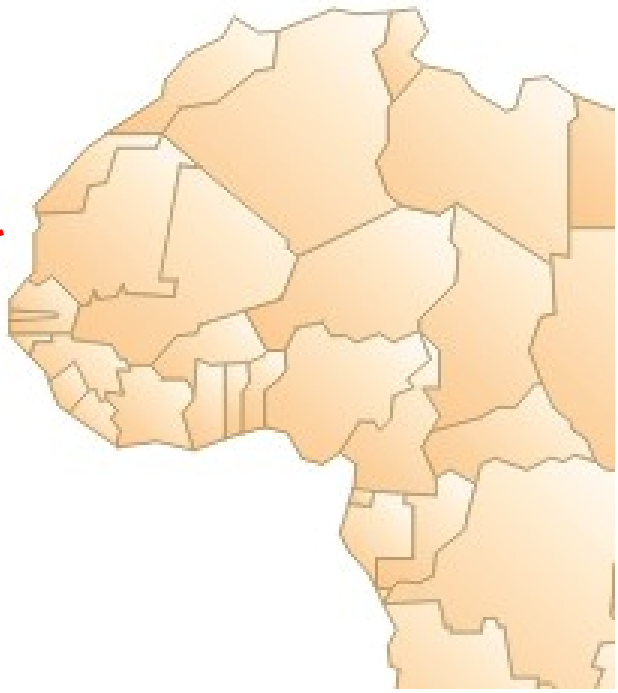
Bijagós FM 2004

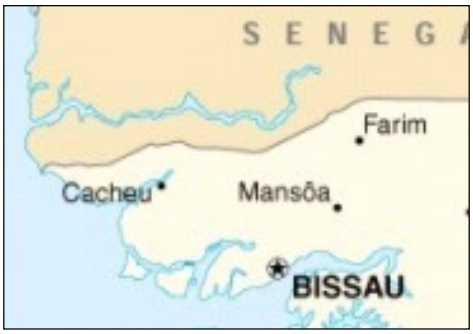
Expedition to Bijagós, in 2004, by *Miguel Figueiredo* and *Delfim Machado*

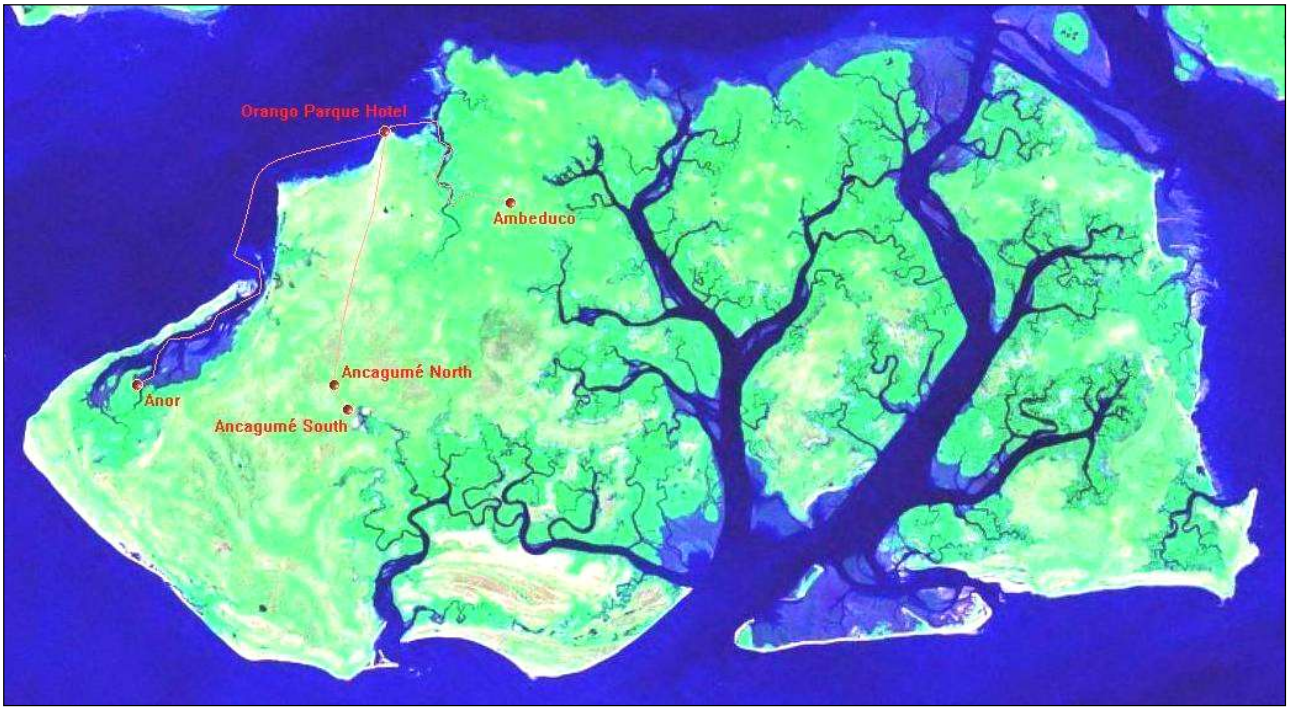
Bijagós is an archipelago about forty kilometers away from the mainland of Guinea Bissau.

It is a very peculiar region, presenting vast areas of shallow waters where more than eighty islands can be found. Its rich fauna includes rarities such as the manatee and the only known population of hippopotamus that lives in saltwater.

The climate presents two main seasons:







Orango group of islands

The rainy season is from June to October. In the rainy season there is freshwater everywhere, ponds, lakes and temporary rivers are common.

The dry season is from November to May. By the end of this season there is almost no freshwater in Bijagós. Only very rare spots can be found, following the dry bed of the rivers and in a few permanent ponds.

Bijagós was declared a Biosphere Reserve by UNESCO.

Purpose

The purpose of Bijagós FM 2004 was:

- To perform a first study of the freshwater fish inhabiting this region.
- To study possible roadmaps and to prepare the logistics for a scientific expedition to the Archipelago.

Team

Miguel Figueiredo

> Portuguese, 37 year old, professionally a software engineer, he has a vast experience in collecting and studying freshwater fish. His expeditions include the Atlas Mountains in Morocco, the ponds of Beira - Mozambique and Lake Malawi.

Delfim Machado

> Portuguese, 27 year old, professionally a software analyst. He has experience in nature raids and he has been a cichlid enthusiast for many years.

Date

Bijagós FM 2004 took place from 2004-05-17 to 2004-05-24.

This date matches precisely the end of dry season: There was almost no freshwater but it was possible to walk easily and there were no mosquitoes.

Final Destination

Guinea-Bissau, Archipelago of Bijagós, Island of Orango.

Orango is the most remote inhabited island of Bijagós. It presents an area of 163 km^2 and it is about 100 kilometers away from the mainland

Collecting places and species

1st Collecting Place: Orango Parque Hotel

Geographic coordinates

N 11°10'51.4"
WO 16°08'23.5"

1st collecting place: Hotel Swimming poll

Description

The fishes were collected from the swimming pool. To avoid insect larvae growth, the Hotel staff had inserted fishes into the swimming pool. Those fish were caught in the rainy season, in nearby freshwater ponds.

At the collecting time (end of the dry season) the water in this unused swimming pool was only 15 cm deep. The bigger fish were dying of lack of oxygen but the amount of fish remained very large: hundreds of specimens populated this place.

Species

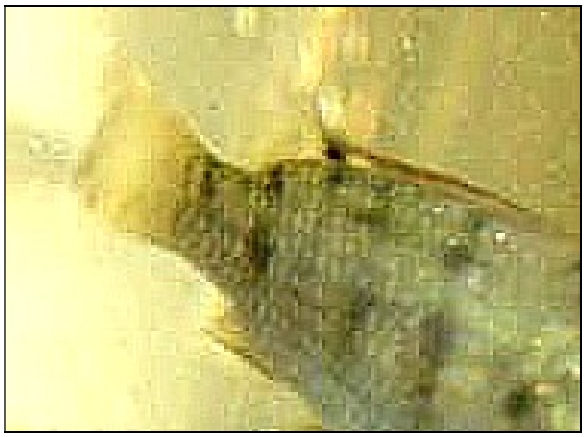
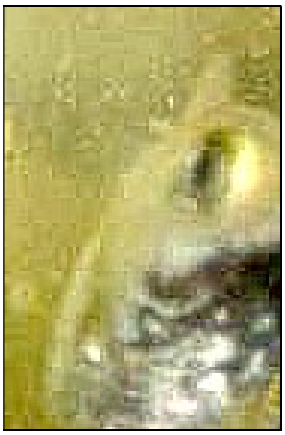
Sarotherodon occidentalis

A few large specimens (20 cm) were found.

Tilapia guineensis


Lots of small to medium fish (2-10 cm) where found.

Sarotherodon melanotheron

Lots of small to medium fish (2-10 cm) where found.

2nd Collecting Place: Anor

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Geographic coordinates

N 11°03'59.6"
WO 16°12'41.1"

Description

Two small ponds, a few kilometers away from the village of Anor, on a dried river's bed. The larger pond was about 3 meter long, 1 meter wide and 50 cm deep.

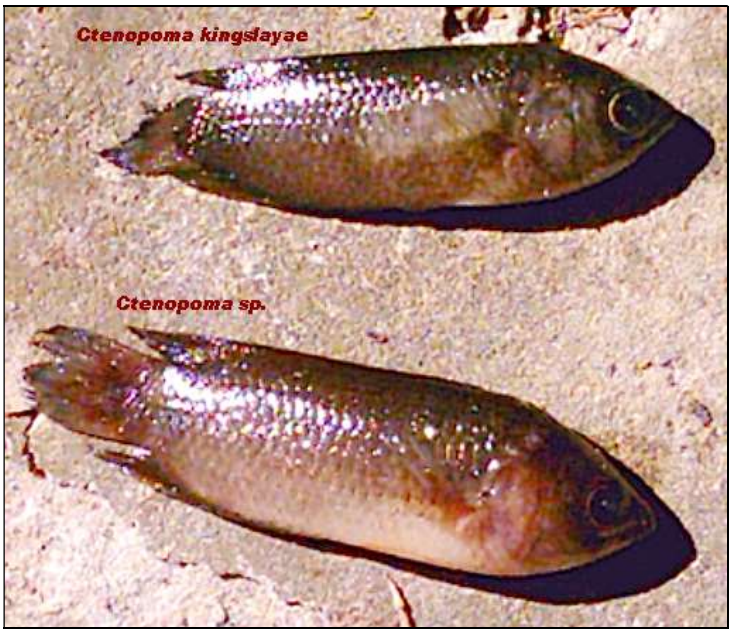
Both ponds presented lots of hippopotamus's excrements.

Species

Epiplatys bifasciatus

It was the most common fish. The pictures are from dead fish. When alive they clearly shown the two dark horizontal stripes that typify the species.

Ctenopoma kingslayae and *Ctenopoma sp.*



Both species of *Ctenopoma* were very common. It was not possible to identify the second species.

Clarias sp.

This catfish had sharp spines at the end of the pectoral fins. They caused two deep wounds on the fingers of the collector (Miguel Figueiredo). The specimens caught were between 7 and 15 cm long.

3rd Collecting Place: Ancagumé (North)

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Geographic coordinates

N 11°06'23.2"
WO 16°09'10.2"

Description

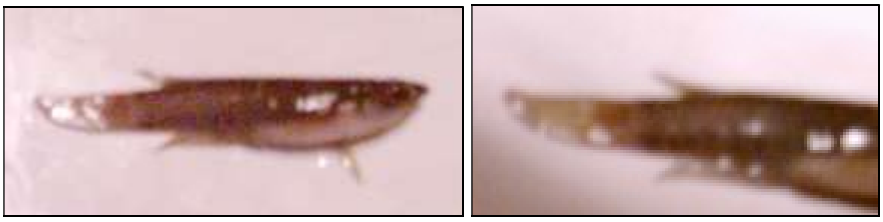
A small pond a few kilometers north from village of Ancagumé, on a dried river's bed. The pond was about 2 meter long, 75 cm wide and 50cm deep.

Species

Epiplatys bifasciatus

It was the same species found before.

Epiplatys sp.



It was not possible to identify this fish on the field and the pictures are very bed. A further identification based only on images will be difficult. Only two of these fish were found at this collecting place and two more at collecting place 4. They all look alike, presenting a dark body and no colors. Maybe they were all females.

Hemichromis cf. bimaculatus

This fish certainly belongs to the *Hemichromis* genus although it might not be a *bimaculatus*.

4th Collecting Place: Ancagumé (South)

Geographic coordinates

N 11°05'57.0"
WO 16°08'57.4"

4th collecting place: Ancagumé (South)

Description

Several large ponds a few kilometers sourth from the village of Ancagumé. Those ponds are part of a single lake on the rainy season.

Species

Epiplatys bifasciatus

It was the same species found before.

Epiplatys sp.

It was the same species found before.

Aplocheilichthys cf. normani

This was a very small fish, with a maximum length of about two centimeters. The body was slender than the common varieties of *A. normani*.

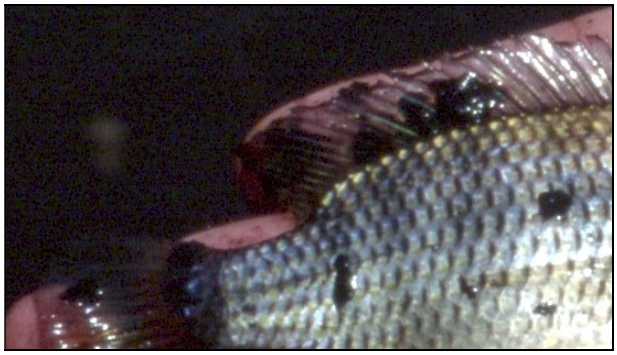
Hemichromis cf. bimaculatus

It was the same species found before.

Hemichromis cf. letourneauxi


Only four of these fishes were caught.

Tilapia sp.

The two specimens presented on the above pictures belong probably to the same species of unidentified tilapia.

Ctenopoma sp.

This species is perhaps the same *Ctenopoma sp*. found before at Anor.

Unidentified catfish


This was a relatively small fish, about 8 cm long. The fin spines were very sharp and dangerous, therefore the fish was always photographed on the net. It was relatively rare, only two specimens were collected.

Clarias sp.

It was the same species found before.

5th Collecting Place: Ambeduco

Geographic coordinates

N 11°09'35.3"
WO 16°06'10.3"

5th collecting place: Ambeduco

Description

A very small pond, about a meter long, 75 cm wide and 4 cm deep. It presented lots of frogs, lots of leaves but almost no water.

Species

Hemichromis cf. letourneauxi

All the caught specimens were juveniles, about 2-3 cm long. These fishes are perhaps the juvenile versions of the *Hemichromis cf. letourneauxi* species found before.

List of collecting places and species

1st Collecting Place: Orango Parque Hotel

- *Sarotherodon occidentalis*
- *Tilapia guineensis*
- *Sarotherodon melanotheron*

2nd Collecting Place: Anor

- *Epiplatys bifasciatus*
- *Ctenopoma kingslayae*
- *Ctenopoma sp.*
- *Clarias sp.*

3rd Collecting Place: Ancagumé (North)

- *Epiplatys bifasciatus*
- *Epiplatys sp*.
- *Hemichromis cf. bimaculatus*

4th Collecting Place: Ancagumé (South)

- *Epiplatys bifasciatus*
- *Epiplatys sp*.
- *Aplocheilichthys cf. normani*
- *Hemichromis cf. bimaculatus*
- *Hemichromis cf. letourneauxi*
- *Tilapia sp.*
- *Ctenopoma sp.*
- *Unidentified catfish*
- *Clarias sp.*

5th Collecting Place

Hemichromis cf. letourneauxi

Other reported fish by the local inhabitants

The local people clearly recognized pictures of the following fish, although they haven't been found by this expedition:

Pseudoepiplatys annulatus

This fish was immediately recognized because of his unique coloration. It is known locally as "Peixe-Camisola" ("T-shirt fish").

Tilapia buettilofei

This fish was also immediately recognized. It might be although *Tilapia joka*, which has a similar pattern.

Hemichromis fasciatus

This species was also frequently recognized.

Other recognized fish, although their occurrence is more uncertain:

Pronothobranchius kiyawensis

The picture of this annual killifish was sometimes pointed by the local people without being sure.

It is possible that at least an annual killifish exists in Bijagós but if so it will probably look quite different from the most common varieties of *Pronothobranchius kiyawensis*.

The local people say that in the rainy season all the temporary freshwater ponds present fish, even if not connected to main streams. This doesn't necessary indicate killifishes, although. Other fish, such as the *Ctenopomas* and *Clarias*, can colonize those ponds by walking through land.

Scriptaphyosemion geryi

This fish was also recognized by people not being 100% sure.

Conclusion

Bijagós presents a rich biodiversity of freshwater fish, deserving certainly an extensive scientific study.

In only five collecting places of a single island – Orango – about twelve freshwater species were found.

The archipelago of Bijagós presents more than eighty islands. About ten of them are inhabited, which generally means that at least a few freshwater ponds don't dry (villages need permanent water). This suggests an abundance of freshwater species, having perhaps several endemisms.

Even the island of Orango is far from being explored. The team was only able to visit five different places of an area more than 160 km^2 wide. Many species remain certainly to be found.

In the rainy season annual killifish are also a strong possibility, therefore we recommend further field work, taking place at the rainy season or soon afterwards.

The Bijagós FM 2004 team wishes to thank to

Carlos Guerra: for all the information and support during the preparation of the expedition.

The Orango Park Hotel and staff: an unbelievable port of sympathy in the middle of one of the most wild and unusual regions of Africa.

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