)	✓	✓	✓	–	–	
Impatiens hians Hook.f. var. bipindensis (Gilg) Grey-Wilson	A(i)	✓	✓	✓	–	–	
Isomacrolobium leptorrhachis (Harms) Aubrév. & Pellegr.	A(i)	✓	–	✓	–	–	
Polystachya albescens Ridl. subsp. angustifolia (Summerh.) Summerh.	A(i)	✓	✓	✓	–	–	
Uvariopsis zenkeri Engl.	A(i)	✓	–	✓	–	–	
Anthonotha xanderi Breteler	A(i)	–	–	–	–	–	

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
Globulostylis rammelooana Sonké	A(i)	✓	–	✓	–	–	
Belonophora talbotii (Wernham) Keay	A(i), A(iii)	✓	✓	✓	–	–	
Pyrenacantha longirostrata Villiers	A(i)	✓	✓	✓	–	–	
Campylospermum umbricola (Tiegh.) Farron	A(i)	–	–	–	–	–	
Talbotiella korupensis Mackinder & Wieringa	A(i)	✓	–	✓	–	–	
Chazaliella obanensis (Wernham) Petit & Verdc.	A(i)	✓	✓	✓	–	–	
Rinorea dewitii Achound.	A(i)	✓	✓	✓	–	–	
Cola suboppositifolia Cheek	A(i)	✓	✓	✓	–	–	
Pseudosabicea batesii (Wernham) N.Hallé	A(i)	✓	✓	✓	–	–	
Drypetes burnleyae Cheek	A(i)	✓	✓	✓	–	–	
Afrothismia hydra Sainge & T.Franke	A(i)	✓	✓	✓	–	–	
Afrothismia foertheriana T.Franke, Sainge & Agerer	A(i)	✓	✓	✓	✓	–	
Rinorea amietii Achound.	A(i)	✓	–	✓	–	–	
Hamilcoa zenkeri (Pax) Prain	A(i)	✓	–	–	–	–	
Trichoscypha mannii Hook.f.	A(i)	–	✓	✓	–	–	
Salacia nigra Cheek	A(i)	✓	✓	✓	–	–	
Guibourtia tessmannii (Harms) J.Léonard	A(i)	–	✓	✓	–	–	

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
Aframomum makandensis Dhetchuvi	A(i)	✓	✓	✓	–	–	
Haplormosia monophylla (Harms) Harms	A(i)	–	✓	✓	–	–	
Aframomum tchoutoui D.J.Harris & Wortley	A(i)	–	✓	✓	–	–	
Aframomum plicatum D.J.Harris & Wortley	A(i)	✓	✓	✓	–	–	
Garcinia staudtii Engl.	A(i)	✓	–	✓	–	–	
Globulostylis minor Wernham	A(iii)	✓	✓	✓	–	–	
Guaduella humilis Clayton	A(i)	✓	–	✓	–	–	
Hymenostegia viridiflora Mackinder & Wieringa	A(i)	✓	✓	✓	–	–	
Leeuwenbergia africana Letouzey & N.Hallé	A(i)	✓	–	✓	–	–	
Leptoderris aurantiaca, Leguminosae	A(i)	–	✓	✓	–	–	
Piptostigma oyemense Pellegr.	A(i)	–	✓	✓	–	–	
Psychotria njumei Cheek	A(i)	–	–	✓	–	–	
Vitex lokundjensis W.Piep.	A(i)	✓	✓	✓	–	–	
Sabicea urbaniana Wernham	A(iv)	✓	✓	✓	–	–	

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

General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Moist Lowland Forest	90	Major

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Forestry	50	

Threats

THREAT	SEVERITY	TIMING
Agriculture & aquaculture - Annual & perennial non-timber crops - Small-holder farming	High	Ongoing - trend unknown
Agriculture & aquaculture - Annual & perennial non-timber crops - Agro-industry farming	High	Ongoing - trend unknown
Energy production & mining - Oil & gas drilling	Low	Future - inferred threat
Biological resource use - Logging & wood harvesting	High	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Mount Cameroon National Park	National Park	protected/conservation area is adjacent to IPA	–
Ndognere Proposed National Park	National Park	protected/conservation area is adjacent to IPA	–

Conservation designation

DESIGNATION NAME	PROTECTED AREA	RELATIONSHIP WITH IPA	AREAL OVERLAP
Mount Cameroon and Mokoko-Onge	Important Bird Area	protected/conservation area overlaps with IPA	260
Mount Cameroon and Mokoko-Onge	Key Biodiversity Area	protected/conservation area overlaps with IPA	260
Mount Cameroon and Mokoko-Onge	Alliance for Zero Extinction Site	protected/conservation area overlaps with IPA	260
Estuaire du Rio Del Rey	Ramsar	protected/conservation area is adjacent to IPA	–

Management type

MANAGEMENT TYPE	DESCRIPTION	YEAR STARTED	YEAR FINISHED
No management plan in place	There does not appear to be a management plans for the FMU 11-008. A management plan for the neighbouring National Park succeeding that expiring in 2019 has not been seen but is likely to exist.	–	–

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