

Akokndoué hill

Mont Akok Ndoé (Test version)

CMNTIPA011



Country: **Cameroon**

Administrative region: **Centre (Region)**

Central co-ordinates: **3.85700 N, 11.46540 E**

Area: **1.6km²**

Qualifying IPA criteria

A(i)

IPA assessment rationale

Akokndoué hill qualifies as a potential IPA site under criterion A(i) through the presence of several globally threatened species which have been recorded here and are known from very few other sites. While the considerably degraded nature of the site is noted and the continued presence of some of these taxa would need to be confirmed, populations at other potential sites are also at risk. For those species endemic to the Yaoundé inselbergs, preserving a network of these neighbouring sites is the best hope for their survival.

Site description

Akokndoué hill (Mont Akok Ndoe) and the associated ridge leading to Mvog-Betsi summit a short distance to the northeast, is a partially forested prominence located in the N'kolbisson area of west Yaoundé, immediately west of the Institute of Agricultural Research for Development (IRAD) and associated buildings. It is part of a chain of c. 1,000m inselbergs in and around the western part of Yaoundé, the capital of Cameroon.

Botanical significance

Many specimens were collected in the Yaoundé area by Zenker and Staudt as far back as the 1890s but unfortunately few of these can be located to precise areas. Subsequent collecting has recorded several rare or important species from the inselberg hills, including rediscovery of many of the earlier collections. The N'kolbisson area has been a particular locus for collecting, partly due to the proximity of the IRAD headquarters and other institutions. Once again, some of these collections, particularly a number made by de Wilde and colleagues in the 1960s can not be further located within this region. However, others are pinpointed to Mont Akokndoué, Mont Minloua or one of the other hills.

Notable amongst the globally threatened species at this site are *Psychotria yaoundensis* (CR), which is endemic to Yaoundé, *Pristimera bilhongii* and *P. breteleri* (both CR) which are both narrowly endemic to the N'kolbisson area. *Pterorachis zenkeri* (VU), first described from Zenker and Staudt's "Yaoundé station" collections, has also been subsequently recorded here as well as at a few other sites including the neighbouring inselbergs of Mont Minloua and Mont Febe.

Callichilia monopodialis (VU) and *Commelina zenkeri* (EN) are other threatened species recorded at this site, while several others, including *Chlorophytum staudtii* (EN), *Cyphostemma camerounense* (EN) and *Momordica camerounensis* (EN), may also occur here, having been recorded from N'kolbisson without a precise location.

Habitat and geology

The hills around Yaoundé rise from the South Cameroon plain between the Sanaga fault and the north-thrusting Congo craton. They are formed from high grade metamorphic rocks, mainly granulites and migmatites also referred to as embriichite gneiss (Achoundong., 1985), derived from sedimentary and igneous

protoliths and apparently dating from around 600 mya (Nzenti et al., 1988; Tchouatcha et al., 2018; Ngnotue et al., 2012).

Precipitation in Yaoundé is 1,605 mm per annum, falling in a bimodal pattern with a small (March-June) and greater (September-November) wet season interspersed with a drier period (July-August) and a second more severe dry period between December and February when mean monthly rainfall drops below the relatively flat mean monthly temperature curve (range: 22.8–25.47 °C) on a Walter-Leith type chart (Simo et al., 2009; Bissaya et al., 2014; Noumi, 2015). This is below the level of rainfall normally thought necessary to sustain evergreen tropical forest (Cheek et al., 2011), although the level may be higher on the summits due to orographic precipitation (Madiapevo et al., 2014; Simo et al., 2009). The original forest was probably semi-deciduous (Achoundong, 1985) but has been heavily degraded.

Conservation issues

The vegetation has been considerably degraded by logging and cultivation. Dense settlements cover the lower slopes and have spread high up the flanks in places. Buildings are visible on satellite imaging to the top of the connected northeast ridge at c. 885 m. Elsewhere in Yaoundé, such as nearby Mont Minloua, similar inselbergs have been partly destroyed by quarrying activity. Yaoundé's population is rapidly growing and such pressures are therefore likely to intensify.

However, despite the considerable habitat degradation, sites such as these present an opportunity for recreational and educational spaces in the expanding city, improving quality of life and prestige of the city while also conserving what remains of the original vegetation. They provide convenient fieldwork sites for students at Yaoundé's universities and, for other urban residents, a potential connection to the country's rich biodiversity.

Site assessor(s)

Bruce Murphy, Royal Botanic Gardens, Kew

Martin Cheek, Royal Botanic Gardens Kew

Olivier Lachenaud, Meise Botanic Garden

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
<i>Pterorhachis zenkeri</i> Harms	A(i)	✓	✓	✓	—	—	
<i>Commelina zenkeri</i> C.B.Clarke	A(i)	✓	✓	✓	—	—	
<i>Pristimera biholongii</i> N.Hallé	A(i)	✓	✓	✓	✓	—	
<i>Pristimera bretelesi</i> N.Hallé	A(i)	✓	✓	✓	✓	—	
<i>Psychotria yaoundensis</i> O.Lachenaud	A(i)	✓	✓	✓	—	—	
<i>Callichilia monopodialis</i> (K.Schum.) Stapf	A(i)	✓	—	—	—	—	
<i>Oxyanthus doucetii</i> Sonké & O.Lachenaud	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
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General site habitats

GENERAL SITE HABITAT	PERCENT COVERAGE	IMPORTANCE
Forest - Subtropical/Tropical Moist Montane Forest	—	
Artificial - Terrestrial - Plantations	—	

Land use types

LAND USE TYPE	PERCENT COVERAGE	IMPORTANCE
Agriculture (arable)	—	
Harvesting of wild resources	—	

Threats

THREAT	SEVERITY	TIMING
Residential & commercial development - Housing & urban areas	High	Ongoing - increasing
Agriculture & aquaculture - Annual & perennial non-timber crops - Small-holder farming	High	Ongoing - increasing
Energy production & mining - Mining & quarrying	High	Future - inferred threat
Geological events - Avalanches/landslides	Medium	Future - inferred threat
Natural system modifications - Fire & fire suppression - Increase in fire frequency/intensity	High	Ongoing - trend unknown
Biological resource use - Logging & wood harvesting	High	Ongoing - trend unknown

Management type

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

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