

# Research and awareness raising on edible mushrooms funded by CEBioS, under the Belgian Global Taxonomy Initiative (GTI)

**Diversity and sharing information about the importance of wild mushrooms for local population from the Tshopo province, Democratic Republic of the Congo**

Presented by:

MILENGE KAMALEBO Héritier (Junior researcher)  
Centre de Recherches Universitaires du Kivu (CERUKI)/Institut  
Supérieur Pédagogique de Bukavu/D R Congo

# Introduction

## Importance of fungi in D.R Congo:

- ➔ Provide diverse substances and services, especially as source of food and income for local communities
  - ➔ Source of proteins, vitamins, fats, carbohydrates, amino acids and minerals
  - ➔ Provide chemical contents used as medicine
  - ➔ Ectomycorrhizal fungi enhance plant nutrition and resistance against stress and diseases
- Play key role in social life of numerous human beings
- Useful for the maintenance of several plants, trees and woodlands
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Collecting information within local population



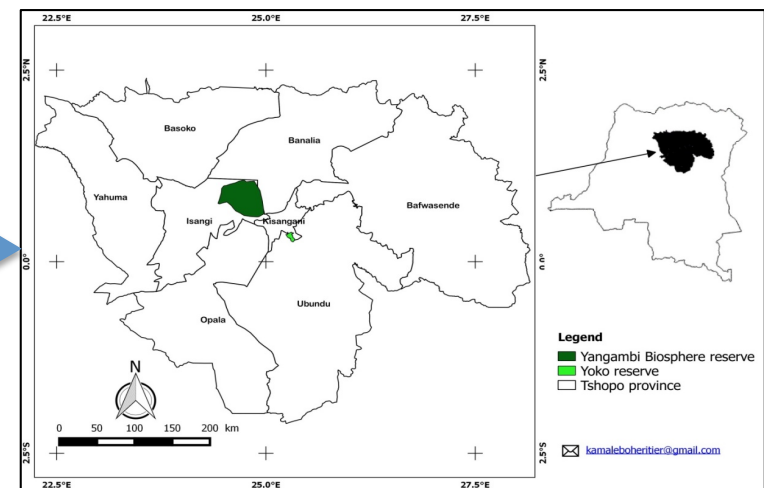
Mushroom harvest



Mushroom identification at Meise Botanic Garden/Belgium



Yangambi Biosphere reserve

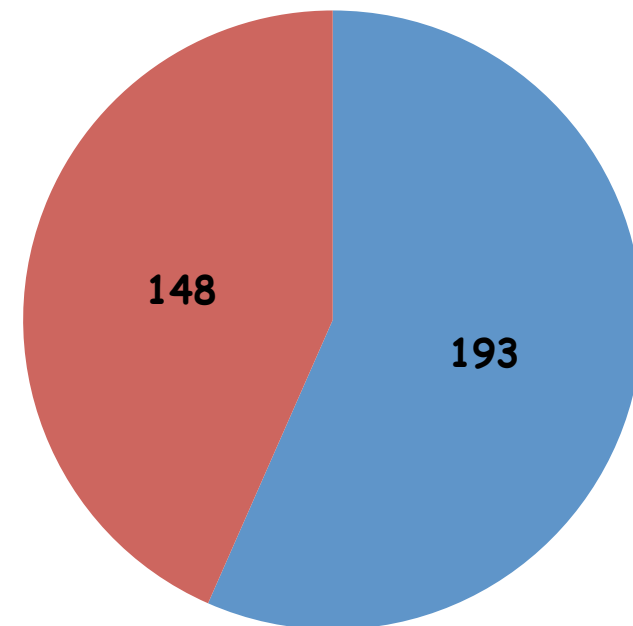


## Results (1/3): Diversity of fungi

- Several unidentified species (148/341)
- Some species suspected new for science



■ Identified species ■ Identified to genus



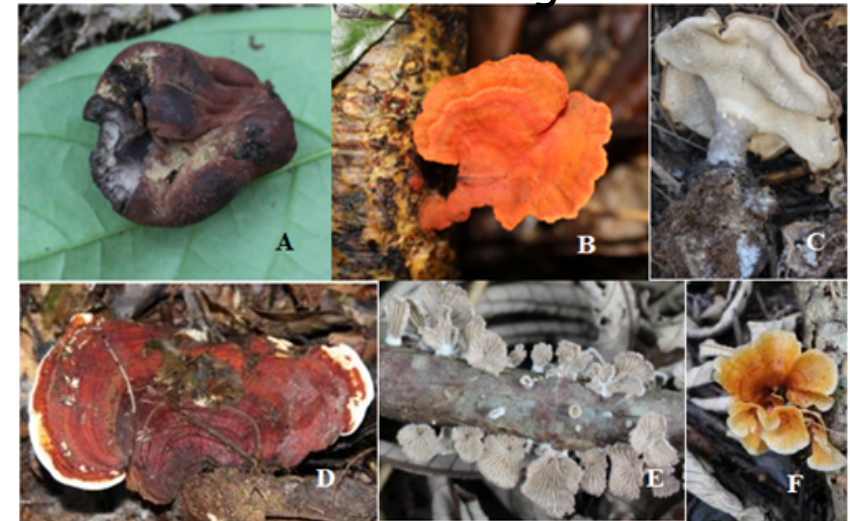
Based exclusively on the aboveground fruiting bodies

# Results (2/3): Importance of mushrooms for the local population - 4 main categories

## Edible fungi



## Medicinal fungi



## Fungi used for myth and believe



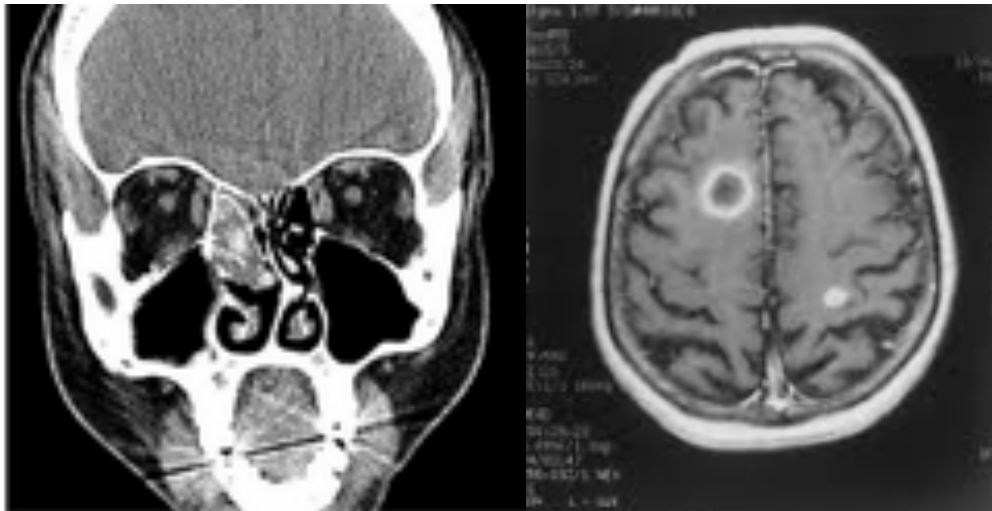
## Recreational fungi



## Results (3/3): Negative interactions between consumers/harvesters and some mushroom species

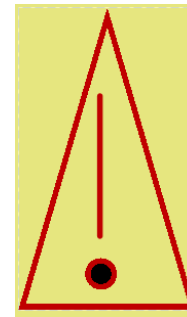
The "Schizophyllum disease":

- ➔ Allergic fungal rhinosinusitis
- ➔ Agent of bronchopneumonia
- ➔ Brain Abscess



Reported from the literature, see:  
(Rihs et al., 1996; Chowdhary et al., 2013;  
Tullio et al., 2008)

The " Auricularia disease":

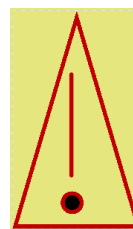
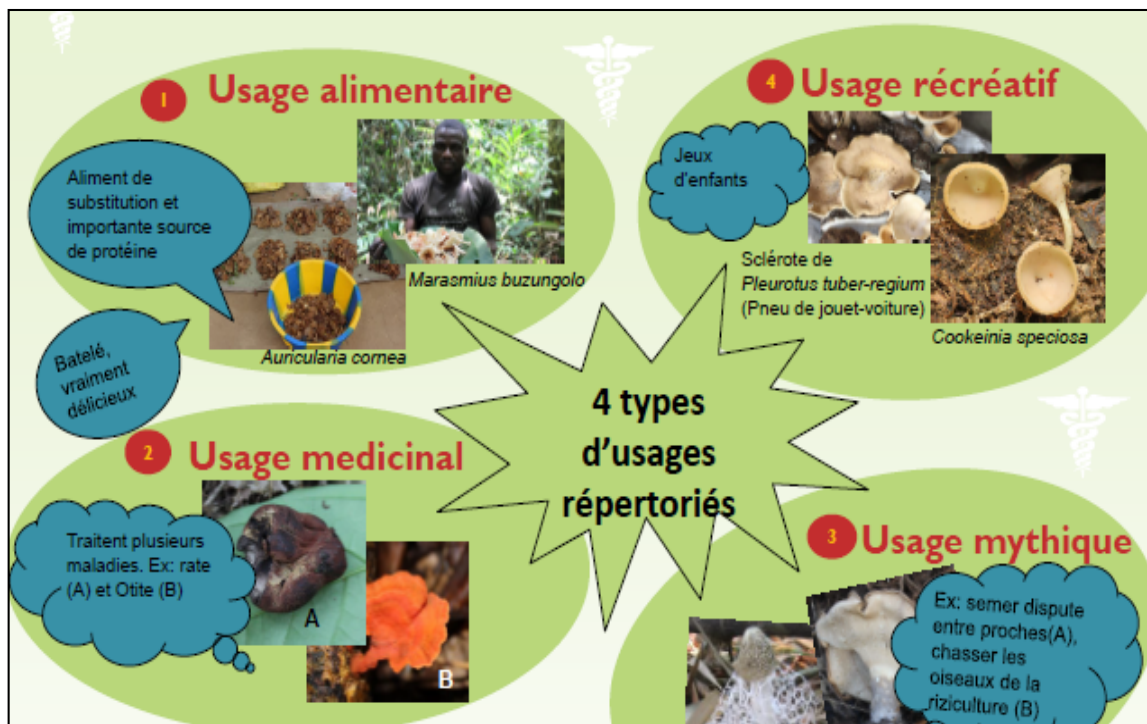


- ➔ The jew's/jelly ear mushroom causes, in some condition, severe skin inflammation

(Source: Original data from local inquiry)

# Awareness raising (used material)

## Poster

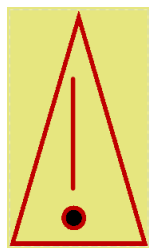


Don't put a packet of *Auricularia* spp (jew's/jelly ear mushroom) in a pocket when it rains



*Lepista rhodotoides* accelerates menstruation for some women

## Leaflet



*Schizophyllum* sp. (split gill mushroom) causes severe allergy to some people

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Quelques problèmes liés à la consommation des champignons sauvages

Des effets négatifs sont signalés chez certains champignons !!!

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## Impact of the study on biodiversity conservation

- ❖ Original data to promote ecosystem services provided by wild fungi
- ❖ A way to develop strategies and tools to strengthen conservation of wild fungi and their habitats.

### How is this possible ?

- Conservation is easier when local people broadly appreciate the ecosystem services (useful fungi)
- Local people can indeed be the main drivers behind protection and conservation of entire ecosystems



## Cultural significance and impact on population livelihood

- Maintenance and transfer of traditional knowledge on wild fungi utilization across generation
- Prevent/protect mushrooms harvesters and consumers against risks of infection
- Reduce poverty and malnutrition by promoting edible fungi consumption and commercialization

## Perspectives

- Deep taxonomic analysis (molecular) on the unknown fungi
- Control of the induced fungal toxicity
- Cultivation of edible fungal species
- Strengthening the network of mycologists (MycorGL)

### To achieve this, need of:

- More research on fungi
- Train more scientists working on fungi
- Labs and equipments

Many thanks to all for your attention



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**Belgium**  
partner in development

**museum** 