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Caracal aurata, African Golden Cat

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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Mammalia	Carnivora	Felidae

Taxon Name: Caracal aurata (Temminck, 1827)

Synonym(s):

• Profelis aurata

Common Name(s):

- English: African Golden Cat, Golden Cat
- French: Chat doré, Chat doré Africain
- Spanish: Gato Dorado

Taxonomic Notes:

Taxonomy is currently under review by the IUCN SSC Cat Specialist Group. This species has traditionally either been included in the genus *Felis* (Kral and Zima 1980) or *Profelis* (Pocock 1917, Wozencraft 2005). More recent molecular data unequivocally reveal that the Caracal *Caracal caracal* and the Serval *Leptailurus serval* are closely allied with the African Golden Cat (Johnson *et al.* 2006).

Assessment Information

Red List Category & Criteria:	Vulnerable A2c+3c <u>ver 3.1</u>			
Year Published:	2015			
Date Assessed:	April 20, 2014			

Justification:

The African Golden Cat is a forest-dependent species restricted to equatorial Africa, where high deforestation and bushmeat hunting levels are causing substantial reductions in their area of occupancy (AOO). Data on the extent of African Golden Cat AOO loss is unavailable due to a lack of population monitoring. We can infer, however, an approximate AOO loss using data on deforestation and bushmeat hunting, as well as evidence of the effects of these on African Golden Cats.

We infer that the cumulative loss of AOO from deforestation and bushmeat hunting along expanding road networks amounts to >30% in the past 15 years (three Golden Cat generations; Pacifici *et al.* 2013) and qualifies the African Golden Cat for Vulnerable status under criterion A2c. Additionally, the exacerbation of these threats due to population growth, projected mining activities and forest clearance for oil palm plantations will likely cause further reduction in AOO for the Golden Cat and we therefore predict that the AOO will be reduced by at least a further 30% in the next 15 years, lending additional support to the species' listing as Vulnerable under criterion A3c.

Previously Published Red List Assessments

2008 - Near Threatened (NT)

2002 - Vulnerable (VU)

1996 – Lower Risk/least concern (LR/lc)

1994 – Insufficiently Known (K)

Geographic Range

Range Description:

The African Golden Cat is endemic to the forests of Equatorial Africa. There are no confirmed records from The Gambia and Guinea Bissau, nor from Togo and Benin (Ray and Butynski 2013), which suggests a separation between Western and Central African populations (Nowell and Jackson 1996).

Country Occurrence:

Native: Angola (Angola); Cameroon; Central African Republic; Congo; Congo, The Democratic Republic of the; Côte d'Ivoire; Equatorial Guinea; Gabon; Ghana; Guinea; Liberia; Nigeria; Sierra Leone; Uganda

Distribution Map



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Population

The African Golden Cat is infrequently observed in the wild, and generally considered rare. In areas of heavy human hunting, Golden Cats were not recorded (e.g. Dibouka village in central Gabon (Henschel 2008) and Korup National Park (NP) in southwest Cameroon (TEAM, http://www.teamnetwork.org)). In an area of putatively suitable habitat in Equatorial Guinea, just 16% of the area was found to be occupied by African Golden Cats due to human disturbance (Martinez Marti 2011). **Current Population Trend:** Decreasing

Habitat and Ecology (see Appendix for additional information)

While the Neotropical and Indomalayan regions have several sympatric forest-dependent felid species, this is Africa's only one. The African Golden Cat occurs mainly in primary moist equatorial forest, although on the periphery of its range it penetrates savanna regions along riverine forest. It also occurs in montane forest and alpine moorland in the east of its range (Nowell and Jackson 1996, Ray and Butynski 2013).

Two studies of scats - from the Ituri forest of the Congo (Hart *et al.* 1996) and the Dzanga-Sangha forest of the Central African republic (Ray and Sunquist 2001) - found similar results. Rodents and squirrels were the main prey item (70 % and 62% respectively), followed by small and medium-size duikers (antelopes) (25% and 33% respectively. Primates made up 5% of the prey items in both studies, and there have been several observations by primate researchers of African Golden Cats hunting arboreal primates (Ray and Butynski 2013, Bahaa-el-din *et al.* in review). The same general diet items were reported by Kingdon (1977) from Uganda's Bwindi National Park. Birds are also taken, and pangolin remains were frequently found in scats from the Ivory Coast's Tai National Park (D. Jenny pers. comm. in Nowell and Jackson 1996).

African Golden Cats have turned up in the diet of leopards, the only other felid to occur in African moist forest. African Golden Cat remains were found in five of 196 Leopard *Panthera pardus* scats from Gabon's Lopé National Park (Henschel *et al.* 2005); a single carcass killed by a Leopard was found in the Ituri (Hart *et al.* 1996).

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

The African Golden Cat is often not a target species for bushmeat hunters, but is eaten when caught and the skin used or sold. Skins are sometimes found for sale in markets, for example in Yaoundé and Kampala where they are often sold alongside medicinal herbs and fetishes (T. Davenport pers. comm. in Ray and Butynski 2013). Skins may be used during circumcision rites or to wrap valuable objects, or as good luck charms for hunting success (Nowell and Jackson 1996).

Threats (see Appendix for additional information)

At least 6.5% of forest (projected from FAO 2011) in Golden Cat range countries has been lost in the past three Golden Cat generations (15 years, Pacifici *et al.* 2013). This translates into, at minimum, an equivalent loss of range for the Golden Cat as a result of habitat loss and fragmentation. Prior to the

year 2000, West and East Africa had already suffered an 88-92% reduction in rainforest, while Central Africa's rainforest extent was reduced by 40% (Laurance *et al.* 2006).

Intensive hunting for bushmeat (>1 million tonnes per year harvested in the Congo Basin, the species' main stronghold; Wilkie and Carpenter 1999), leading to 'empty forest syndrome' (Sayer 1992), likely accounts for greater reduction in area of occupancy (AOO) for the Golden Cat than deforestation, but is more difficult to quantify. Within 10–15 km of roads and settlements, large and medium bodied mammals experience sharp declines in population (Laurance *et al.* 2006, Blake *et al.* 2007, Henschel 2008). In excess of 64% of forest habitat in the Congo Basin lies within 10 km of a road and is also predicted to be affected by higher hunting pressure (Blake *et al.* 2007). Development of roads increased rapidly in the past 15 years (e.g. 35% increase in the Democratic Republic of Congo and >300% increase in northern Republic of Congo since the year 2000; Laporte *et al.* 2007). Golden Cat populations within these highly impacted areas are likely to be severely reduced or extirpated through direct mortality and loss of prey.

Golden cats are often not a primary target species, but are frequently killed by wire-snares (four individuals in two months in 20 km² in Gabon; Bahaa-el-din pers. obs.; and 13 individuals in three months in Lobéké, Cameroon; Ray *et al.* 2005), probably owing to similarities in body size and trail use to target species such as duikers. In an area of moderate bushmeat hunting, Golden Cats were recorded at less than a quarter of the population densities that they are found at in pristine areas (Bahaa-el-din *et al.* in prep). Where more intense hunting occurs, such as in village hunting areas (e.g. Dibouka village in central Gabon; Henschel 2008) and national parks (e.g. Korup NP in southwest Cameroon; TEAM, http://www.teamnetwork.org), camera trap and bushmeat studies did not record the species despite the presence of suitable habitat contiguous with the main forest of the Congo Basin.

Recent landscape-scale Golden Cat surveys in mainland Equatorial Guinea (Rio Muni) emphasize that prior range estimates based on forest cover may have significantly overestimated remaining golden cat range. An estimated 78% of Rio Muni consists of tropical dense forest and therefore putatively suitable habitat, but Golden Cats were found to occupy just 16% of the area (Martinez Marti 2011). Its presence in the area was correlated with rugged, inaccessible terrain away from human disturbance (Martinez Marti 2011). Golden Cats were reported by locals to be easy to hunt and locally extirpated long before other medium-to-large mammal species (Martinez Marti 2011).

These threats will intensify, as the human population within the species' range shows the fastest growth rates in the world (+2.6-2.8% per annum for West, Central and East Africa; FAO 2011). The population in main Golden Cat range countries, estimated at nearly a quarter of a billion for 2013, is projected to almost quadruple by 2100 (UN 2012, http://esa.un.org/wpp/).

The current "stampede of foreign investment" in mining activities and associated infrastructure development in Africa is of immediate concern (Edwards *et al.* 2014). In Central Africa, 42% of ecologically important areas would be directly impacted if there were complete development of mineral resources in the region (assuming that ecological impacts extend within 10 km of mines; Edwards et al. 2014). China's mineral investment alone has quadrupled in 10 years (Zhang 2011). In addition, it is predicted that the conversion of forests to oil palm plantations, which has caused extensive loss of forest habitat and biodiversity in Southeast Asia, will have similar impacts in Africa (particularly in West and Central Africa) as it expands over the coming years (Wich *et al.* 2014). The realisation of these

investments includes habitat destruction and degradation, relocation of human populations into previously remote areas and massive-scale infrastructural development including road and rail which in turn lead to the aforementioned surge in bushmeat hunting in these areas (Edwards *et al.* 2014).

Conservation Actions (see Appendix for additional information)

Included on CITES Appendix II. Hunting of this species is prohibited in Angola, Benin, Burkina Faso, Congo, Ghana, Côte d'Ivoire, Kenya, Liberia, Nigeria, Rwanda, Sierra Leone and Democratic Republic of Congo, with hunting regulations in place in Gabon, Liberia and Togo (Nowell and Jackson 1996).

Key protected areas for the species include: Gola F.R. (Sierra Leone), Mount Nimba Strict N.R. (Liberia, Côte d'Ivoire, Guinea), Sapo N.P. (Liberia), Taï and Comoé National Parks (Côte d'Ivoire), Gashaka Gumti N.P. (Nigeria), Dja Faunal Reserve (Cameroon), Lopé N.P. and Ivindo N.P. (Gabon), Odzala and Nouabale-Ndoki National Parks (Congo Republic) and Dzangha-Ndoki National Parks (CAR), Virunga N.P. (DR Congo), Queen Elizabeth and Bwindi Impenetrable National Parks (Uganda) (Butynski and Ray 2013).

There is a need for further survey work to acquire reliable population density estimates in various forest types, including disturbed habitats, in order to help better determine the population status across the range of the species.

Credits

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Appendix

Habitats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.5. Forest - Subtropical/Tropical Dry	Resident	Suitable	Yes
1. Forest -> 1.6. Forest - Subtropical/Tropical Moist Lowland	Resident	Suitable	Yes
1. Forest -> 1.7. Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level	Resident	Suitable	-
1. Forest -> 1.9. Forest - Subtropical/Tropical Moist Montane	Resident	Suitable	-

Use and Trade

(http://www.iucnredlist.org/technical-documents/classification-schemes)

End Use	Local	National	International
Medicine - human & veterinary	Yes	No	No
Wearing apparel, accessories	Yes	No	No
Other household goods	Yes	No	No

Threats

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Threat	Timing	Scope	Severity	Impact Score
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.1. Shifting agriculture	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem stre	esses -> 1.1. Ecosyster	n conversion
		1. Ecosystem stre	esses -> 1.2. Ecosysten	n degradation
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.2. Small-holder farming	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem stre	esses -> 1.1. Ecosyster	n conversion
		1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.1. Annual & perennial non-timber crops -> 2.1.3. Agro-industry farming	Ongoing	Minority (50%)	Slow, significant declines	Low impact: 5
	Stresses:	1. Ecosystem stre	esses -> 1.1. Ecosysten	n conversion
		1. Ecosystem stre	esses -> 1.2. Ecosyster	n degradation
2. Agriculture & aquaculture -> 2.2. Wood & pulp plantations -> 2.2.2. Agro-industry plantations	Future	Minority (50%)	Rapid declines	Low impact: 4
	Stresses:	1. Ecosystem stre	esses -> 1.1. Ecosyster	n conversion

		1. Ecosystem stresses -> 1.2. Ecosystem degradation		
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.2. Small-holder grazing, ranching or farming	Ongoing	Minority (50%)	Causing/could cause fluctuations	Low impact: 5
	Stresses:	1. Ecosystem str	esses -> 1.1. Ecosyster	n conversion
		1. Ecosystem str	esses -> 1.2. Ecosyster	n degradation
3. Energy production & mining -> 3.2. Mining & quarrying	Ongoing	Minority (50%)	Rapid declines	Medium impact: 6
	Stresses:	1. Ecosystem str	esses -> 1.1. Ecosyster	n conversion
		1. Ecosystem str	esses -> 1.2. Ecosyster	n degradation
4. Transportation & service corridors -> 4.1. Roads & railroads	Ongoing	Majority (50- 90%)	Slow, significant declines	Medium impact: 6
	Stresses:	2. Species Stresses -> 2.1. Species mortality		
5. Biological resource use -> 5.1. Hunting & trapping terrestrial animals -> 5.1.2. Unintentional effects (species is not the target)	Ongoing	Majority (50- 90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem stresses -> 1.3. Indirect ecosystem effects		cosystem effects
		2. Species Stresses -> 2.1. Species mortality		tality
		2. Species Stresses -> 2.2. Species disturbance		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.4. Unintentional effects: (large scale)	Ongoing	Majority (50- 90%)	Rapid declines	Medium impact: 7
	Stresses:	1. Ecosystem str	esses -> 1.1. Ecosyster	n conversion
		1. Ecosystem stresses -> 1.2. Ecosystem degradation		
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.5. Motivation Unknown/Unrecorded	Ongoing	Majority (50- 90%)	Causing/could cause fluctuations	- Medium impact: 6
	Stresses:	1. Ecosystem str	esses -> 1.2. Ecosyster	n degradation

Conservation Actions in Place

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions in Place	
In-Place Land/Water Protection and Management	
Occur in at least one PA: Yes	
In-Place Education	
Included in international legislation: Yes	
Subject to any international management/trade controls: Yes	

Conservation Actions Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Actions Needed

1. Land/water protection -> 1.1. Site/area protection

Conservation Actions Needed
1. Land/water protection -> 1.2. Resource & habitat protection
2. Land/water management -> 2.1. Site/area management
5. Law & policy -> 5.1. Legislation -> 5.1.2. National level
5. Law & policy -> 5.2. Policies and regulations
5. Law & policy -> 5.3. Private sector standards & codes
5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level

Research Needed

(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed
1. Research -> 1.2. Population size, distribution & trends
1. Research -> 1.3. Life history & ecology
1. Research -> 1.5. Threats
1. Research -> 1.6. Actions
3. Monitoring -> 3.1. Population trends
3. Monitoring -> 3.4. Habitat trends
0. Root -> 4. Other

Additional Data Fields

Distribution
Estimated extent of occurrence (EOO) (km ²): 4084995
Lower elevation limit (m): 0
Upper elevation limit (m): 3600
Population
Population severely fragmented: No
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes
Generation Length (years): 5
Movement patterns: Not a Migrant

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