

Updating Key Biodiversity Areas in the Lofa-Gola-Mano Nimba complexes

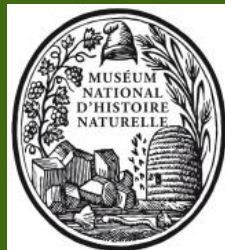


Ehoarn Bidault, Bruno Senterre, Moussa Diabaté, Tariq Stévant



The project: partners, actors, beneficiaries

- Funding from CEPF initially over 18 months (until dec. 2020)
 - Activities delayed due to Covid and military coup in Guinea.
 - Funding extending until May 2022, with no increase.
- New partner identified meanwhile:
 - Forestry Training Institute (Bomi, Liberia).
 - Help towards the creation of a new national herbarium in Liberia.
 - Implication of a botanist trained during the project.



The project: results

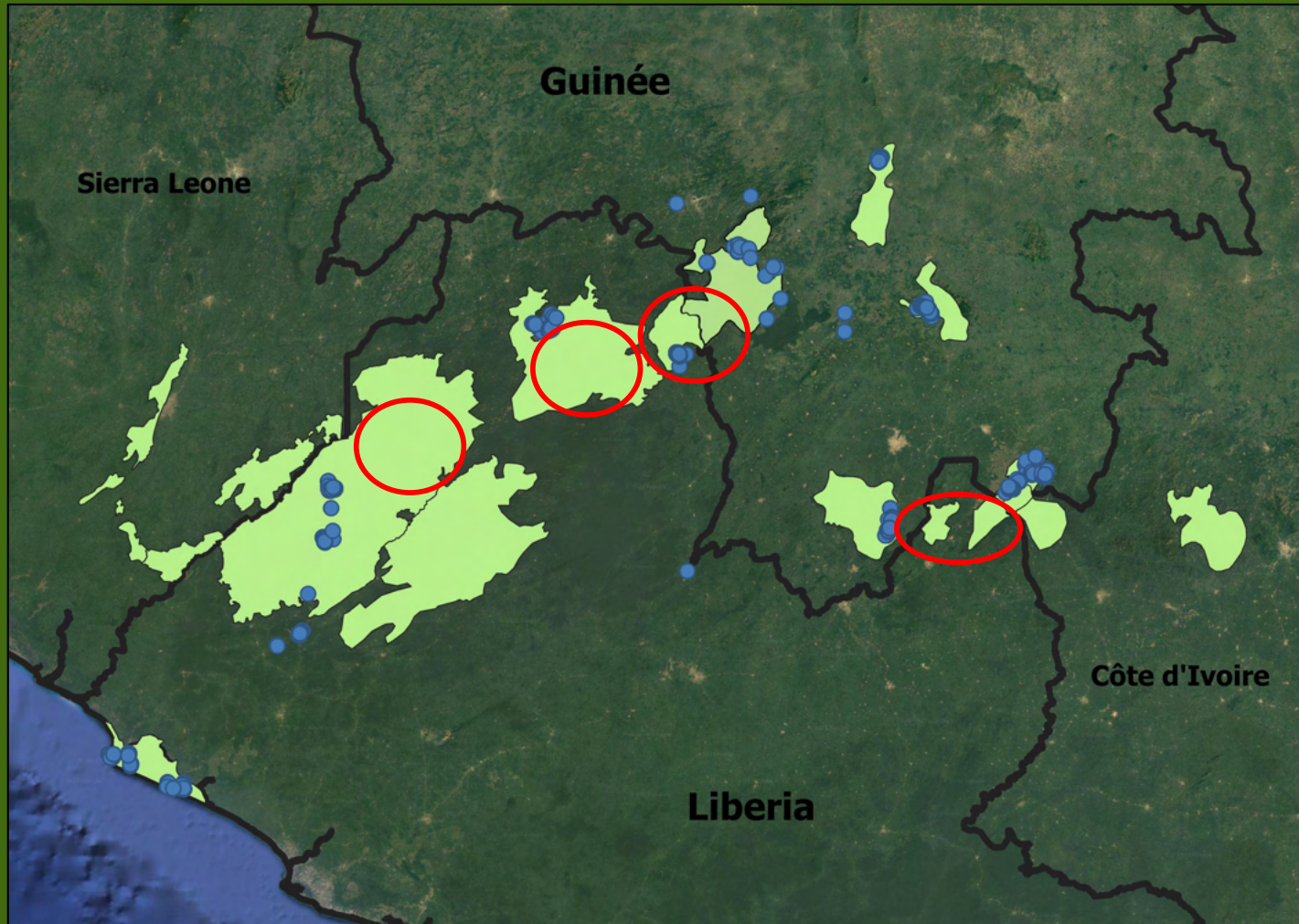
Increase knowledge by generating new data:

- 1732 botanical samples collected in Guinea
- 2082 in Liberia
- 63 vegetation transects in 9 different sites
- 493 orchid individuals cultivated at Sérédou, Guinea
- 5610 photos including 650 orchids



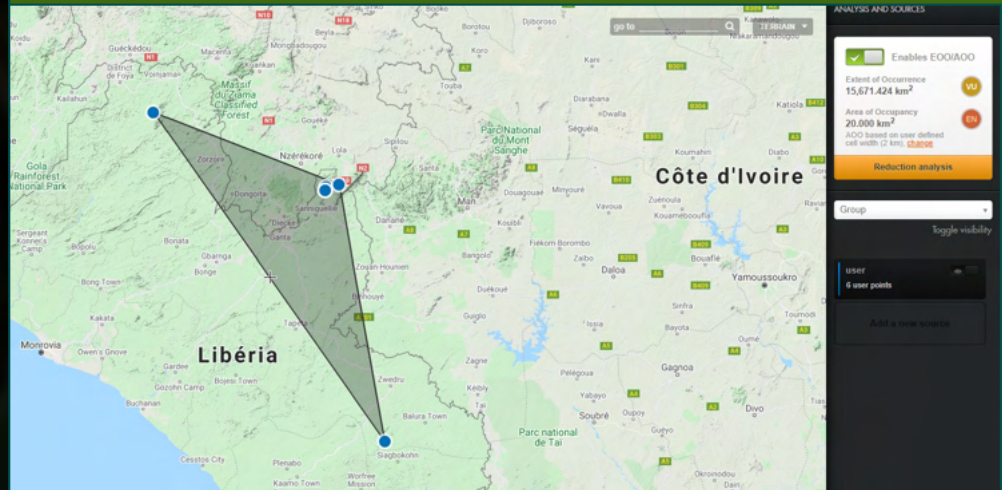
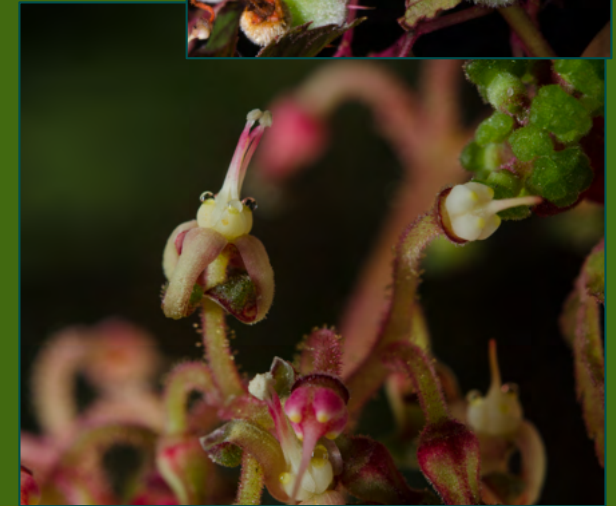
The project: results

- Remoteness and difficult access: Wologizi, Wonegizi, Gola
- Border closing due to Covid: Nimba Liberia & West Nimba



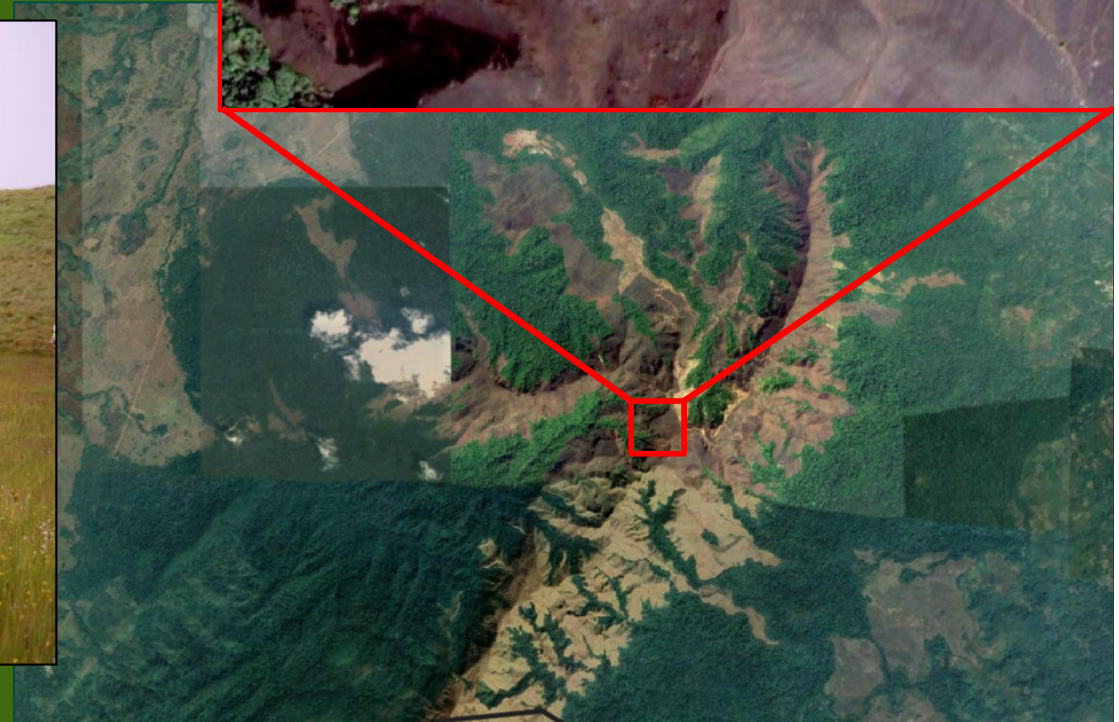
The project: results

- Identify threatened ecosystems and species:
 - 204 threatened species identified.
 - 150 assessed against Categories and Criteria of the IUCN Red List.
 - Example: *Cyphostemma adamii*.
 - Endemic to Liberia, known from 6 collections.
 - Endangered, assessment submitted to the Red List.



The project: results

- Identify threatened ecosystems and species:
 - 87 ecosystems identified
 - 30 threatened ecosystems
 - Example: mare d'hivernage, Nimba. Critically Endangered.
 - *Montane saxicolous seasonal marsh grassland on ironstone*



The project: results

Update the KBA analysis:

- Done for the ecosystems, but not submitted to the KBA secretariat
- Still undergoing for species

KBA Code	KBA Name	Lowland superhumid (11010): EN		Lowland perhumid (12010): VU-EN		Submontane perhumid (22010): EN		Montane perhumid (32010): EN		Lowland humid (13010): EN (EN-CR)		Submontane humid (23010): VU (VU-EN)		Montane humid (33010): VU (VU-EN)	
		km ²	% Global	km ²	% Global	km ²	% Global	km ²	% Global	km ²	% Global	km ²	% Global	km ²	% Global
SLE2	Kambui	0	0	204.4	0.3	0	0	0	0	0.2	0.0	0	0	0	0
SLE7	Tiwai	0	0	11.4	0	0	0	0	0	0	0	0	0	0	0
SLE1	Gola	0	0	721.2	1.1	0	0	0	0	0	0	0	0	0	0
LIB10	Piso	42.1	0.2	0	0	0	0	0	0	0	0	0	0	0	0
LIB11	Lofa-Gola-Mano	0	0	4251.6	6.3	0	0	0	0	0	0	0	0	0	0
LIB8	Kpelle	0	0	2089.6	3.1	0	0	0	0	0	0	0	0	0	0
LIB16	Wologizi	0	0	1513.6	2.2	42.4	32.1	0.4	7.4	0	0	0	0	0	0
LIB17	Wonegizi	0	0	242.5	0.4	6.9	5.2	0	0	0	0	0	0	0	0
fw4		83.1	0.4	1049.3	1.6	0	0	0	0	0	0	0	0	0	0
fw5		123.8	0.6	1814.1	2.7	0	0	0	0	0	0	0	0	0	0
fw11		0	0	2424.8	3.6	0	0	0	0	0	0	0	0	0	0
GIN8	Ziama	0	0	139.2	0.2	34.8	26.3	1.0	17.8	451.3	2.6	155.2	22.6	0.8	3.4
GIN2	Diéké	0	0	548.1	0.8	0	0	0	0	0	0	0	0	0	0
LIB15	West Nimba	0	0	92.7	0.1	2.1	1.6	0	0	0	0	0	0	0	0
LIB12	Nimba	0	0	93.1	0.1	19.7	14.9	0.9	16.0	0	0	0	0	0	0
CIV8	Nimba transboundary	0	0	106.4	0.2	0	0	0	0	31.4	0.2	0	0	0	0
CIV14	Nimba integrale	0	0	44.2	0.1	9.7	7.4	1.4	25.4	0	0	0	0	0	0
GIN9	Nimba	0	0	23.1	0	13.6	10.3	1.8	32.9	48.6	0.3	14.6	2.1	2.0	8.2
GIN4	Bero	0	0	0	0	0	0	0	0	66.6	0.4	40.6	5.9	0	0
GIN10	Fon	0	0	0	0	0	0	0	0	46.8	0.3	26.4	3.8	2.1	8.7
CIV7	Man	0	0	0	0	0	0	0	0	194.0	1.1	42.7	6.2	0	0
	TOT KBA	249.1	1.1	15369.3	22.8	129.1	97.8	5.5	99.5	838.9	4.9	279.5	40.7	4.9	20.4
	TOT West Africa	22453	100	67369	100	132	100	6	100	17030	100	687	100	24	100



The project: results

Publish and broadcast results to the public and stakeholders:

- The report on the ecosystems of the two complexes was published.
- General information published.
- Information on the threatened species in the process of being published.

Assessment of Key Biodiversity Areas in the Lofa-Gola-Mano-Nimba complexes (West Africa) using ecosystem criteria

Final Report

Prepared by :

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Prepared for
Missouri Botanical Garden (MBG)

31st December 2020



CRITICAL ECOSYSTEM
PARTNERSHIP FUND

Les Plantes Menacées du Lofa-Gola-Mano & Nimba - Threatened Plants of Lofa-Gola-Mano & Nimba

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Le projet Zones Clés de Biodiversité

[EN] Summary of the project

Le Complexe des Monts Nimba

Le Complexe de Lofa-Gola-Mano

Les espèces et habitats menacés

Les habitats menacés

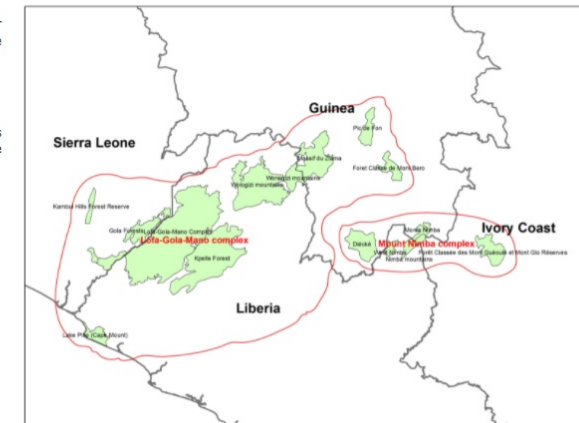
Les espèces menacées

Ce site web a été développé dans le cadre du projet de « Mise à jour des Zones Clés de Biodiversité pour les complexes de Lofa-Gola-Mano et des Monts Nimba », financé par le Critical Ecosystem Partnership Fund, et réalisé par le MBG.

En effet, les Zones Clés de Biodiversité (*Key Biodiversity Areas, KBA*) sont un outil développé par l'UICN pour identifier les zones d'importance pour la conservation sur base de seuils de présence et de représentativité des espèces et habitats menacés selon les Catégories et Critères de la Liste Rouge de l'UICN. Basé sur le constat que les ZCB en Afrique de l'Ouest ont été majoritairement définies grâce à la présence d'espèces menacées animales, le MBG propose par ce projet de :

- identifier la composante menacée des espèces de plantes et des habitats des ZCB existantes, afin de combler les lacunes de connaissances ;
- mettre à jour l'analyse de ces ZCB pour évaluer leur représentativité et leur potentiel de conservation des plantes et des habitats menacés.

Ce site web a donc pour objectif de fournir à tous les intervenants utilisant le concept de ZCB ou nécessitant l'identification et la connaissance d'espèces ou d'habitats menacés pour développer leurs projets, des informations préliminaires sur **les espèces végétales et les habitats menacés présents dans les deux complexes de Lofa-Gola-Mano et des Monts Nimba.**



The project: results

Participate in harmonizing the regional practices:

- Same techniques used in both countries
- Data recognized at the international level
- Increase visibility on the work accomplished



← → ↻ Non sécurisé | legacy.tropicos.org/Specimen/101193977

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Ehoarn Bidault - 5016

Details Images (6) Map

Current Determination
Monocyclanthus vignei Keay **Family:** Annonaceae **Determined By:** E. Bidault 2020 [✎ Edit](#)

Previous Determinations
!!Annonaceae Juss. **Family:** Annonaceae **Determined By:** [✎ Edit](#)

Collection Information

Collectors Ehoarn Bidault, Kolou Koivogui, Philomena Yarwoah & Lansana Konaté

Collector Team Ehoarn Bidault
Kolou Koivogui
Philomena Yarwoah
Lansana Konaté

Collection Number 5016

Collection Date 24 février 2020

Location Liberia, Grand Cape Mount

Coordinate 07°26'23"N 010°41'01"W (7.4396730, -10.6837450)

Elevation 370 m

Herbaria BRLU, K, MO, P, SERG, WAG

Description Arbuste de 3 m de haut, fleurs solitaires sur le tronc, corolle mauve à l'intérieur, orange à l'extérieur. Etamines blanches. Odeur citronnée. Echantillon en alcool.

Locality Gola NP, au bord et dans les environs de Mano River. Forêt de terre ferme sur pente.

Specimen Condition flower

Last Modified 09 Jun 2020 Ehoarn Bidault

[✎ Edit this Specimen](#)
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[➕ Add Determination](#)
[➕ Add Barcode/Accession Number](#)
[➕ Add a Common Name](#)
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The project: results

Reinforce local capacities:

- 4 technicians trained in Guinea
- 2 technicians trained in Liberia

Fieldwork methods: pressing and drying of herbarium collections



The project: results

Reinforce local capacities:

- 4 technicians trained in Guinea
- 2 technicians trained in Liberia

Fieldwork methods: forested
vegetation transects



The project: results

Reinforce local capacities:

- 4 technicians trained in Guinea
- 2 technicians trained in Liberia

Management and maintenance of herbarium specimens and associated data at the Herbarium



The project: results

Reinforce local capacities:

- 4 technicians trained in Guinea
- 2 technicians trained in Liberia

Orchid cultivation and scientific monitoring in a dedicated structure: the orchid shadehouse



Results obtained

- 1000 to 2000 expected samples:
3814 specimens collected
- 2 students and 2 technicians SERG trained: yes, and 2 botanists in Liberia
- Local capacities reinforced
- Strengthen collaboration between 3 countries (LI, GN, SL): reinforced between Liberia and Guinea, collaboration with Sierra Leone still to be established
- Deeper knowledge of species and ecosystems



Results obtained

- A checklist of plant species for the 2 complexes
 - Identification still in progress. Dynamic checklists published online.
- Identification and description of the threatened habitats
 - Report Senterre 2020
- Identification of threatened species site by site, and publication on IUCN Red List
 - 56 threatened species assessed
- Leaflets and posters for the KBAs and the complexes
 - Currently in progress
- Compilation and broadcasting of data through a dedicated website
 - Currently being enriched



LBR10 Lake Piso



- Before the project: 536 collections
- Now 838 (402 made by the project)
- 306 species incl. 134 collected by the project
- 11 pot. threatened species before the project
- Now 17



LBR10 Lake Piso

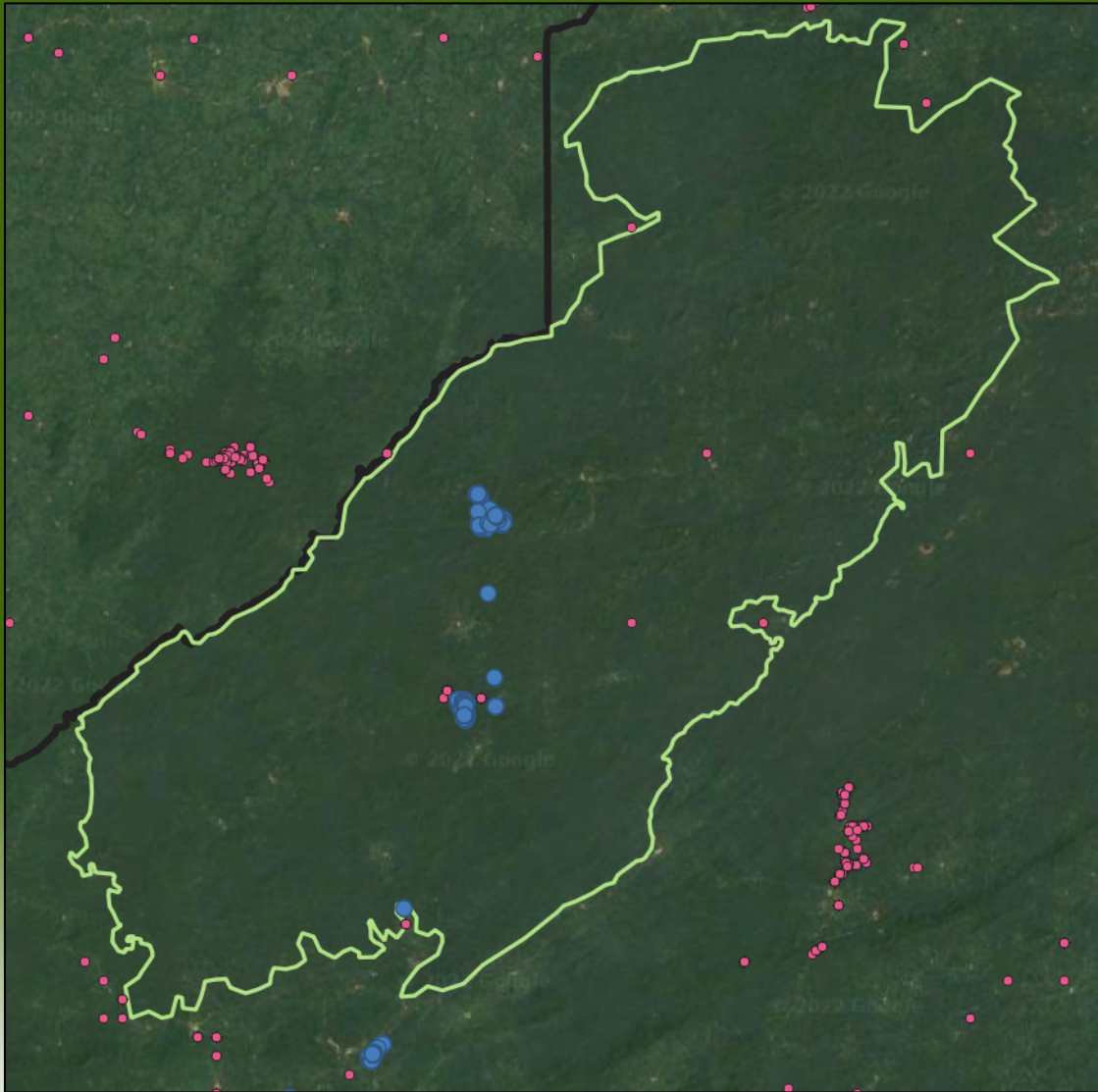


- *Vepris laurifolia*, Rutaceae
- Assessed as Critically Endangered on the Red List (2017)

- Open shrubby vegetation on backshore dunes
- Assessed as Data Deficient (Senterre, 2020), but very likely threatened



LBR11 Lofa-Mano Complex



- Before the project: 599 collections
- Now 1372 (773 made by the project)
- 349 species including 232 collected by the project
- 10 pot. threatened species before the project
- Now 32



LBR11 Lofa-Mano Complex

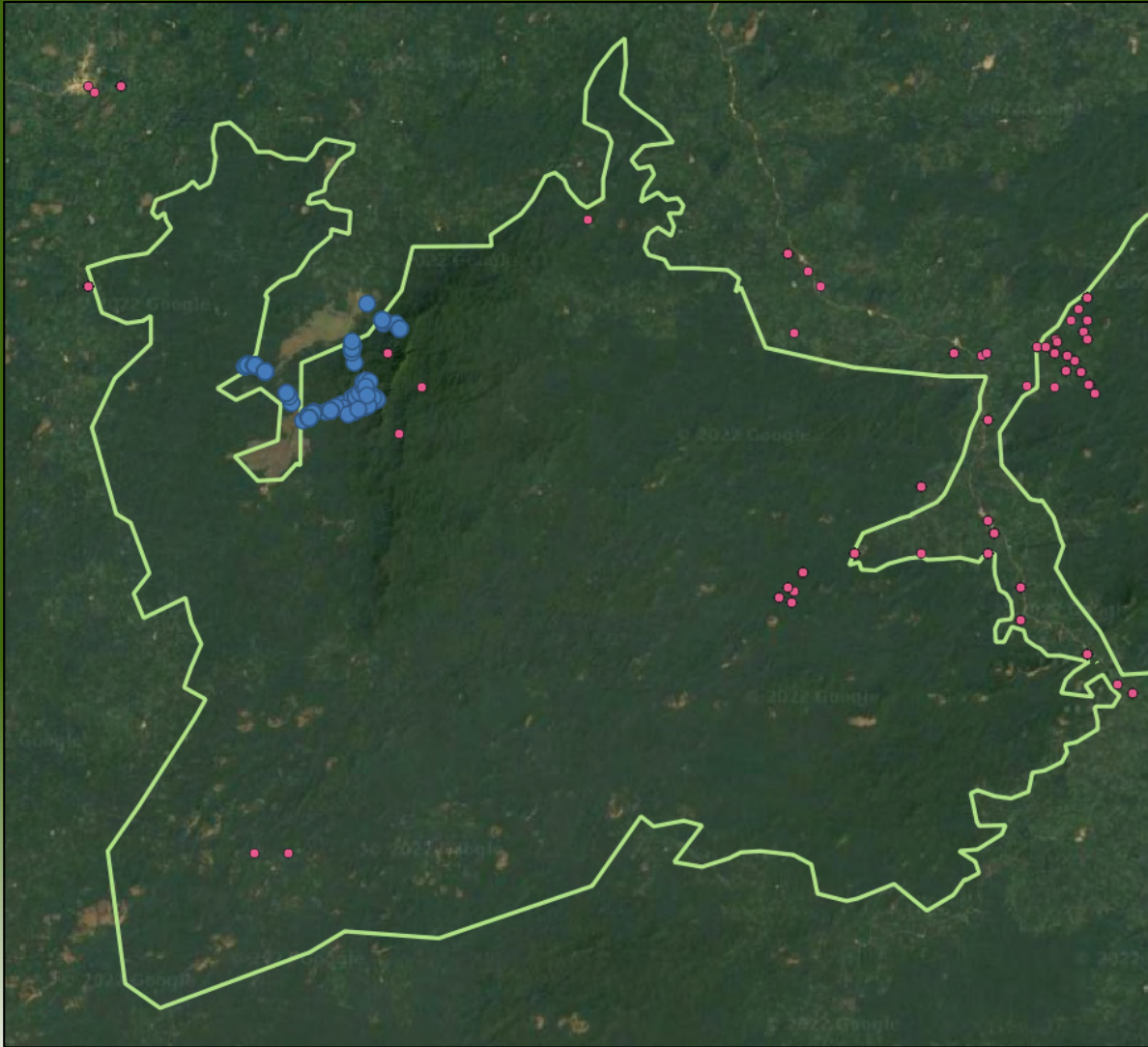
- *Monocyclanthus vignei*,
Annonaceae
- Assessed as Endangered on
the IUCN Red List (1998)



- Lowland ravine forest
- Assessed as Vulnerable (Senterre, 2020)



LBR16 Wologizi Mountains



- before the project: 530 collections
- Now 921 (391 made by the project)
- 341 species including 148 collected by the project
- 9 pot. threatened species before the project
- Now 18



LBR16 Wologizi Mountains

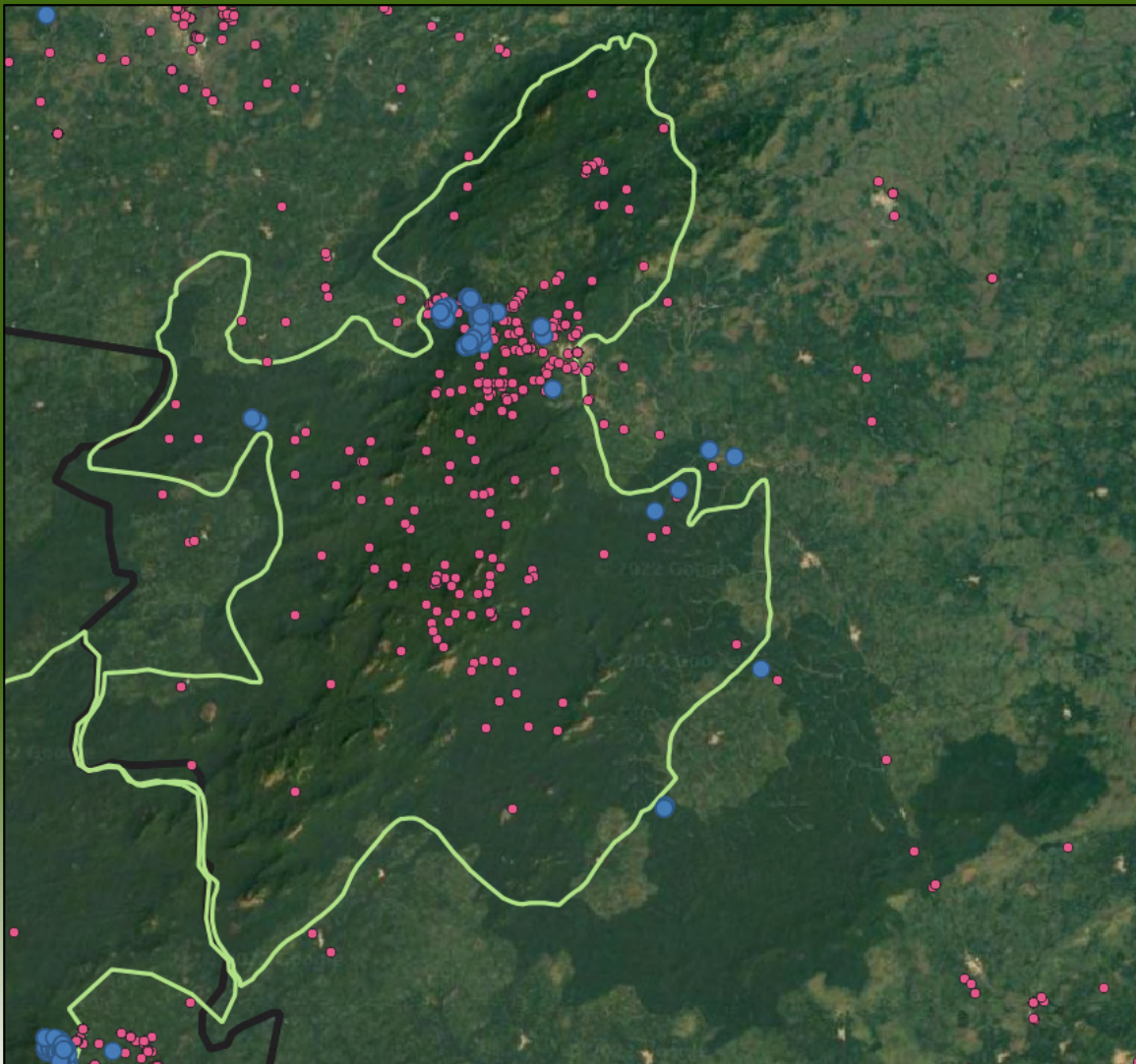
- *Napoleonaea alata*
- Assessed as Endangered (2019)



- Submontane mesic forest
- Wologizi contains 32%
- Assessed as Endangered (Senterre 2020)



GIN8 Massif du Ziama



- Before the project: 367 collections
- Now 998 (553 made by the project)
- 420 species including 202 collected by the project
- 44 pot. threatened species before the project
- Now 39



GIN8 Massif du Ziama



Photo:
Pepe Haba

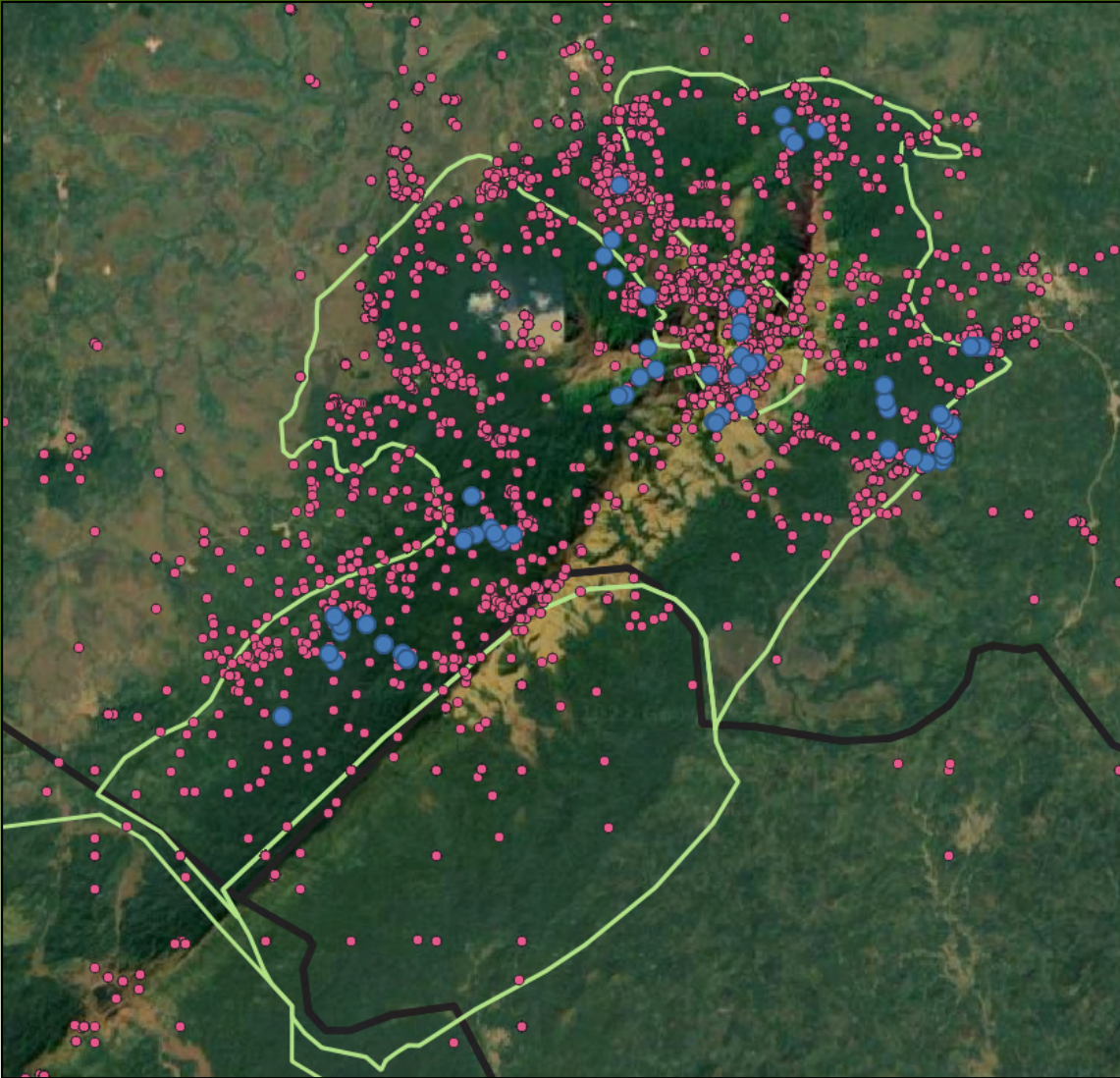
- *Inversodicraea pepehabai*
- Assessed as Endangered on the IUCN Red List (2018)



- Submontane swampy forests
- Assessed as Endangered (Senterre, 2020)



GIN9 Monts Nimba



- Before the project, ca. 5300 collections
- Now ca. 5600 (284 by the project)
- Why? Transects
- 1244 species including 128 collected by the project
- 117 threatened species, potentially 240 if we take IUCN Criteria A into account
- **Baseline SMFG and historical collections: best known site**



GIN9 Monts Nimba



- Submontane saxicolous forest on crust
- Assessed as Critically Endangered (Senterre 2020)

- *Impatiens nzoana*
- Assessed as Endangered (2019)



Case study: freshwater ecosystems, Podostemaceae



- Aquatic plant family growing on rocks in rapids or waterfalls.
- Family largely unknown in Liberia, slightly more in Guinea
- High diversity, species often threatened



Case study: freshwater ecosystems, Podostemaceae



- Species threatened hydro-electric projects, water pollution, artisanal gold mining.
- Present at least on Mano, Loffa & Saint Paul rivers
- In Guinea, also present on smaller forest rivers
- Freshwater KBA. Ramsar sites?



First conclusions and challenges to overcome

- Strong heterogeneity in the baseline knowledge
 - The project allowed to start filling some gaps
- Some data inaccessible
 - Old collections, or recent but never made public
- Standardization is necessary
 - All collected data and some old data were put into a single system to facilitate analysis





Thanks for your attention



MISSOURI BOTANICAL GARDEN

FTI-Tubmanburg
March 1st, 2022