Nguti forests

CMNTIPA043

Country: **Cameroon**
Administrative region: **Southwest (Region)**
Central co-ordinates: **5.29790 N, 9.35640 E**
Area: **1142km²**

Qualifying IPA criteria

A(i)

IPA assessment rationale

The site qualifies as an IPA under criterion A(i) due to the considerable number of globally threatened species with populations of national or international importance.

Site description

This site is based on an area of predominantly lowland rainforest investigated through the European Forestry Institute (EFI) funded rapid botanical survey (RBS) performed by Dr Peguy Tchouto and colleagues and reported by Hawthorne (2015). It fills a gap between three major protected areas, Korup National Park, Banyang Mbo Wildlife Sanctuary and Bakossi National Park, an area previously suspected to be of botanical importance (Philips & Miller, 2002; Cheek et al., 2004) but with few collected specimens. The boundary demarcated here is based on a maximal inclusive polygon incorporating the 25 sample locations of the RBS team with an enlargement of c. 2 km added to the coordinates of the outer points. The boundary was additionally modified slightly along the western and eastern boundaries to adjoin Korup National Park and Banyang Mbo Wildlife Sanctuary respectively, to incorporate a few species records near Ntale in the east, and to avoid ovelap with the two parts of FMU 11-008 in the southeast. The towns of Nguti and Manyemen are within the site along the N8 Kumba-Mamfe road, which bisects the site from north to south.

Botanical significance

A large number of globally threatened and sub-endemic species have been recorded from the relatively little collecting that has been done in the region. Cola metallica (CR), Tricalysia lejolyana (EN), Cola suboppositifolia (EN) and Warneckea ngutiensis (CR) are recorded from the site close to Banyang Mbo Wildlife Sanctuary and are included in both TIPA sites, although the latter is thus far known from a single collection and therefore could be endemic to Nguti.
While the terrain rises to over 1000 m in the northwest of the site, all the sample locations were below 500 m and therefore the submontane flora is little known and there are notably few orchids recorded. None of the recorded species are endemic to the site itself. This is probably due to the rapid survey method which might fail to record or recognise undescribed species from the often infertile specimens collected.
Not surprisingly, the flora has affinities with nearby sites, Korup, Rumpi Hills, Bakossi National Park and Bayang Mbo. Several of the taxa listed here are otherwise known only from one of these sites, such as Keetia bakossiorum, Deinbollia unijuga and Memecylon bakossiense. Calpocalyx cauliflorus (VU), Hugonia macrophylla (VU) and Uvariopsis korupensis (EN).
The site also shares affinities with more distant sites in the south of Cameroon such as the Ngovayang massif and Campo Ma'an. This is likely due to the lowland nature of these sites. Some of these records represent a significant northern range expansion, such as Rinorea microglossa, Dictyophleba setosa, Heckeldora leptotricha and Lychnodiscus brevibracteatus and should be treated with some caution.
Although not globally threatened, Microcoelia bulbocalcarata, has a highly disjunct distribution, and is only known in Cameroon from one collection near Nguti, close to Banyang Mbo.
Amongst the social, economic and culturally important species

recorded are Microberlinia bisulcata (CR) a valuable "zebrawood" timber.

Habitat and geology

The site has a high-rainfall, seasonal climate with mean annual rainfall of 3,725 mm recorded at Nguti, peaking at 620 mm in July and dropping to 30 mm in January and December (Rodewald et al., 1994). However, rainfall is likely to vary across the site, with only 2,200 mm recorded at the Ikenge Research Station west of the site. Nguti would appear to lie within a rainshadow so this data is surprising and may be an anomaly due to the short (2 year) recording period. An average of 2,646 mm is elsewhere cited for Nguti municipality (Nguti Council, 2009; data for years 2005-2008). Mean monthly minima and maxima at Nguti ranged from 23.0 to 32.6 °C between September 1991 and August 1992 and from 17.5 to 33.2 °C over a 27 month period at IRS where the dense forest may contribute a cooling effect (Rodewald et al., 1994).
The terrain is mainly fairly flat at around 300 m but the hills directly west of Nguti rise to over 1,000 m near the northwestern border, while in the southwest the terrain also rises towards the Rumpi Hills region, reaching 1000 m within the proposed IPA area. Southeast of Manyemen the terrain also rises to over 700 m. Geologically the area lies at the boundary of the volcanic Mount Cameroon Line and more ancient, weathered basement rocks which underlie Korup National Park to the west. Soils are indicated as predominantly red basic and acid yellow ferralitic sesquioxides (ORSTOM, 1970; Letozey, 1985) or as Haplic Nitisols in association with Rhodic Nitisols (Yerima & Van Ranst, 2005).
The site is mostly covered in closed rainforest, mapped by Letouzey (1985) as type 228, "Atlantic Biafran forest with Caeslapiniaceae", with more semi-deciduous elements in the south towards the Rumpi Hills (type 205) and submontane forest on the higher hills. Along the Kumba-Mamfe road the forest is cleared around several towns (Nguti, Manyemen, Bayib-Asibong) and there are further large areas of farmland and degraded land along the D100a road west of Manyemen. A substantial area has been degraded or converted to palm oil plantation east of the Kumba-Mamfe road south of Manyemen. However, further areas demarcated as palm oil plantations in the southwest around Sambaliba, and east of Nguti adjacent to Banyang Mbo reserve still appear on satellite imagery to have mainly intact forest (GlobalForestWatch, 2021).

Conservation issues

The site was threatened with a very large palm oil project which received significant attention from local people, conservation organisations and media. After an initial 73,000 ha planned development, 20,000 ha were granted through Presidential decrees in 2013 (416-418) and an area of 882 ha was estimated to have been cleared between December 2011 and March 2016 (Greenpeace, 2016). There were numerous accusations of illegal expropriation of local farmers and other objections. Although the American company Herakles Farms withdraw from the project, forest clearance was reported to have continued and even increased under new ownership (Cannon, 2016). This can be seen starkly on satellite imagery in the concession area south of Manyemen and east of the N8 road but not in the other areas (GlobalForestWatch, 2021). However, there is also considerable tree cover loss in other areas of the site south of Nguti around this time, perhaps indirectly related to these plantations. The SGSOC lease was due to expire in November 2016 (Deugogue, 2016).
In addition to the palm oil concessions, the IPA area also includes 4 community forests (covering c. 13,000 ha), parts of Nguti and Mamfe council forests (c. 17,000 ha) and parts of FMUs 11-006 and 11-001 (c. 6,500 ha).
Much of the data assembled here is based on a survey conducted partly in response to the disputed environmental study performed for Herakles-SGSOC which was used to argue the forest was largely degraded with relatively low conservation value (Asamoah, 2011; Kupsch et al., 2014; Hawthorne, 2015). Not surprisingly, however, given the location of the site surrounded by five major conservation areas (Korup N.P., Bakossi N.P., Rumpi Hills, Banyang Mbo Wildlife Sanctuary and Nta Ali Forest Reserve), the area was revealed to be of high conservation value, with 23 large mammals recorded and all threatened animals known from Korup present, including Critically Endangered Forest Elephants and Endangered Nigeria-Cameroon Chimpanzees and Drills, as well as the many plant species of conservation importance listed here (Kupsch et al., 2014; Hawthorne, 2015).
It should be noted that to the west of the southern part of the site, the area of forest between Korup and Rumpi Hills has also been targeted with a SGSOC concession plot. Although Kupsch et al (2014) also reported high numbers of trees of conservation importance from this plot, the area is not included in the IPA proposed here as it was was not included in Hawthorne (2015) and would constitute a considerable enlargement of an already large site. It is likely to warrant inclusion as a separate IPA. Several rare species have also been collected south of the site, around the village of Mbu.

Site assessor(s)

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
Pradosia spinosa Ewango & Breteler	A(i)	✓	✓	✓	–	–	
Memecylon bakossiense R.D.Stone, Ghogue & Cheek	A(i)	✓	✓	✓	–	–	
Keetia bakossiorum Cheek	A(i)	✓	✓	✓	–	–	
Microberlinia bisulcata A.Chev.	A(i)	✓	–	–	–	–	
Chassalia laikomensis Cheek	A(i), A(iii)	–	–	–	–	–	
Rothmannia ebamutensis Sonké	A(i)	✓	✓	✓	–	–	
Uvariopsis korupensis Gereau & Kenfack	A(i)	✓	✓	✓	–	–	
Deinbollia unijuga D.W.Thomas	A(i)	✓	✓	✓	–	–	
Thyrsosalacia pararacemosa N.Hallé	A(i)	✓	✓	✓	–	–	
Psychotria njumei Cheek	A(i)	–	✓	✓	–	–	
Millettia laurentii de Wild.	A(i)	–	✓	✓	–	✓	
Amphiblemma amoenum Jacq.-Fél.	A(i)	✓	✓	✓	–	–	
Trichilia zewaldae J.J.de Wilde	A(i), A(iii)	✓	✓	✓	–	–	
Aulacocalyx mapiana Sonké & Bridson	A(i), A(iii)	✓	✓	–	–	–	
Ancistrocladus grandiflorus Cheek	A(i)	✓	✓	✓	–	–	
Psychotria darwiniana Cheek	A(i)	✓	✓	✓	–	–	
Boutiquea platypetala (Engl. & Diels) Le Thomas	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
Amorphophallus preussii (Engl.) N.E.Br.	A(i)	✓	✓	✓	–	–	
Pyrenacantha longirostrata Villiers	A(i)	✓	✓	✓	–	–	
Cola megalophylla Brenan & Keay	A(i)	✓	✓	✓	–	–	
Rhipidoglossum obanense (Rendle) Summerh.	A(i)	✓	✓	✓	–	–	
Psychotria podocarpa Petit	A(i)	✓	✓	–	–	–	
Calpocalyx cauliflorus Hoyle	A(i)	✓	✓	✓	–	–	
Afzelia pachyloba Harms	A(i)	–	–	–	–	✓	
Hugonia macrophylla Oliv.	A(i)	✓	✓	✓	–	–	
Baillonella toxisperma Pierre	A(i)	–	–	–	–	✓	
Uvariodendron giganteum (Engl.) R.E.Fr.	A(i)	✓	✓	–	–	✓	
Cordia platythyrsa Baker	A(i)	–	–	–	–	✓	
Terminalia ivorensis A.Chev.	A(i)	–	–	–	–	✓	
Angylocalyx talbotii Baker f. ex Hutch. & Dalziel	A(i)	–	✓	–	–	–	
Afrostyrax lepidophyllus Mildbr.	A(i)	–	✓	✓	–	–	
Calycosiphonia macrochlamys (K.Schum.) Robbr.	A(i)	–	✓	–	–	–	
Staurogyne bicolor (Mildbr.) Champl.	A(i)	✓	✓	–	–	–	
Strychnos elaeocarpa Gilg ex Leeuwenb.	A(i)	✓	✓	✓	–	–	
Strychnos mimfiensis Gilg ex Leeuwenb.	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
Salacia lenticellosa Loes. ex Harms	A(i)	✓	✓	✓	–	–	
Loesenera talbotii Baker f.	A(i)	✓	✓	–	–	–	
Crateranthus talbotii Baker f.	A(i)	✓	✓	–	–	–	
Napoleonaea egertonii Baker f.	A(i)	✓	✓	✓	–	–	
Drypetes staudtii (Pax) Hutch.	A(i)	✓	–	–	–	–	
Garcinia staudtii Engl.	A(i)	✓	–	–	–	–	
Lophira alata Banks ex Gaertn.f.	A(i)	–	–	–	–	✓	
Antrocaryon micraster A.Chev. & Guillaumin	A(i)	–	–	–	–	✓	
Chassalia manningii O.Lachenaud ined.	A(i)	✓	✓	✓	–	–	
Balonga buchholzii (Engl. & Diels) Le Thomas	A(i)	✓	✓	✓	–	–	
Berlinia hollandii Hutch. & Dalziel	A(i)	✓	✓	✓	–	–	
Begonia prismatocarpa Hook. subsp. delobata Sosef	A(i)	✓	✓	✓	–	–	
Diaphananthe bueae (Schltr.) Schltr.	A(i)	✓	–	–	–	–	
Chazaliella obanensis (Wernham) Petit & Verdc.	A(i)	✓	–	–	–	–	
Bulbophyllum teretifolium Schltr.	A(i)	✓	✓	✓	–	–	
Cola metallica Cheek	A(i)	✓	✓	✓	–	–	
Warneckea ngutiensis R. D. Stone	A(i)	✓	✓	✓	✓	–	
Tricalysia lejolyana Sonké & Cheek	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
Ancistrocladus korupensis D.W.Thomas & Gereau	A(i)	✓	✓	✓	–	–	
Cola suboppositifolia Cheek	A(i)	✓	✓	✓	–	–	
Allophylus conraui Gilg ex Radlk.	A(i)	✓	✓	✓	–	–	
Grossera major Pax	A(i)	✓	✓	✓	–	–	
Piptostigma goslineanum Ghogue, Sonké & Couvreur	A(i)	✓	✓	✓	–	–	
Aframomum plicatum D.J.Harris & Wortley	A(i)	✓	✓	✓	–	–	
Aframomum tchoutoui D.J.Harris & Wortley	A(i)	✓	✓	✓	–	–	
Entandrophragma candollei Harms	A(i)	–	–	–	–	✓	
Memecylon dasyanthum Gilg & Ledermann ex Engl.	A(i)	✓	–	–	–	✓	
Afrofittonia silvestris Lindau	A(i)	–	–	–	–	–	
Aframomum makandensis Dhetchuvi	A(i)	✓	✓	✓	–	–	
Ormocarpum klainei Tisser.	A(i)	✓	✓	✓	–	–	

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	84	Major
Artificial - Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest	10	
Artificial - Terrestrial - Plantations	1	
Artificial - Terrestrial - Urban Areas	5	

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Agriculture (arable)	10	
Forestry	25	Unknown
Residential / urban development	—	
Harvesting of wild resources	—	Unknown

Threats

THREAT	SEVERITY	TIMING
Agriculture & aquaculture - Annual & perennial non-timber crops - Shifting agriculture	High	Ongoing - increasing
Transportation & service corridors - Roads & railroads	Medium	Ongoing - increasing
Agriculture & aquaculture - Annual & perennial non-timber crops - Agro-industry farming	High	Ongoing - trend unknown
Biological resource use - Logging & wood harvesting	Medium	Ongoing - trend unknown
Human intrusions & disturbance - War, civil unrest & military exercises	Medium	Ongoing - trend unknown
Residential & commercial development	Medium	Ongoing - trend unknown

Protected areas

PROTECTED AREA NAME	PROTECTED AREA TYPE	RELATIONSHIP WITH IPA	AREAL OVERLAP
Korup National Park	National Park	protected/conservation area is adjacent to IPA	—
Bakossi National Park	National Park	protected/conservation area is adjacent to IPA	—
Banyang Mbo	Wildlife Sanctuary	protected/conservation area is adjacent to IPA	—

Management type

MANAGEMENT TYPE	DESCRIPTION	YEAR STARTED	YEAR FINISHED
No management plan in place		–	–

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