

# The Biology Department

First message: It is good, in a conference on biodiversity and sustainable development, that the scientists that study the biodiversity actually get the floor.  
Sounds self-evident but ....

Second message: The species of many groups of animals and plants are far from known. Hence, the essential inventory as a baseline for further studies is lacking in many groups and for many regions. Decision makers do not like to hear this.

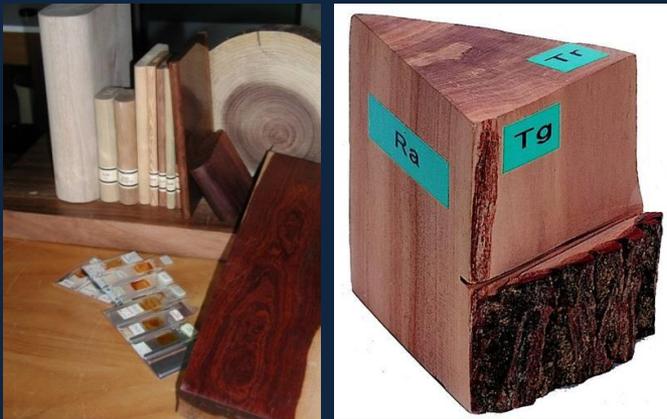
Second message: In the Royal Museum for Central Africa, most studies on the biodiversity have a collaborative component and a sustainable development inference.

Fourth message: I am a fool in trying to present the activities of the Biology Department in a couple of minutes



## Some examples

Wood biology : one of the largest collections of tropical wood;  
research contributes to forest ecology and underpins sustainable  
production of wood in tropical Africa



## Some examples

Tephritidae (fruit flies): about 4500 species, 40 % of which are fruit infesters and cause major damages.

Unique expertise in the Museum: monitoring of indigenous and exotic fruit fly pests, and their invasion pathways, through regional networks. Contributing to development of low-cost pest management practices

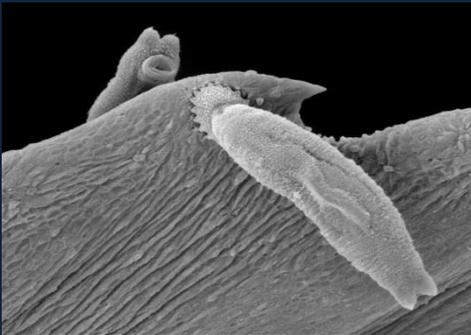
Syrphidae (hover flies): beneficial, important pollinators; the larvae of many species predate on agricultural pests.

Unique expertise in the identification and relationships between species; studying the host – pollinator relationships and their impact in pollination of crops

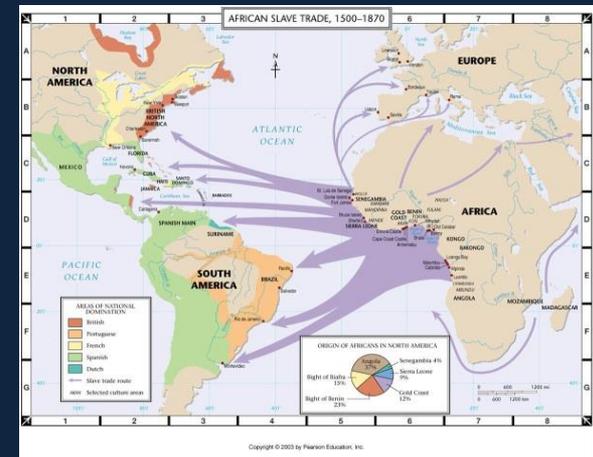


# Some examples

Parasites of fishes and humans:  
Invasive tilapia and introduction of new parasite species in the natural environment



Basic biological data on human parasites (*Schistosoma*) and the use of parasites to trace human migration within and outside Africa

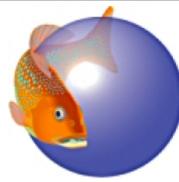


## Some examples

Fish

What is the problem?





**FishBase** ( 33200 Species , 306300 Common names, 56500 Pictures, 52400 References, 2220 Collaborators, 33 million Hits/month )  
(10/2015)

[Home](#) | [FishBase Book](#) | [FishBase Tour](#) | [Best Photos](#) | [Hints](#) | [Guest Book](#) | [Download](#) | [Links](#) | [Fish Forum](#) | [Fish Quiz](#) | [FishWatcher](#) | [Ichthyology Course](#) | [LarvalBase](#) | [Team](#) | [Identification](#)

# Fishbase

The world's largest, freely accessible, online database on fishes, and available on DVD

**Objective** = to transfer knowledge and information to developing countries often lacking libraries and data facilities

## Some numbers:

> 30 million hits, ± 0.7 million visits by ± 0.4 million visitors per **month** in 2015  
available in 24 different languages  
306,300 common names in more than 350 languages  
8 mirror sites



The museum is a founding member of the FishBase consortium and responsible for the information on African fishes

Large component of capacity building: three months training in fishbase and fish taxonomy

With the support of  
THE BELGIAN  
DEVELOPMENT COOPERATION **.be**



# IUCN

Since 2004 collaboration with IUCN (International union for the Conservation of Nature) for red list assessments of African Freshwater fishes.



## THE DIVERSITY OF LIFE IN AFRICAN FRESHWATERS: UNDERWATER, UNDER THREAT

An analysis of the status and distribution of freshwater species throughout mainland Africa

Edited by: William Darwall, Kevin Smith, David Allen, Robert Holland, Ian Harrison and Emma Brooks

### Chapter 3.

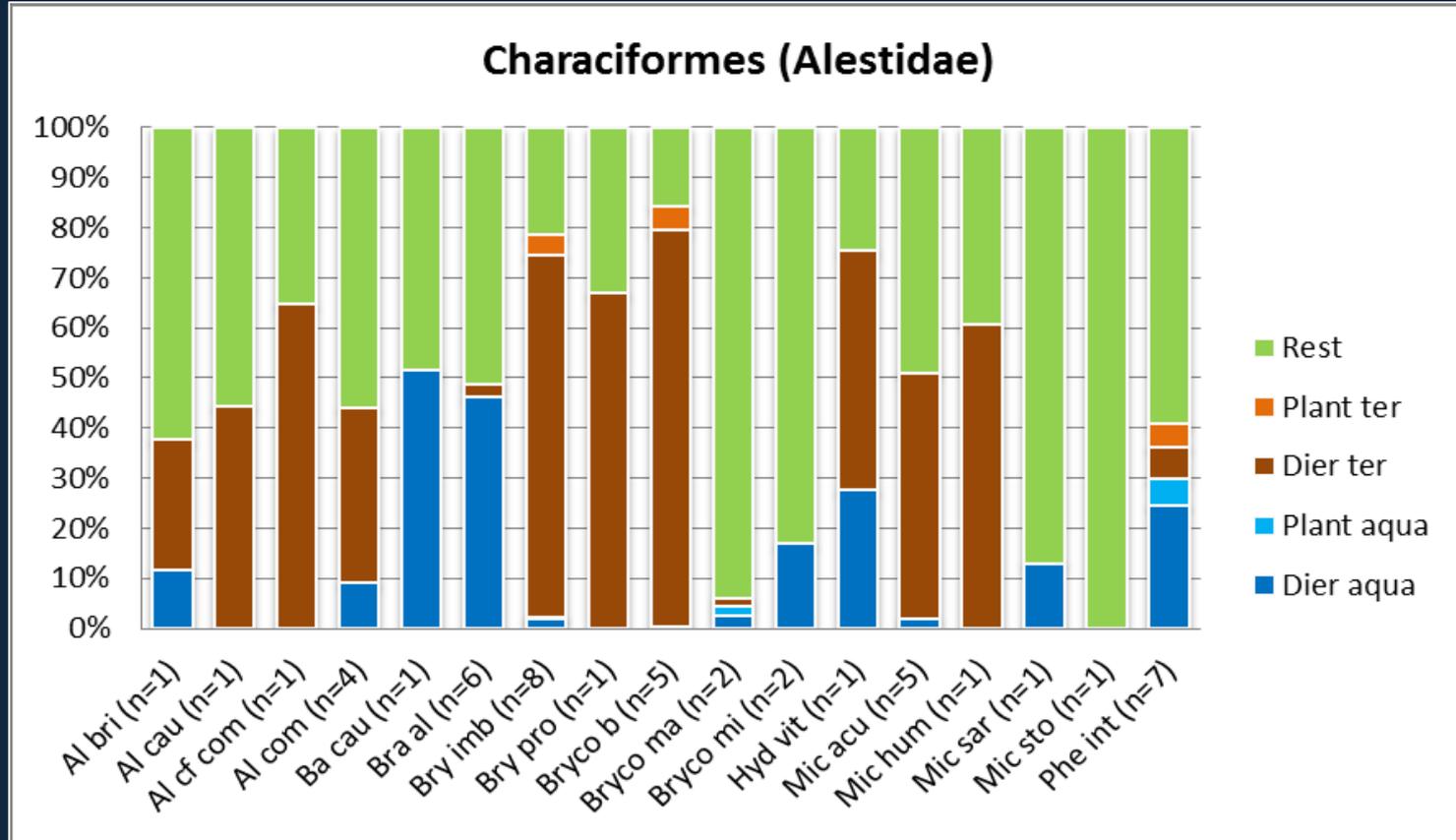
The status and distribution of freshwater fishes

Snoeks, J.<sup>1</sup>, Harrison, I.J.<sup>2</sup> and Stiassny, M.L.J.<sup>3</sup>

- <sup>1</sup> Zoology Department, Royal Museum for Central Africa, Leuvensteenvoeg 15, B-1300 Tervuren, Belgium and Laboratory of Animal Diversity and Systematics, Katholieke Universiteit Leuven, Charel Debeverstraat 32, B-3000 Leuven, Belgium
- <sup>2</sup> Conservation International, 2011 Crystal Drive, Suite 500, Arlington, VA 22202, USA
- <sup>3</sup> Department of Ichthyology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024, USA



# Just a stupid example : analyses of stomach contents of the fishes near Kisangani



Fish feed from the land. Crucial implications for conservation

## Today's newspapers

"Brazil hit by one of the worst environmental disasters ever"

"Brazil declares emergency after mine waste spill"

"Anger rises as Brazilian mine disaster threatens river and sea with toxic mud"



The museum has a small scale VLIR-UOS project with the KU Leuven on the influence of toxins from mining activities on the fishes and the aquatic environment in Katanga (RDC).