

January 13, 2012

# Biodiversity Hotspot Eco-tours

Issue No.17  
www.arkive.org

# The Guinean Forests of West Africa

*Critically Endangered*

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### Words to Know!

- **Endemic Species:**  
Those that can only be found in one place on earth
- **Indicator Species:**  
A species whose health "indicates" the health of the ecosystem
- **Biome:**  
An area of the world categorized by its vegetation and climate

**W**elcome to the Guinean Forests of West Africa! This brochure will give one an inside view on what this breathtaking hotspot has to offer. With over 11,048 plant and animal species living in a critically endangered habitat, this is a one of a kind eco-tourism environment. Plan a trip today and experience the biodiversity of the hotspot, and maybe even get involved with some conservation efforts to keep it safe for generations to come. (Conservation International, 2007)

### Where on Earth are the Guinean Forests of West Africa?

The exact location is 8°N 5°W (Ivory Coast Map, 1999), but this biodiversity hotspot makes up much of geographic west Africa, and can be found in 12 countries, including three islands. (Conservation International, 2007)



*Map of the Guinean Forests of West Africa. (Conservation International, 2007)*

## THE BIOME

The Guinean Forests of West Africa are one of the most diverse places on earth. Not surprisingly, they make up a tropical rainforest biome which is located in West Africa. The area's vegetation can be further categorized into moist forests, which can be found along the coast, freshwater swamp forests, and semi-deciduous forests, which are located further inland as one approaches the higher elevated Cameroon highlands. (Conservation International, 2007)

*A newly discovered toad that is still unnamed. (Conservation International, 2007)*



*A tropical hardwood tree native to the forest hotspot. (Conservation International, 2007)*



*The endemic, Lowe's heunon (Conservation International, 2007).*

The climate in this region is typically hot and humid with over 80 inches of precipitation a year (World Wildlife Fund, n.d.), and, for the most part, the terrain is relatively uniform with lowland forests and a few mountainous regions. At one time the Guinean forests formed a thick band of richly diverse ecosystems, but are now in critically endangered pieces due to deforestation and other degrading human impacts. (Conservation International, 2007)

*A canopy walkway located in Ghana's Kakum National Park which is frequented by many eco-tourists. (Conservation International, 2007)*



*One of the many endemic forest plants threatened by deforestation. (Conservation International, 2007)*

## UNIQUE BIODIVERSITY

**This is not the average flower bed.**

Plants...

Although the flora of the Guinean Forests of Western Africa is very similar to that of central Africa, around 20 percent of the 9,000 plant species are considered endemic. Mt. Cameroon and the Gulf of Guinea Islands are home



*Oil palm tree (Haynes, 1998)*

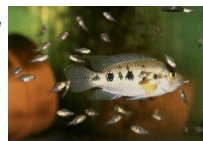
to many of these endemic species. The oil palm is an economically important species that is grown in many tropical areas. Its value for oil production and ability to grow in places other than in the Guinean Forests takes it off the list of endemic species, but it is native to the region. (Conservation International, 2007)

### Did You Know?

Both Cichlids and Killifish are popular aquarium fish!

### Freshwater Fish...

*Cichlids are tropical fish with spiny fins. (Thysochromis an-sorgii, n.d.)*



Out of all the organisms in this hotspot, fish are considered to be the most diverse group with over 510 fish species, many of which are endemic. Over 60 species of Cichlid fish are endemic to the area and one-quarter of the world's species of killifish live in this region, as well. (Conservation International, 2007)



*Killifish are tropical fish about the size of minnows. (Addis, 2007)*

Just keep swimming, swimming, swimming.

Amphibians happen to be another poorly research species group.

Studies do show that more than 80 out of the 225 amphibians are endemic and that there is a very high

diversity of tree toads. (Rodel, 2003)



...Amphibians

One unique endemic species is the Mount Nimba toad which does not give birth to tadpoles, but to fully developed toadlets after a nine month pregnancy. Sadly, the Nimba toad is critically endangered due to extensive forest damage. (Conservation International, 2007)

No, you can't catch warts from them.



*Banded wattle-eye (Borrow, 2007)*

Birds...

Almost 11 percent of the 785 bird species found in the West African Forests are endemic, and many species have important ecological roles. The Upper Guinean Forests and Cameroon Mountains are two of the seven Endemic Bird Areas found in this hotspot. The Cameroon Mountain EBA is home to the banded wattle-eye which is one of the dozens of endangered bird species. The banded wattle-eye has been threatened by deforestation and is in a very tangible danger because it can only live in the mountainous forests of the Cameroon highlands. (Conservation International, 2007)

It is kind of like Twitter,

but in real life.

Diana monkey  
(Photographers  
Direct, n.d.)



## Mammals...

This hotspot's mammal diversity is very high. Thirty percent of all the mammal species in the entire country of Africa can be found in these Guinean Forests. These forests also happen to be famous for their 30 species of primates, 18 of which are endemic. The Diana Monkey is one of the most important endemic primates because of its indicator species status.

The West African Forests are also home to seven endemic animal species, many of which are also very rare. For instance, the zebra duiker, which is a vulnerable species, is one of the "rarest antelopes in the world". (Conservation International, 2007)



Zebra duiker  
(McHugh,  
n.d.)

## ...Reptiles

Reptiles are on group of species that have been poorly studied in the Guinean Forests. So far it is suggested that there are more than 200 reptile species 52 of which are endemic. One endemic species is the Los Archipelago worm lizard, which is a legless lizard that resembles a worm. (Conservation International, 2007)

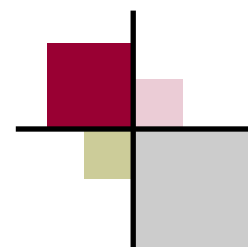
Creeping, crawling, camouflaging

Species Group	Number of Species	Endemic Species	Percent Endemism
Plants	9,000	1,800	20.0
Mammals	320	67	20.9
Birds	785	75	9.6
Reptiles	210	52	24.8
Amphibians	221	85	38.5
Freshwater Fishes	512	143	27.9

This table organizes the ratio of regular and endemic species information. (Conservation International, 2007)

## HUMAN IMPACTS

For thousands of years humans have been using the rich resources provided by the Guinean Forests of West Africa. From logging and agriculture, to mining and hunting, humans depend on this valuable forest ecosystem, but the increasing burden is too much for the forests bear. Studies show that the Guinean Forests are some of the most exploited and unstable biodiversity hotspots in the world, with only 15 percent (93,047 km) of their original forest cover intact. (Conservation International, 2007)



Continued →

There are a whole lot of monkeys.

These West African forests were first used for timber during colonial times. This large scale logging was followed by commercial plantations which were followed with slash-and-burn agriculture which has been and still is the most degrading process for the region to go through. (Conservation International, 2007)



*Timber from tropical West Africa being exported to the U.S. (African Hardwood Logs and Lumber, 2011)*



*'Slashed and burned' forest in Sierra Leone. (Sierra Leone Slash and Burn, 2011)*

Today, logging and agriculture continue to pose serious threats against the survival of this priceless hotspot of biodiversity. Illegal logging makes up most of the timber problem. In Ghana, for example, the annual harvest limit was quadrupled in 2002 due to illegal logging. Meanwhile, the rapidly increasing population is putting more and more pressure on the land to yield more and more harvest each year. As the once fertile soils become over-used and useless the demand for more is skyrocketing, which definitely puts the remaining forest areas in deep trouble. (Conservation International, 2007)

Mining along with hunting also add to the human induced damage of the Guinean Forests. Mining occurs mostly in mountainous areas, but is just as harmful to the forests as other processes that require tree removal. While mining, logging, and agriculture produce plenty of visual damage, hunting is a much more subtle poison because its effects are not readily noticeable. The bush-meat trade, which includes wild animals like antelope and monkeys, has grown to both a national and international level, and largely contributes to the local economies. Not only is it a valuable part of the economy, but it also happens to be the main source of protein for much of the human populations. (Conservation International, 2007)



*Bush-meat hunter (Davies, 2003)*

### Empty Forest Syndrome...

...is when a forest looks healthy, but is actually devoid of all large wildlife, which will eventually lead to a complete collapse of the ecosystem.

As one can see human dependence on the Guinean Forests of West Africa has increased dramatically over time. Now there are life threatening consequences that the forest ecosystem can no longer overcome on its own. (Conservation International, 2007)

## Conservation Actions

Since the 1960's various government and environmental groups have been working to preserve the Guinean Forest of West Africa. Some conservation efforts come through a forest reserve network that focuses mainly on protecting timber supplies and watersheds. Country governments in this region, like those of Nigeria, Cote d'Ivoire, and Cameroon,

*Cross River National Park (Cross River National Park, 2010)*



have been making an effort as well by creating National Parks and other protected areas. For instance, the 4,227 km Cross River National Park in Nigeria, which is the largest protected area in the region, and the Korup National Park in Cameroon "which is home to the oldest rainforests in Africa" have become some of the most important parks in Western Africa. International groups like Conservation International and World Wildlife Fund have sponsored and organized projects to connect protected areas with conservation corridors, which enhance the "effectiveness of protected areas". One outcome to this effort was to join the Congo Basin and Nigeria-Cameroon forests, which occurred in 2000. (Conservation International, 2007)

Even with all these conservation efforts there are still many obstacles to overcome, especially when trying to find alternatives to forest-dependent human needs. Other economic development in the areas, like ecotourism, may be places to start, but it is also important to work on a community level to educate people, especially those in rural areas, on the importance of sustainability, and promote the

*Illegal logging harming the somewhat protected Korup National Park. (Canela, n.d.)*



awareness of biodiversity impacts. During the past few years Conservation International has been working in Ghana to substantially reduce the bush-meat trade by reviving cultural traditions, which discourage killing wildlife, and by promoting biodiversity education. Hopefully, with these new projects and conservation ideas, the world will see even more progress in the Guinean forests. (Conservation International, 2007)



*Korup National Park (Korup National Park, 1994)*

Individuals and groups around the world recognize the Guinean Forests of West Africa as critically in need of environmental protection, but acknowledgement and action can be two very different things. Today, 17.4 percent of this forest region receives some sort of protection, but realistically only 3 percent is being given adequate protection to preserve the irreplaceable biodiversity. (Conservation International, 2007)

## Future Outcomes

Today, in the Guinean Forests of West Africa, the human population is the source of the degradation of pricelessly diverse habitats. For the past thousand years, the resources provided by these habitats have been exploited in increasing amounts as the local human populations grow, and studies predict that the next twenty years will double the current population. This spells out bad news for the remaining forest areas if preservation efforts are not enacted and enforced. The evident crisis has been recognized, and conservation actions are being made, but protected areas still are not receiving the protection they need because only 20 percent of the remaining forest area is adequately cared for. (Conservation International, 2007)

Hotspot Original Extent (km <sup>2</sup> )	620,314
Hotspot Vegetation Remaining (km <sup>2</sup> )	93,047
Endemic Plant Species	1,800
Endemic Threatened Birds	31
Endemic Threatened Mammals	35
Endemic Threatened Amphibians	49
Extinct Species	0
Human Population Density (people/km <sup>2</sup> )	137
Area Protected (km <sup>2</sup> )	108,104
Area Protected (km <sup>2</sup> ) in Categories I-IV	18,880

*This table shows the current status of the Guinean Forests. [Categories I-IV refers to areas receiving adequate protection] (Conservation International, 2007)*



### How to Help

- Contact Conservation International or visit their website to get involved with their projects.



*'So in other words, today... the Guinean Forests, tomorrow... the world.' (Patterson, n.d.)*

So far, 115 animal species are threatened, and thankfully none have become extinct at this time which makes “now” the perfect window of opportunity to create more effective conservation efforts in order to keep the West African forest extinction level at zero and save the threatened species, before it is too late and more irreversible damage is done to the region’s ecosystems. It is also important to keep in mind that damage to the earth’s ecosystems hurts the planet as a whole. The deforestations of rain forests especially impacts planet earth as it is a crucial regulator of atmospheric gases, so in other words, today... the Guinean Forests, tomorrow... the world. (Conservation International, 2007)



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