Could Ecological Importance Value of Wild Edible Fruit Trees Predict their Ethnobotanical Use Value in Protected Areas?

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What were the research questions?

- What is the ecological importance value of wild edible fruits (WEFT) species in the Lama Forest Reserve (LFR) in?

- What is the ethnobotanical value of WEFT species?

- What is the relationship between the use value and ecological importance value of WEFT species in protected areas?

Which approaches did we use?

Data collected:

- An ethnobotanical survey with 136 respondents enabled assessing the Use Values (UV) of WEFTs

- An inventory of the WEFTs was done in 53 squares plots of 45m x 45m (Fig.1).

-The ecological importance values (IVI) were estimated using the relative density, the frequency, and relative coverage of WEFT species.

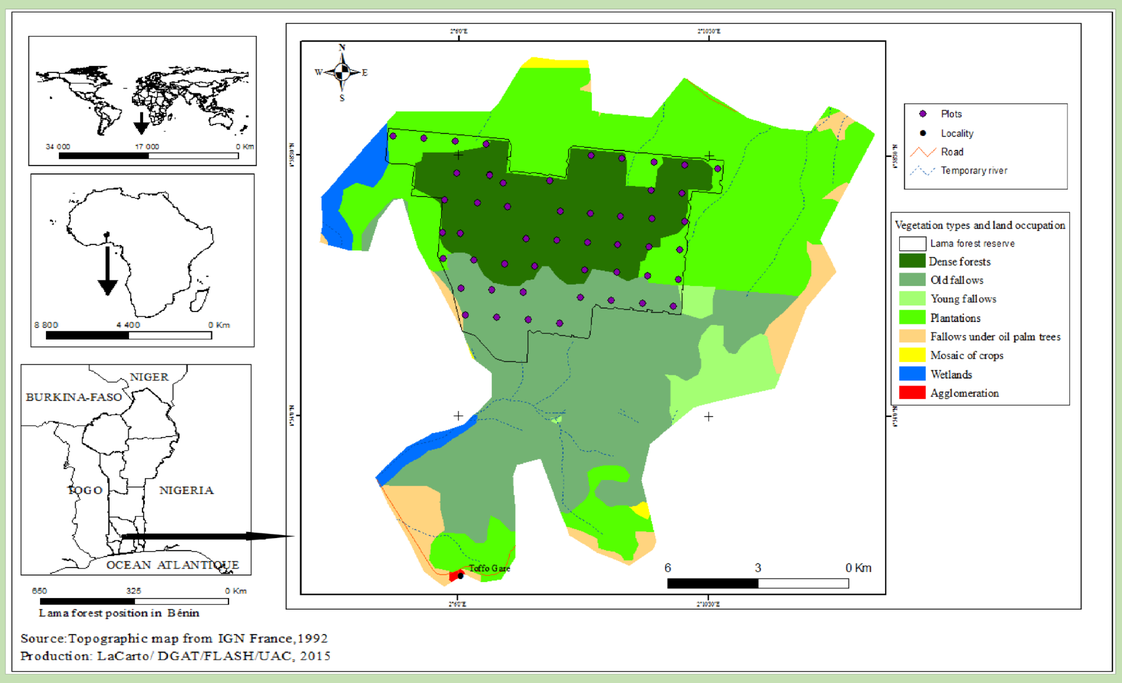


Figure 1 : Map showing the location of the LFR in Benin and the plots

Data analysis

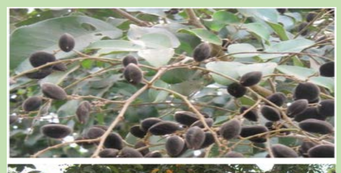
- Relationship between UV and IVI was estimated using a simple linear regression analysis where IVI is the explicative variable and UV the dependent one.

What did we get?

-10 WEFT species belonging to 10 genera and 8 botanical families were recorded in the LFR (Table 1).

Table 1: List of the WEFT species recorded

WEFT species	Families
Dialium guineense Willd	Fabaceae
Diospyros mespiliformis Hochst.	Ebenaceae
Drypetes floribunda Hutch.	Euphorbiaceae
Ficus capensis Forssk.	Moraceae
Lecaniodiscus cupanioides Planch.	Sapindaceae
Mimusops andongensis Bruce.	Sapotaceae
Pancovia bijuga Willd	Sapindaceae
Psidium guajava L.	Myrtaceae
Pterocarpus santalinoides L'Hér. ex De.	Fabaceae
Spondias mombin L.	Anacardiaceae



Dialium guineense

Diospyros mespiliformis

Mimusops andogensis

Drypetes floribunda

Pterocarpus santalinoides

Ficus capensis

Pancovia bijuga

Psidium guajava

Spondias mombin

Lecaniodiscus cupanioides

- *D. guineense* had both, the highest UV and IVI (UV=0.7 and IVI=1.424) while *P. santalinoides* had the lowest value for both parameters (UV=0.0001 and IVI=0.003 (Figs. 2&3)

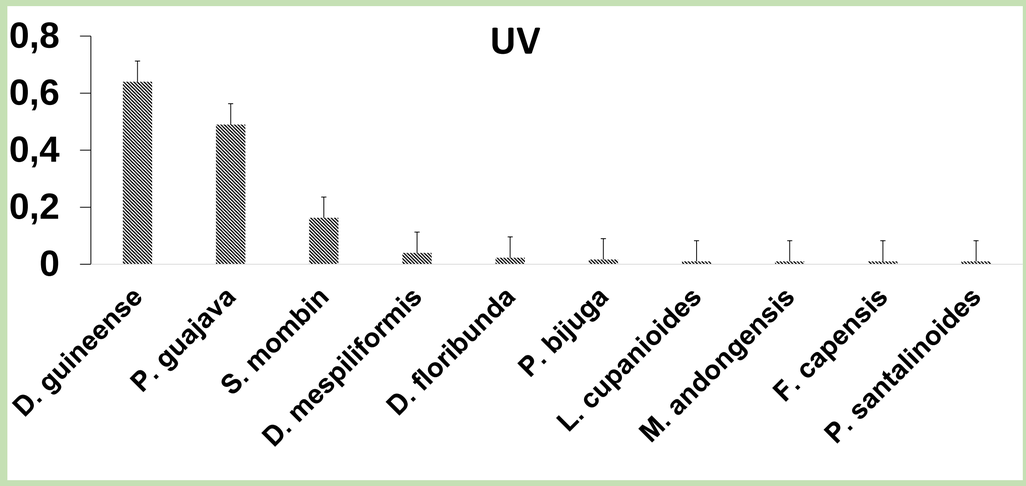


Figure 2: Use value of WEFT species

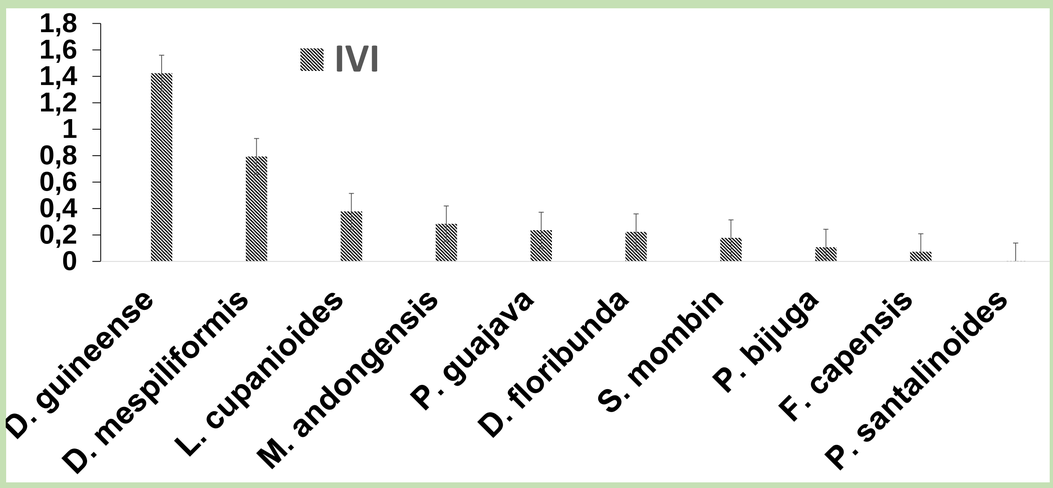


Figure 3: Ecological importance value of WEFT species

- A significant positive linear relationship was found between UV and IVI for WEFT species in the LFR (Fig.4).

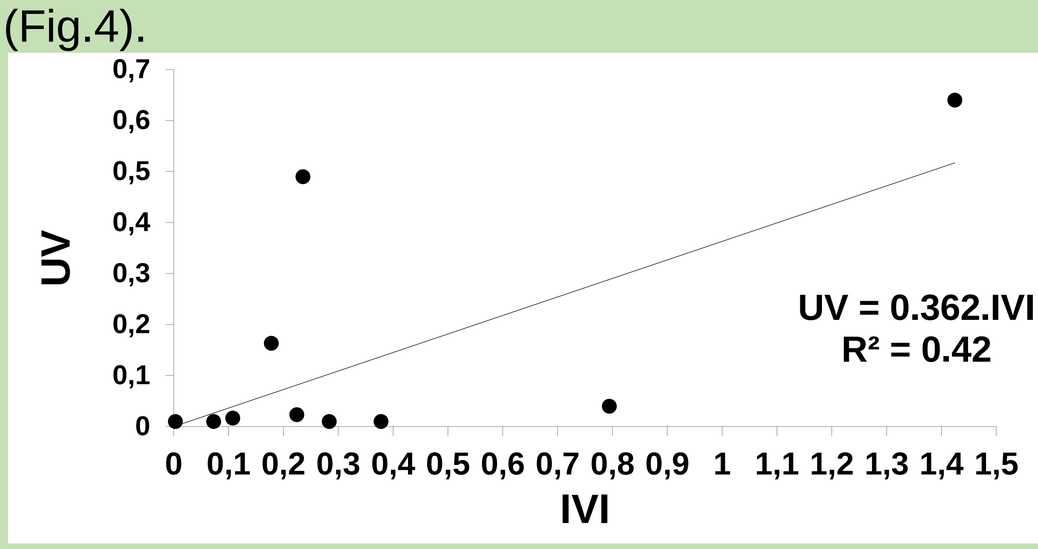


Figure 4: Relationship between IVI et UV of WEFT species

What are the implications?

- This observation made in the protected area of the LFR is an indication that riparian populations have limited access to the reserve.

What are the perspectives?

- The same studies should be repeated in other protected areas in Benin to confirm this relationship between UV and IVI of WEFT species.

Acknowledgements