

The CFS Network of Large Forest Plots: Applications for Diversity Inventory

I Thanks ~~TF~~ Earthwatch Tropical Forest Forum

I do big science

Large-scale intensive inventories, key sites, repeated
Address key questions: how many species, abundance, extinction
change, climate

Maps to remind of tree abundance

Demography, models of community, extraction, CO₂, ~~etc~~

II CFS / STRI

Standardized set of large plots overhead

Zaire just finished before war
Korup

III Royal we & collaborators

Count on participation of local scientists
3 Zairian 2 Cameroonian

Extend plots as research centers

Selfish on my part, since Africans can get funds

IV Diversity in 4 plots, how it helps in rapid assessment

Inventory of 670,000 ind of 1530 spp

First ever report on Zaire

1. Problem with Spp-area

2. Spp-indiv diminishes, ~~for~~ similar processes

3. Theory to predict

4. ~~Small samples underestimate div. but theory provides way to extrapolate; lack of asymptote~~

4. Recommendations (small samples underestimate, but theory provides way to extrapolate; lack of asymptote)

5. Zaire

monodominance

Early results of curve defies theory

Relates to dominance (map of mban)

mban restricts div., favors ambaka

conclusion - African forest diverse, underestimated in small plots

conclusion
→

IV Conclusions

Mixed forests, ^{div} can be accurately extrapolated with an easy index provided by theory

(but further test needed ~~NEEDS THEORY~~)

~~Sampling at wider scales to estimate spp difference of infer ~~the~~ ranges - theory needed, careful~~

~~How theoretical ecology ~~does~~ coupled with~~

New theory needed for understanding, anticipating effect of monodominance

Sampling at extensive sites, theory for inferring species range & extrapolating ~~the~~ change in communities

General - how theoretical ecology, coupled with thorough empirical work, does address key issues in conservation

gilbde

Liana
≥ 20

Number of species and stems for different quadrat sizes in Zaire

2 Jan 97

non-mbar

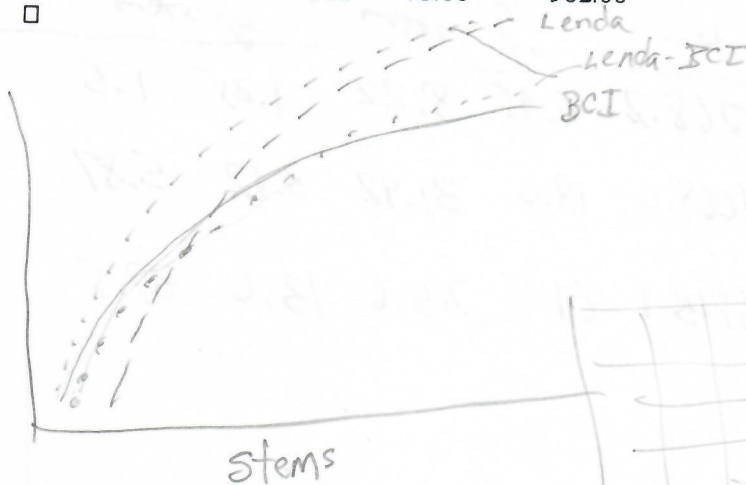
| Dim1 | Dim2 | N | Dbh | Species Mean | Stems Mean | BCI |
|------|------|-----|-----|--------------|------------|-----|
| 20 | 20 | 250 | 10 | 44.47 | 284.00 | 51 |
| 20 | 20 | 250 | 100 | 7.33 | 13.73 | |
| 20 | 20 | 250 | 300 | 1.99 | 3.61 | |
| 40 | 40 | 60 | 10 | 89.62 | 1130.25 | |
| 40 | 40 | 60 | 100 | 19.02 | 54.10 | |
| 40 | 40 | 60 | 300 | 4.55 | 14.37 | |
| 100 | 100 | 10 | 10 | 187.50 | 7099.90 | 173 |
| 100 | 100 | 10 | 100 | 62.00 | 343.30 | |
| 100 | 100 | 10 | 300 | 14.60 | 90.20 | |
| 200 | 200 | 2 | 10 | 266.50 | 28283.50 | |
| 200 | 200 | 2 | 100 | 115.00 | 1340.50 | |
| 200 | 200 | 2 | 300 | 35.50 | 361.50 | |
| 200 | 500 | 1 | 10 | 356.00 | 70999.00 | 270 |
| 200 | 500 | 1 | 100 | 199.00 | 3433.00 | |
| 200 | 500 | 1 | 300 | 73.00 | 902.00 | |

species

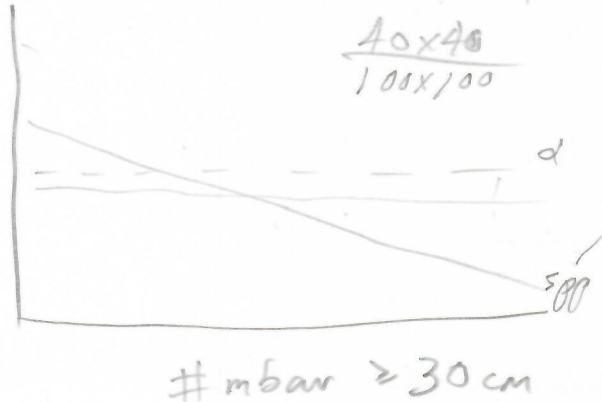
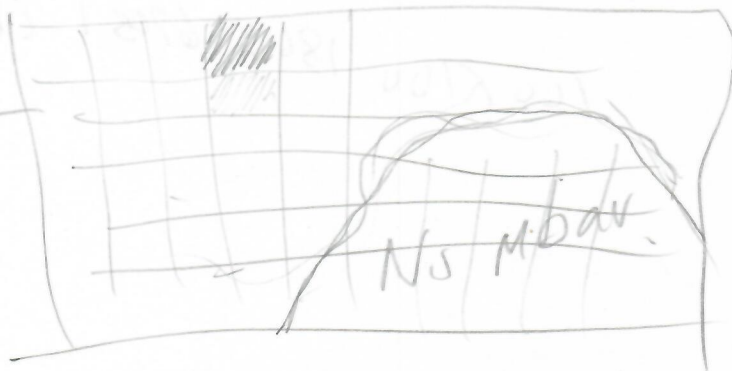
stems

BCI

species



species/20x20
in mbar
no mbar



Jusuni

605 spp 606 spp
5545 ind 6737 ind

mbar ≥ 30 cm

U.K. TROPICAL FOREST FORUM

c/o NATURAL RESOURCES INSTITUTE, CENTRAL AVENUE, CHATHAM MARITIME, KENT ME4 4TB, UK

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Chairman: Ron Kemp Coordinator: Jane Thornback

To **Dr Richard Condit, Centre for Tropical Forest Science
Smithsonian Tropical Research Institute
Edificio 401, Avenida Roosevelt
ANCON, Panama
Republic of Panama**

Fax: 00 507 232 6274

From **Jane Thornback**

Date **30 October 1996**

Re **Cameroon Conference on 17-24 January 1997**

No of pages **4**

Dear Dr Condit

Ms Thornback has contacted Dr Elizabeth Losos about participation in the forthcoming Conference in Limbe, Cameroon on the African Rainforests and the Conservation of Biodiversity.

Dr Losos will be unable to attend the Conference to present a paper entitled:

'The Smithsonian 50sq. ha. plot: African review'

She has, however, suggested contacting you to take her place. She also proposed that the title of the paper should be changed to:

'Forest Dynamics Plots of the Centre for Tropical Forest Science: An African Review and its relevance to forest management'

Please would you indicate whether you are willing and able to attend the Conference to present a paper.

Ms Thornback will be in the office tomorrow (Thursday 31 October), and will be able to supply more details about the Conference.

Yours sincerely

Jeremy Burgess
pp Jane Thornback



The Natural Resources Institute (NRI) is an internationally recognised centre of expertise on the natural resources sector in developing countries. NRI provides the institutional support for the UK Tropical Forest Forum Secretariat.



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THE AFRICAN RAIN FORESTS AND THE CONSERVATION OF BIODIVERSITY

WORKSHOP

17-24 JANUARY 1997

LIMBE BOTANIC GARDEN, SW PROVINCE, CAMEROON

Atlantic Beach

A Workshop will take place at the Limbe Botanic Garden in SW Province, Cameroon, West Africa, from 17-24 January on the topic of the African Rain Forests and the Conservation of Biodiversity. The theme of the Workshop is the linkages between the inventory, monitoring and assessment of biodiversity and the management, use and conservation of forests.

The Workshop will have four major themes around which discussion will be focused:

- The inventory, monitoring and assessment of biodiversity
- The use, management and conservation of forests, both commercially and by community
- The institutional framework for forest conservation
- The valuation of forest resources for conservation purposes

The meeting will have four working groups to match the four themes. These will discuss how the themes contribute to the conservation of biodiversity; plenary sessions will then consider the linkages between the four topics as a realistic approach to conservation.

The Workshop is sponsored by Earthwatch Europe with a grant from DGVIII of the European Union, and with support from the UK Overseas Development Association whose Mount Cameroon Project will act as the local host. The event is being coordinated by the UK Tropical Forest Forum.

Immediately following the main conference will be a one-day Workshop on the topic of the "Domestic Market Potential for Non Timber Tree Products". This is being coordinated by the UK-based Natural Resources Institute.

Limbe Botanic Gardens are a one hour drive from the international airport at Douala, SW Cameroon. A range of hotel accommodation is available.

For further information contact:

Jane Thornback

UK Tropical Forest Forum

Natural Resources Institute

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United Kingdom

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Workshop Agenda - Draft - September 1996

AFRICAN RAINFORESTS AND THE CONSERVATION OF BIODIVERSITY

LIMBE BOTANIC GARDEN, SW CAMEROON

17 - 23 January 1997

Programme of events

Day of Arrival Thursday 16 January

Arrival and registration

Afternoon: Tours of Limbe Botanic Garden

Evening: Informal reception and buffet supper

Day 1 Friday 17 January

10am: Official opening ceremony (Limbe Town Hall/LBG Jungle Village)

- Opening remarks
- Intro to Mt Cameroon Project
- Intro to EU funding for conservation
- Intro to Earthwatch Europe
- Intro to UK Tropical Forest Forum
- Speeches of welcome by Ministers
- Intro to Workshop: aims and objectives

- Opening speech
Conservation of African rainforests: who is it for and how to achieve it?

Lunch: Sonara Beach Club

pm: Tours of Limbe Botanic Garden / Mount Cameroon project lectures

Day 2 Saturday 18 January

Key note addresses on the Workshop Themes from the Working Group Chairpersons.

- 8.30 - Biological Inventory and Monitoring
- 10.30 - Use, Management and Conservation of Forests: commercially and by community
- 12.00 Lunch
- 1.30 - Institutional framework for forest conservation
- 3.30 - Valuing the forest resource for conservation purposes
- 5.00 Setting up of Working Groups
- 7.30 Buffet in the Limbe Gardens

Day 3 Sunday 19 January

Workshop tours to mangroves and mountain

Day 4 Monday 20 January

Working Groups on two of the four themes meet in session led by Theme Co-Chairs. Presentations of 20 minutes each followed by discussion of 15 minutes.

Day 5 Tuesday 21 January

Working Groups on the remaining two themes meet in session

Chairs plus rapporteurs to draw up comprehensive recommendations for presentation at plenary session

Day 6 Wednesday 22 January

Plenary Session with reports back from Working groups plus discussions of recommendations.

Evening: Workshop Dinner

Day 7 Thursday 23 January (end midday)

Final session. Conference recommendations. Closing ceremony

Friday 24 January

One Day Workshop on "Domestic Market Potential for Non Timber Tree Products organised by the UK Natural Resources Institute

Field Trips

1. Limbe Botanic Garden. (2-3 hours)
At a variety of times throughout the meeting
2. Mount Cameroon Project. (Half to one day). Visit to various project areas.
3. Korup, Kilum and Kupe Forest Conservation Projects. (3-4 days)
All three areas are a one -day drive from Limbe. Arrangements can be made for Small groups of up to ten people to visit these sites
4. Savannah Parks of North Cameroon. Tour operators can arrange tourist visits if sufficient interest.

Monday, 20th January 1997

Working Group 1: Biological inventory and monitoring

Co-Chairs: Dr Ian GAULD (Natural History Museum, UK)
Dr Leon BENNUN (National Museums of Kenya)

- 8.15 Welcoming Remarks
- 8.30 Dr Leon BENNUN & John FANSHAW (National Museums of Kenya;
BirdLife International UK)
Using forest birds to evaluate forest management: an East African
perspective.
- 9.00 Dr Martin CHEEK (Royal Botanic Gardens, Kew, UK)
Title tbc: Botanical inventory in South West Cameroon: linking
inventory to conservation.
- 9.30 Dr Richard BAGINE (National Museums of Kenya)
Biodiversity databases as management tools: an example from
Kakamega Forest, Kenya
- 10.00 Coffee
- 10.30 Joseph MUTANGAH (National Museums of Kenya)
Forest quality indicators and Kakamega Forest, Kenya
- 11.00 Mr Abu Juam MUSAH (Forestry Department, Ghana)
Title tbc: The role of databases and forest inventories in Ghana
- 11.30 Prof. Emmanuel OBOT (Cross River National Park, Nigeria)
Biodiversity surveys in Cross River National Park, Nigeria
- 12.00 Dr Richard CONDIT (Center for Tropical Forest Science, Panama)
Large Plots of the Center for tropical Forest Science: Relevance to
Biodiversity and Management
- 12.30 Lunch
- 14.00 Mr Clement TOH & Mr John de MARCO (BirdLife International, Cameroon
& Royal Society for the Protection of Birds, UK)
Biodiversity monitoring on Mount Oku, Cameroon
- 14.30 Mr Alphonse MACKANGA (ECOFAC, Gabon & Universite de Montpellier,
France)
Utilisation des inventaires biologiques dans l'aménagement de la
mosaïque forêt-savane.
- 15.00 Dr Valerie KAPOK & Mr Martin JENKINS (World Conservation Monitoring
Centre, UK)
Title tbc: Indicators of forest condition and vulnerability