

How to get an ERC grant? Experience with Advanced ERC project

Ecological determinants of tropical-temperate trends in insect diversity

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2015 – 2020, Budget EUR 3,428,367 including large equipment EUR 929,000

Why to apply?

Thumbnail images of grant proposals and research papers, including titles like "Ecological determinants of tropical temperate trends in insect diversity" and "Why to apply?".

The grant format is very straightforward, formal requirements no more complicated than for GACR, US NSF, UK NERC or Australian ARC

Incredible freedom and flexibility in the execution of research, including changes in the budget
Probably the only strictly merit-based research funding competition in the EU – making it prestigious

HOWEVER

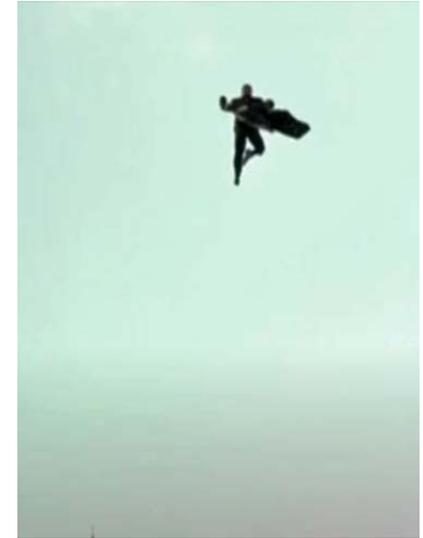
The competition is intense; mean quality of proposals >>GACR

[Write a draft, give it for comments to several experienced colleagues, take some time off, return to the draft with fresh eyes]

How much pilot data is enough? And too much?

There must be some pilot data to prove that you have solid foundations for your research.

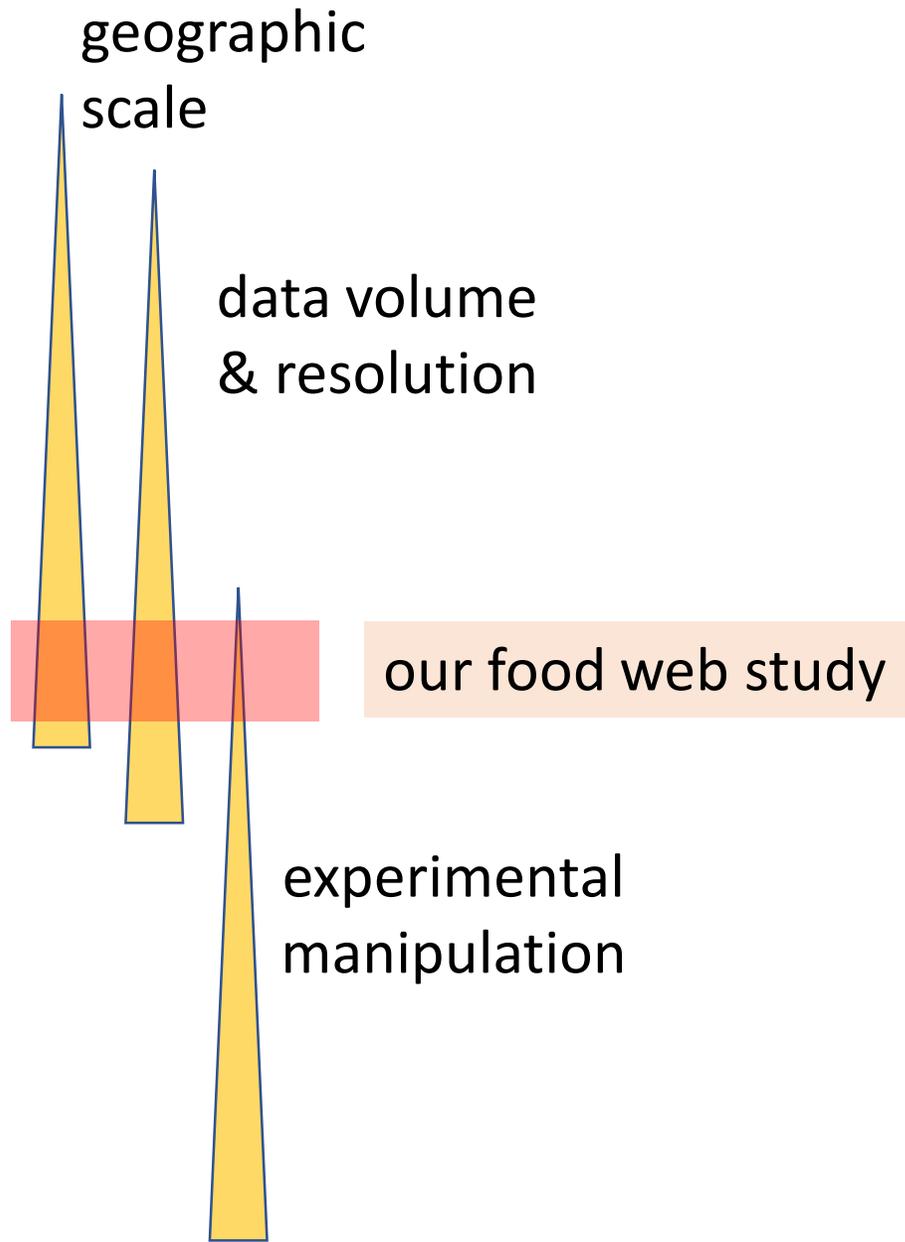
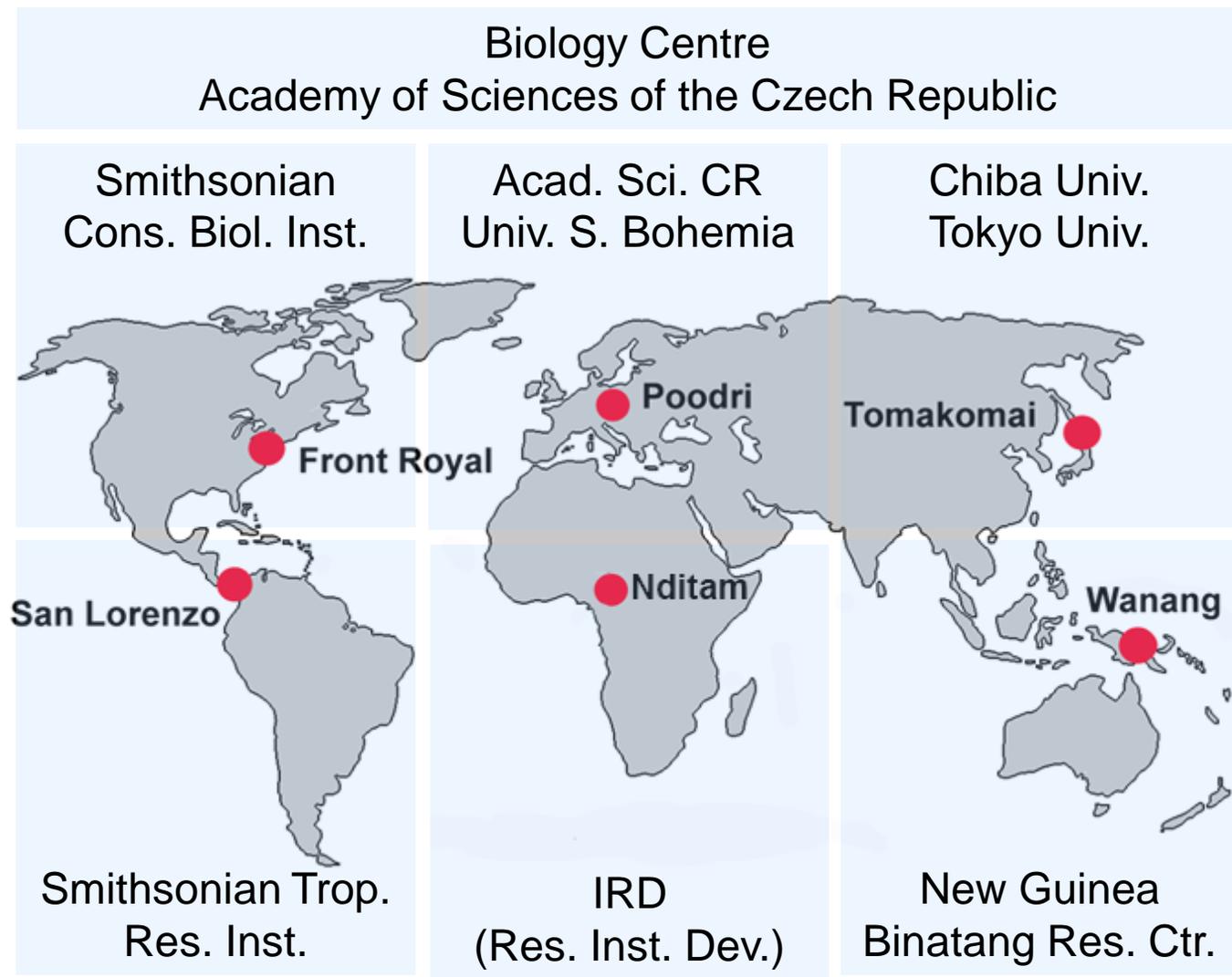
But then there must also be that impossible jump, leap of faith that will radically advance your research, not only gradually improve it.

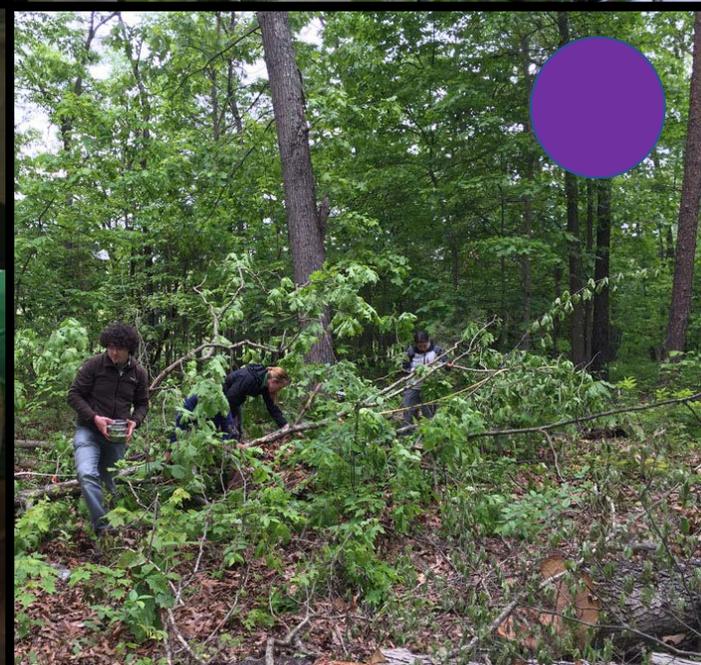
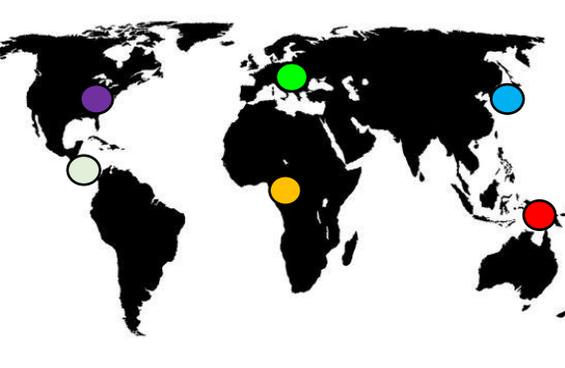


Highly complex plant-insect food web
in New Guinea rainforests

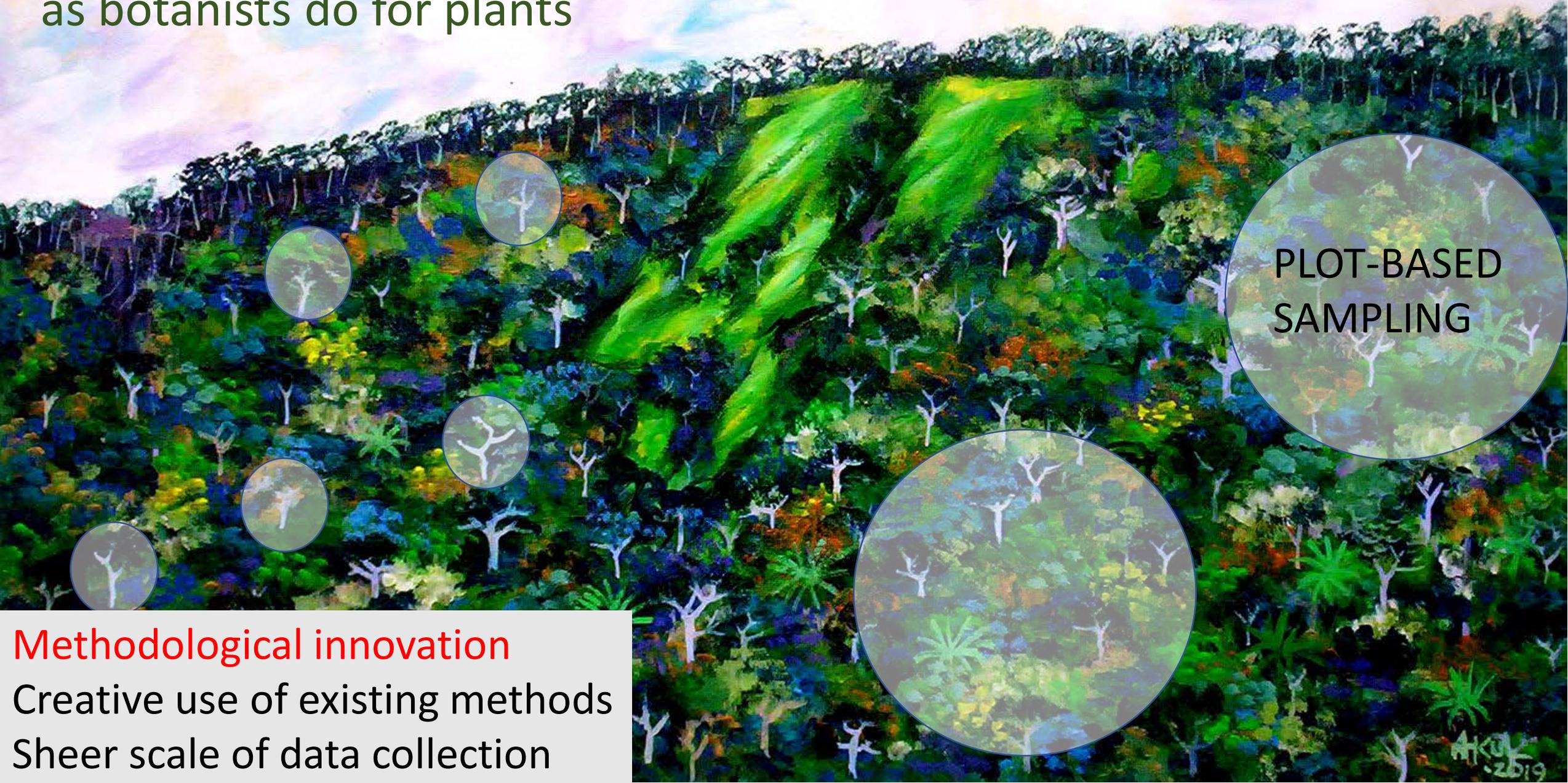
~200 tree species, ~9,600 insect species,
~50,000 interactions

Study design: maximize your competitive advantage





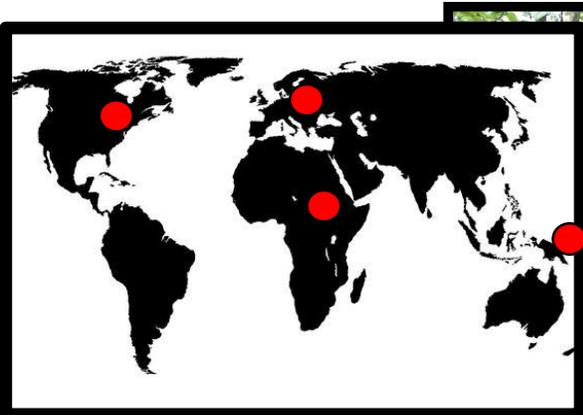
No more of botany-envy: sampling entire forest plots for insects as botanists do for plants



PLOT-BASED
SAMPLING

Methodological innovation

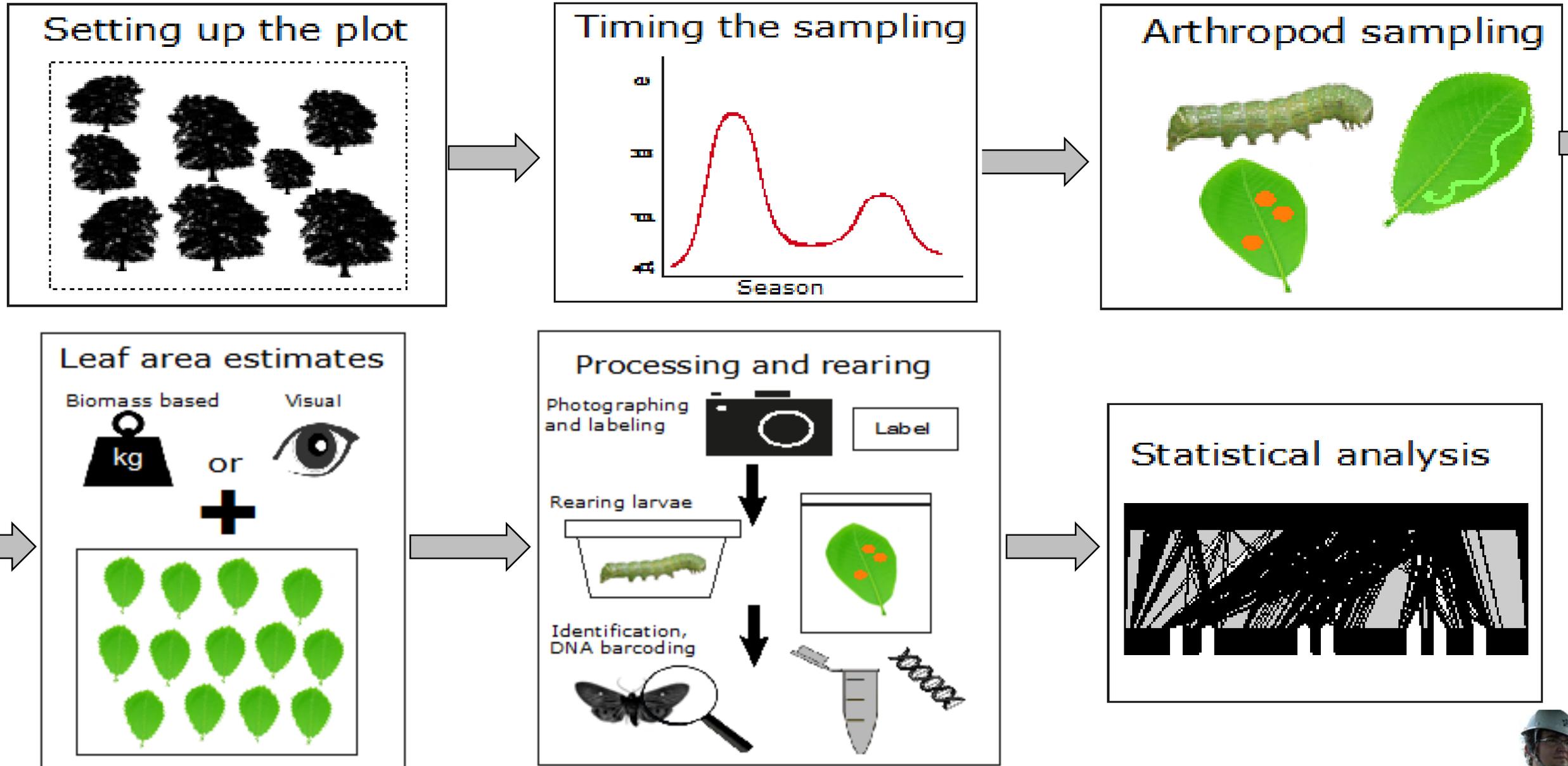
Creative use of existing methods
Sheer scale of data collection



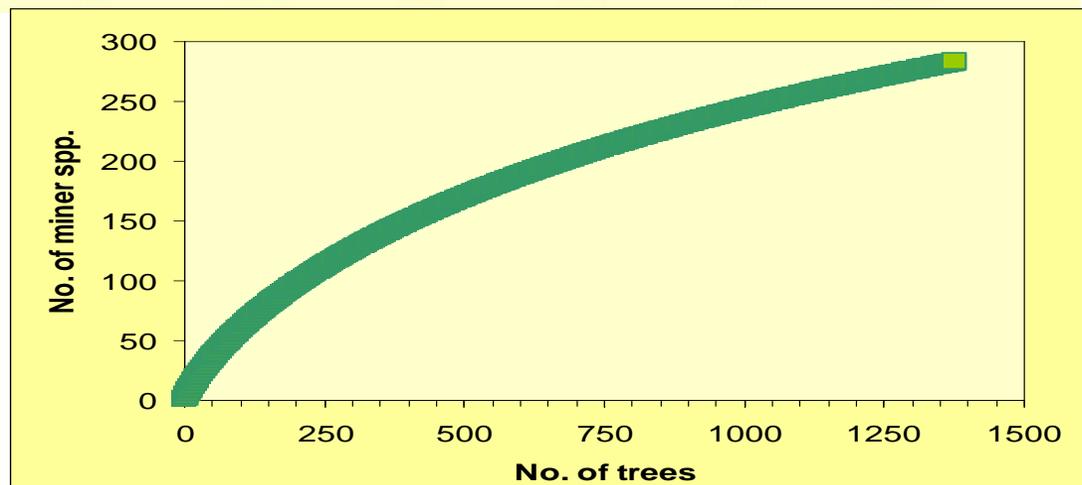
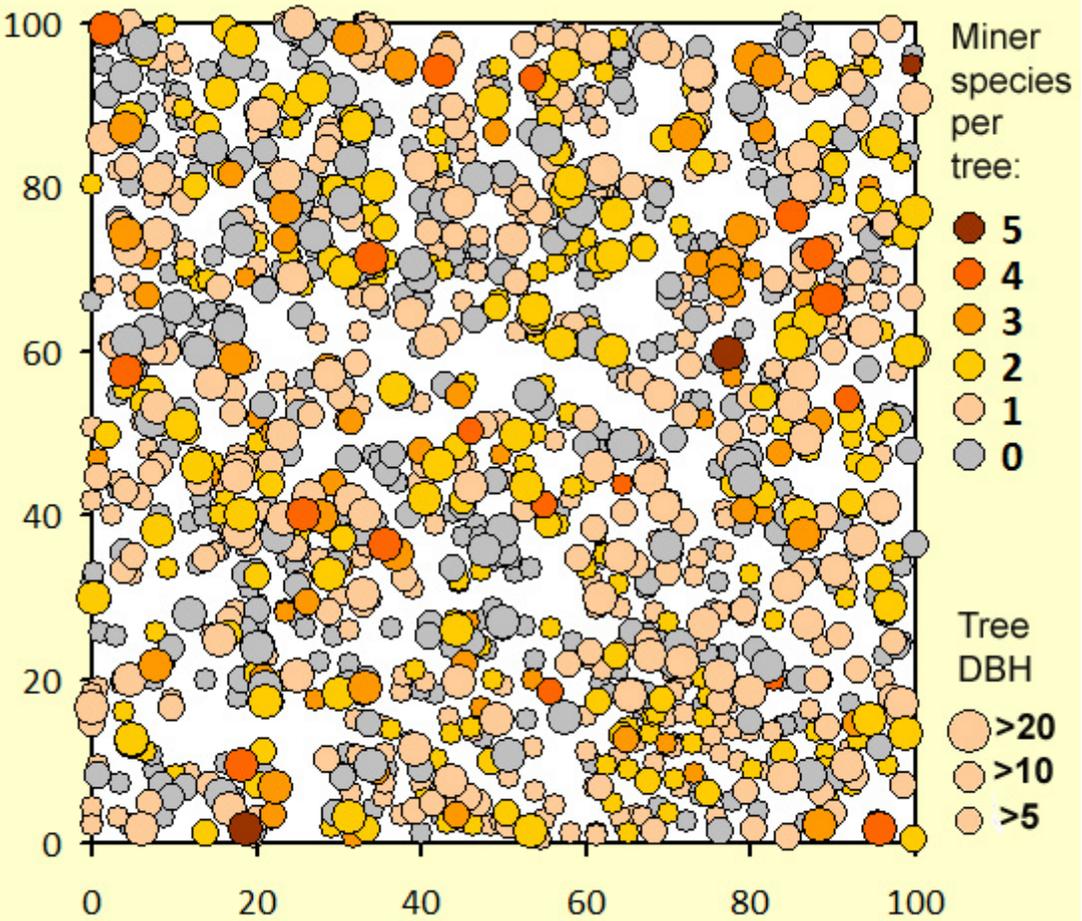
Methodological innovation
Creative use of existing methods
Sheer scale of data collection



Workflow for plot-based sampling



Methodological innovation
Creative use of existing methods
Sheer scale of data collection







Japan

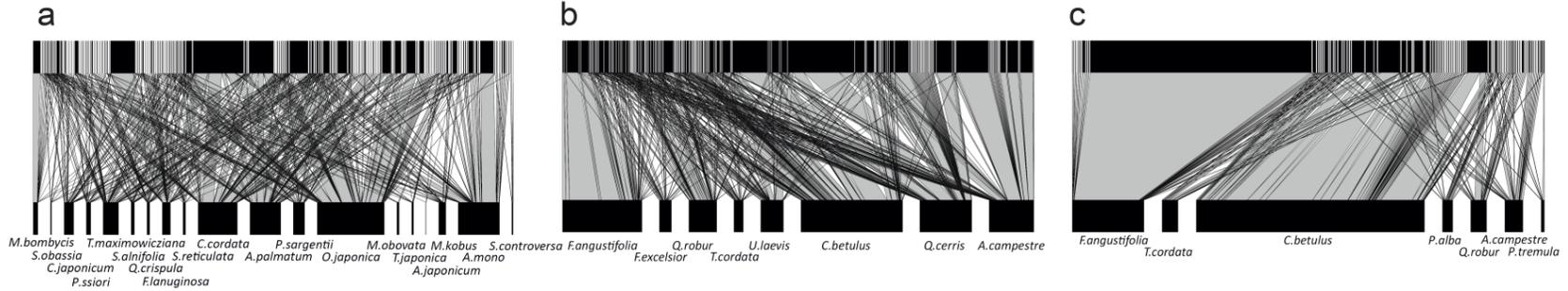


C. Europe 1

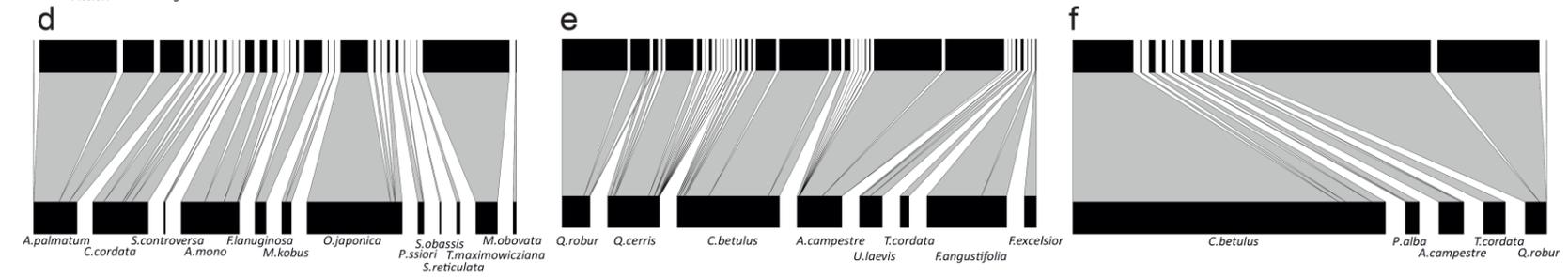


C. Europe 2

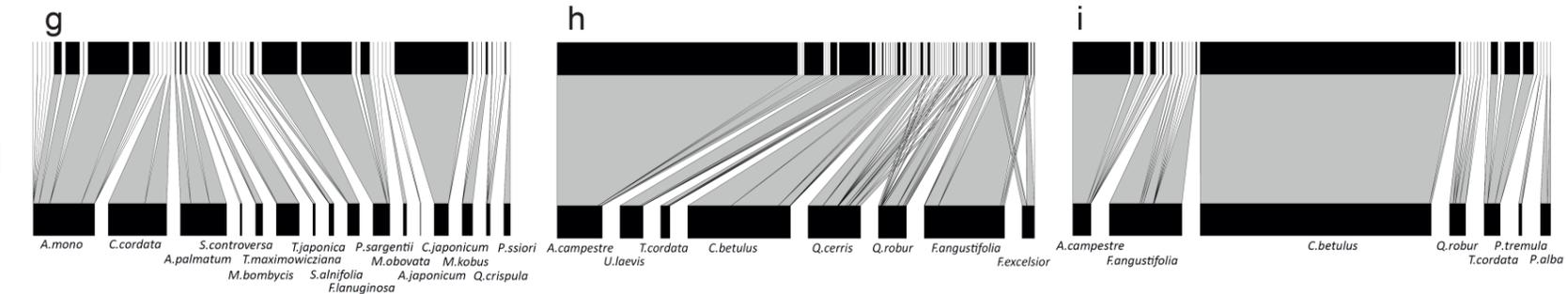
Chewers



Miners



Gallers



Subset of tropical trees matching temperate forest

number & size of individuals, number of species

Methodological innovation

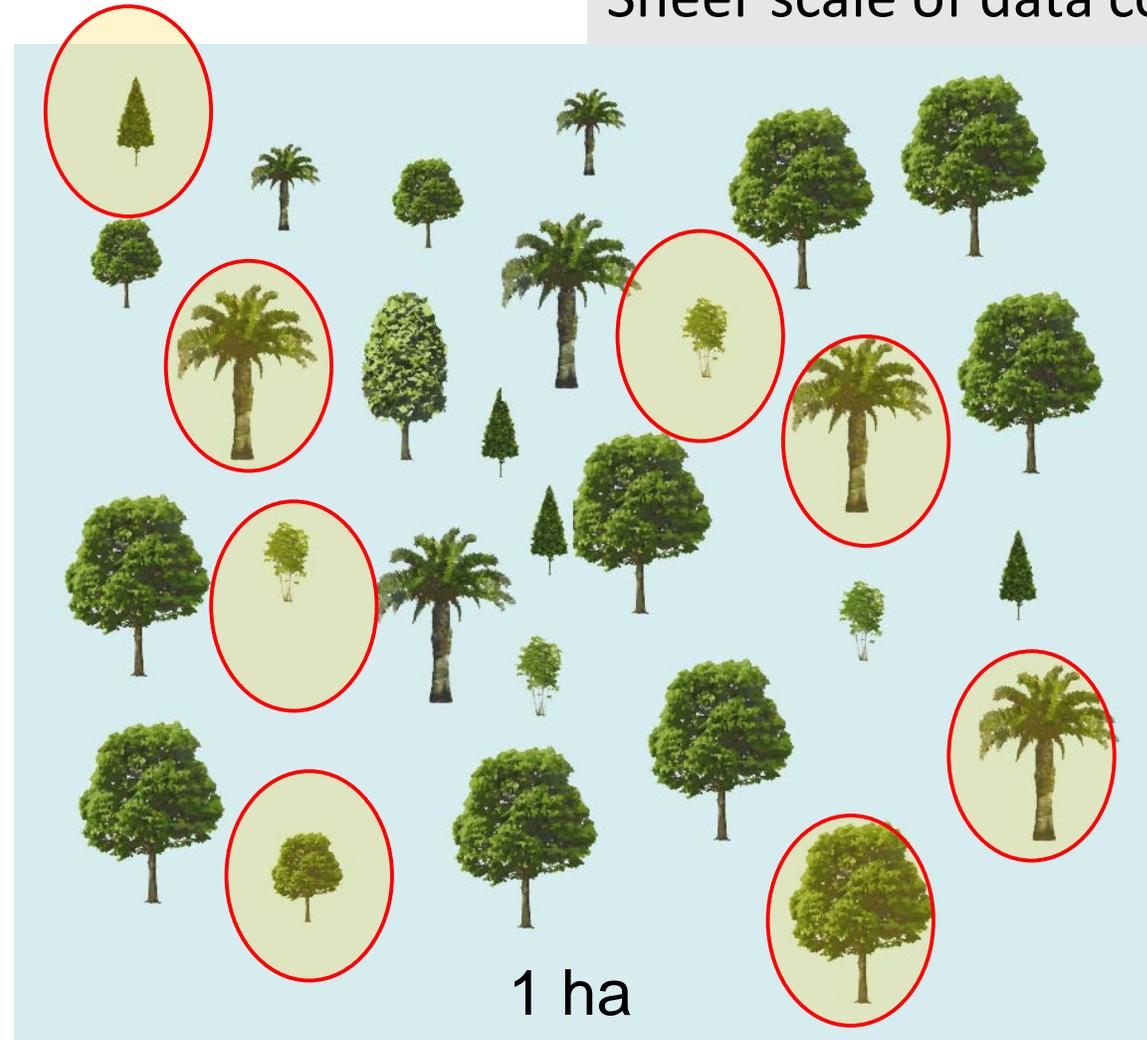
Creative use of existing methods

Sheer scale of data collection



0.1 ha

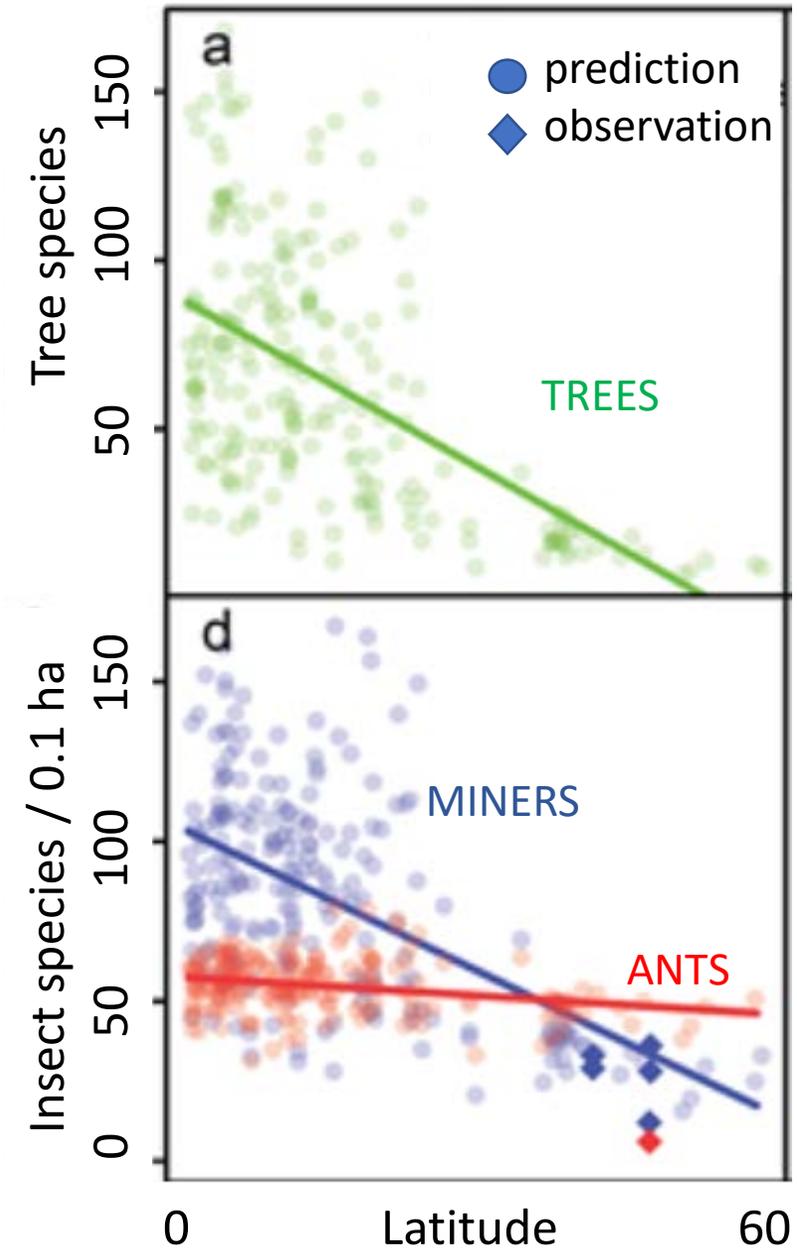
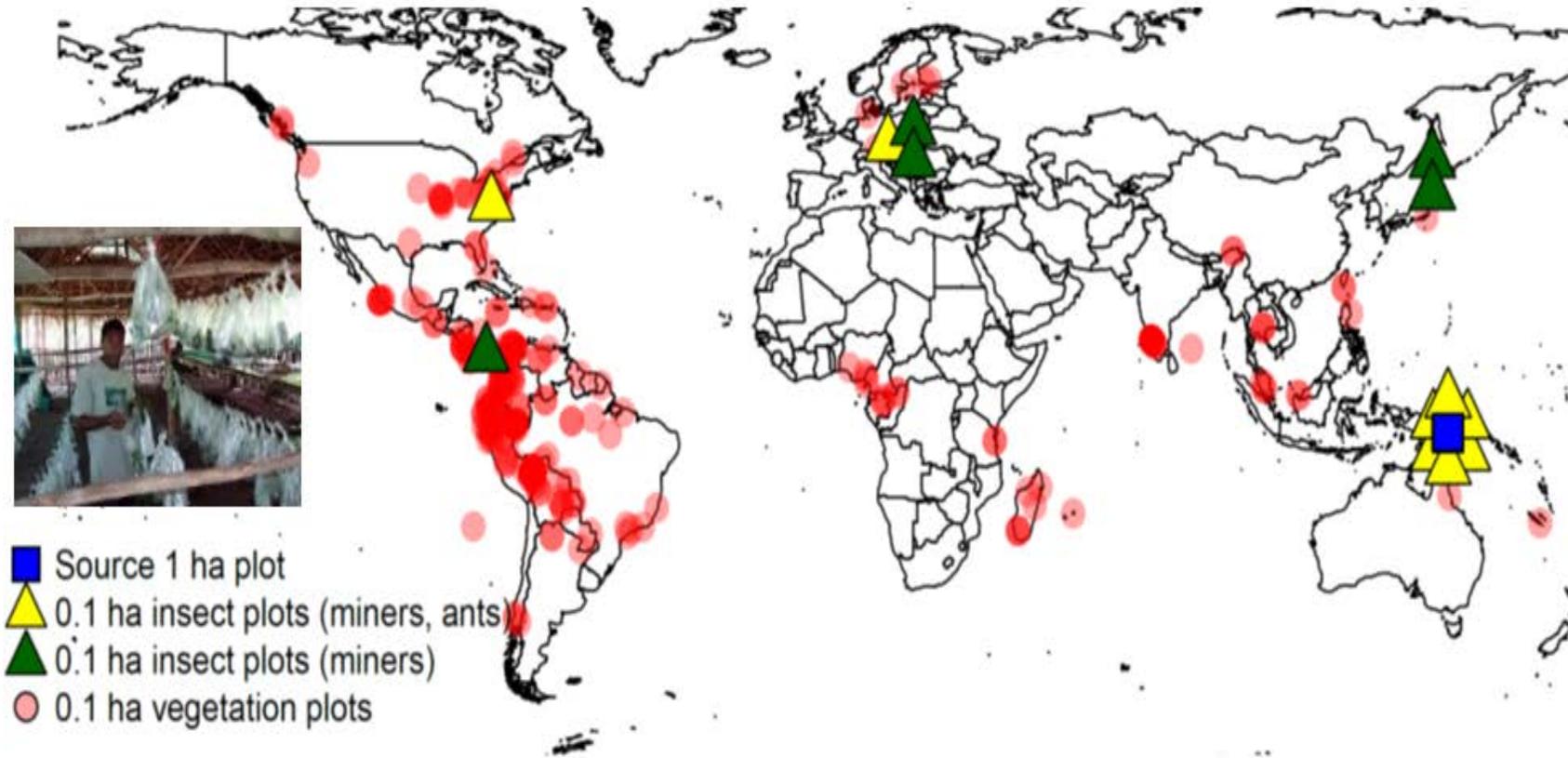
Temperate forest



1 ha

Tropical forest

0.1 ha plant plots used to predict insect composition from PNG 1 ha data set



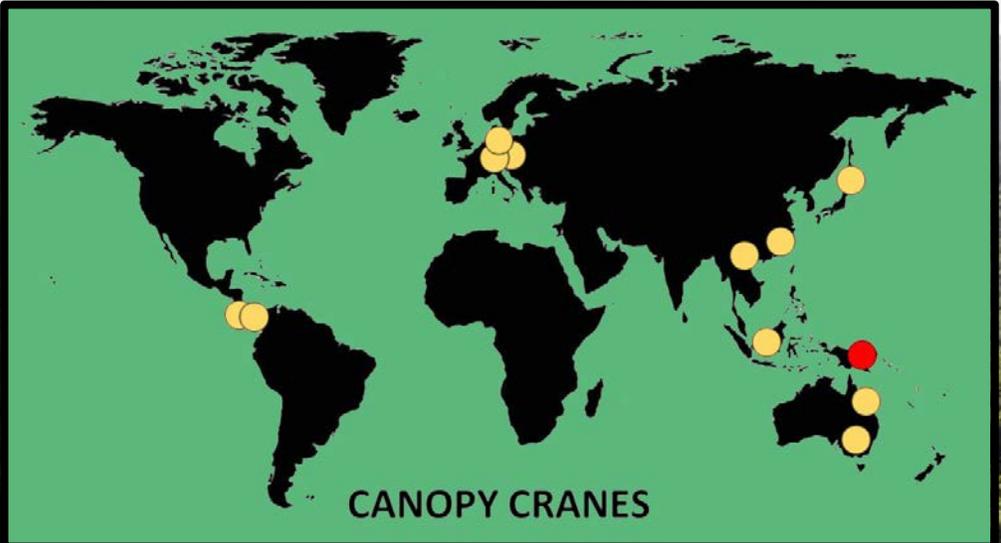


Should you include large equipment?
(It does not compete with the other budget.)

- Yes in general, especially if it significantly
- expands the range of methods
 - increases the volume of data
 - builds national capacity
 - increases the interest of the project

Canopy crane:

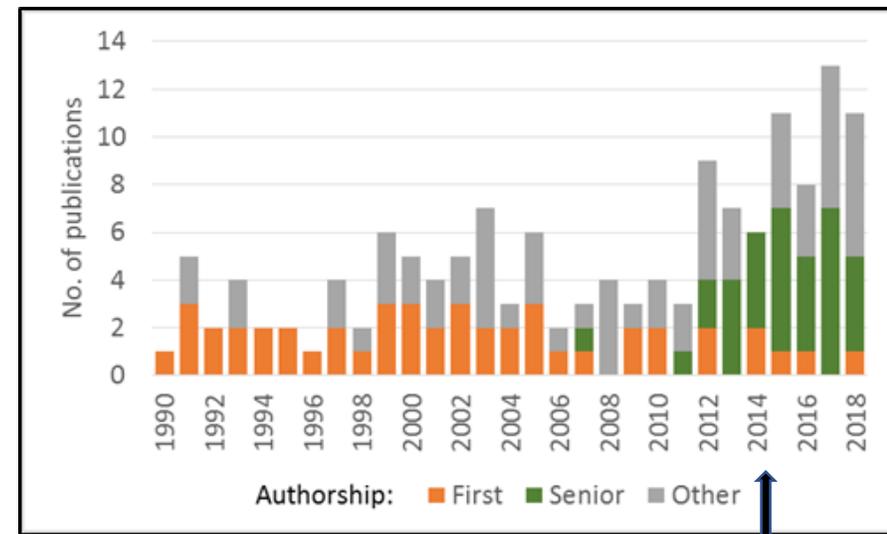
Expands canopy sampling to New Guinea
One of only 6 such tropical facilities
First tropical canopy crane operated by EU



CANOPY CRANES

How important is your CV?

- the quality of your best paper(s) – and journal – matters
- first (and senior) authorships matter
- recent papers matter



Vojtech Novotny

FOLLOW

Biology Centre, [Czech Academy of Sciences](#) & Zoology Department, Univ. of South Bohemia

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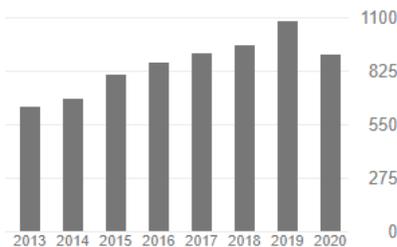
[Plant-Insect Interactions](#) [Rainforests](#) [Biodiversity Conservation](#) [Food webs](#) [Papua New Guinea](#)

TITLE + CITED BY YEAR

TITLE	CITED BY	YEAR
Averting biodiversity collapse in tropical forest protected areas WF Laurance, DC Useche, J Rendeiro, M Kalka, CJA Bradshaw, ... Nature 489 (7415), 290-294	875	2012
Low host specificity of herbivorous insects in a tropical forest V Novotny, Y Basset, SE Miller, GD Weiblen, B Bremer, L Cizek, P Drozd Nature 416 (6883), 841-844	708	2002
Why are there so many species of herbivorous insects in tropical rainforests? V Novotny, P Drozd, SE Miller, M Kulfan, M Janda, Y Basset, GD Weiblen science 313 (5790), 1115-1118	545	2006
Rare species in communities of tropical insect herbivores: pondering the mystery of singletons V Novotný, Y Basset Oikos 89 (3), 564-572	510	2000
Arthropod diversity in a tropical forest Y Basset, L Cizek, P Cuénoud, RK Didham, F Guilhaumon, O Missa, ... Science 338 (6113), 1481-1484	348	2012
CTFS-Forest GEO: a worldwide network monitoring forests in an era of global change KJ Anderson-Teixeira, SJ Davies, AC Bennett, EB Gonzalez-Akre, ... Global change biology 21 (2), 528-549	343	2015

Cited by VIEW ALL

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Co-authors EDIT

- Yves Basset
Entomologist, Smithsonian Tropi... >
- Scott E. Miller
Department of Entomology, Nati... >
- George Weiblen
Professor, University of Minnesota >
- Pavel Drozd
University of Ostrava >

application year

Your team



You typically have to hire most of the team for the project.

However, consider what are competitive advantages of the team members and collaborators you already have.



While there is no point in frivolous submissions of poor ERC applications, most of Czech researchers err on the side of caution and do not submit when they should have!

The importance of institutional “esprit de corps”:
at our Department, every “tenure track” researcher is expected to apply for ERC

