

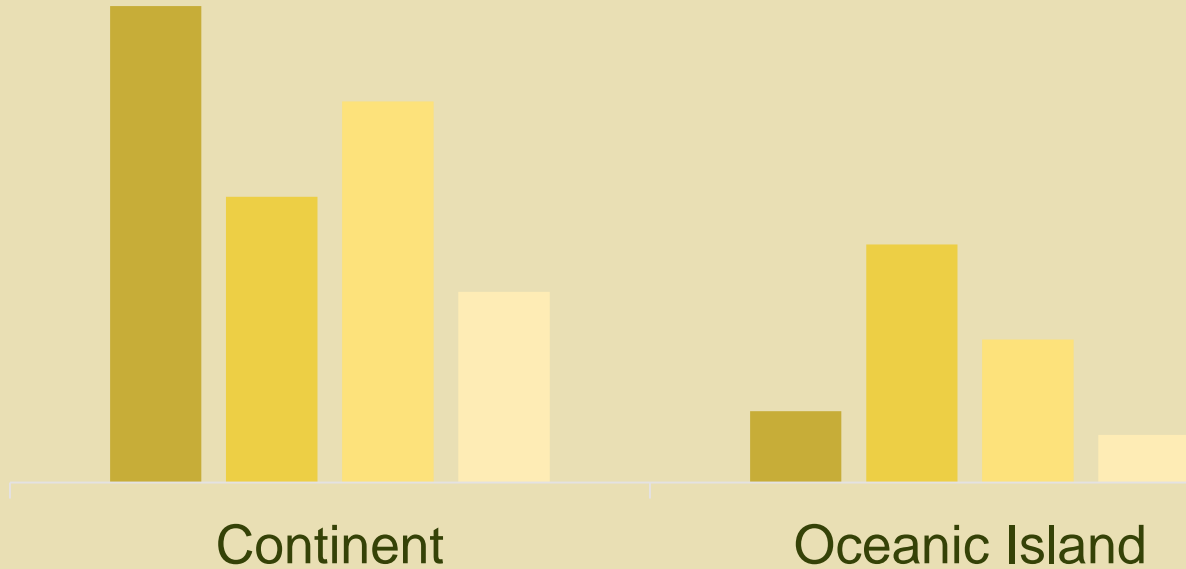


# Island disharmony of the Macaronesian bryophyte community

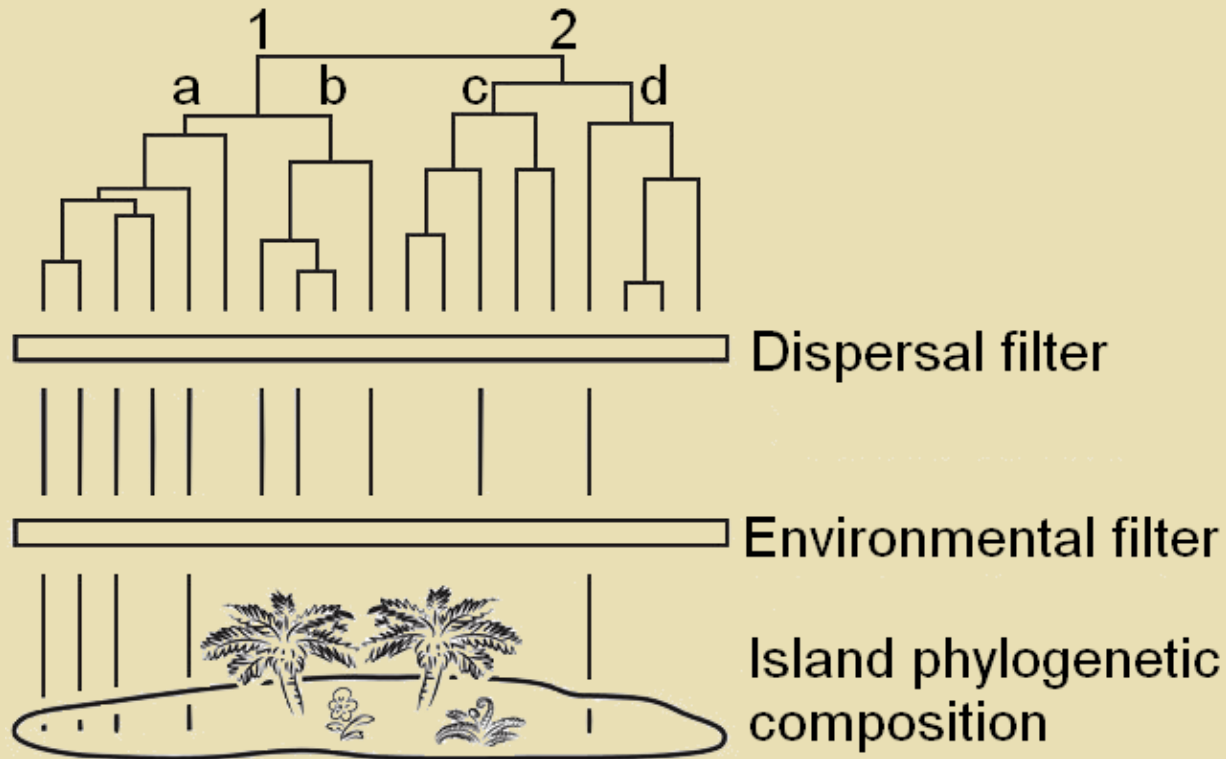
Sébastien Mirolo, Alice Ledent, Flavien Collart, Patrick Mardulyn, Rosalina Gabriel, Juana Maria Gonzalez Mancebo, Alain Vanderpoorten, Jairo Patiño



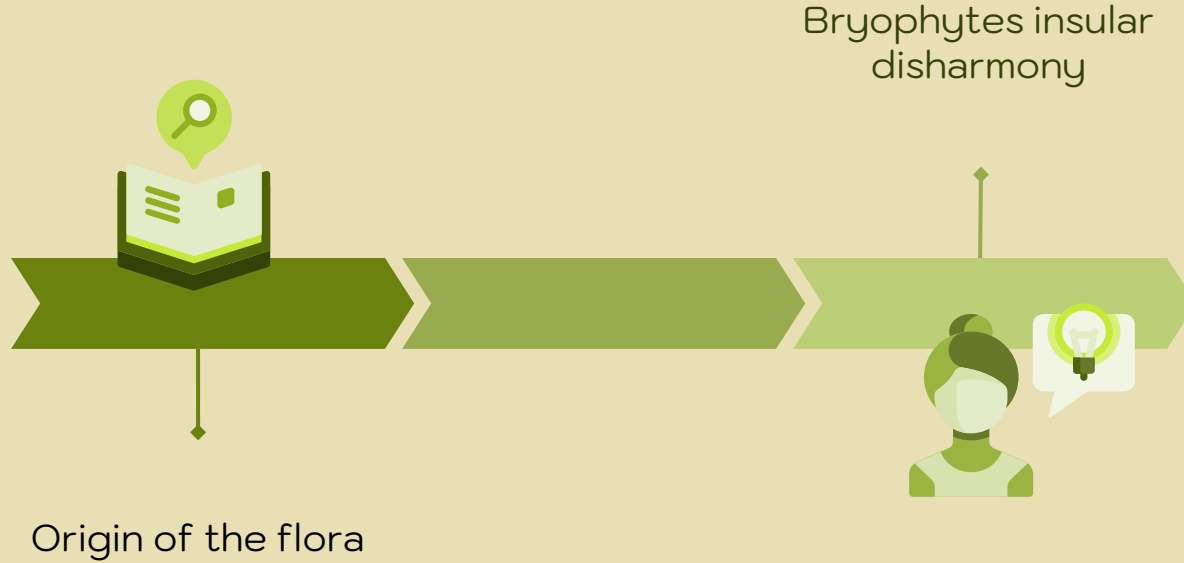
# Insular disharmony



# Insular disharmony



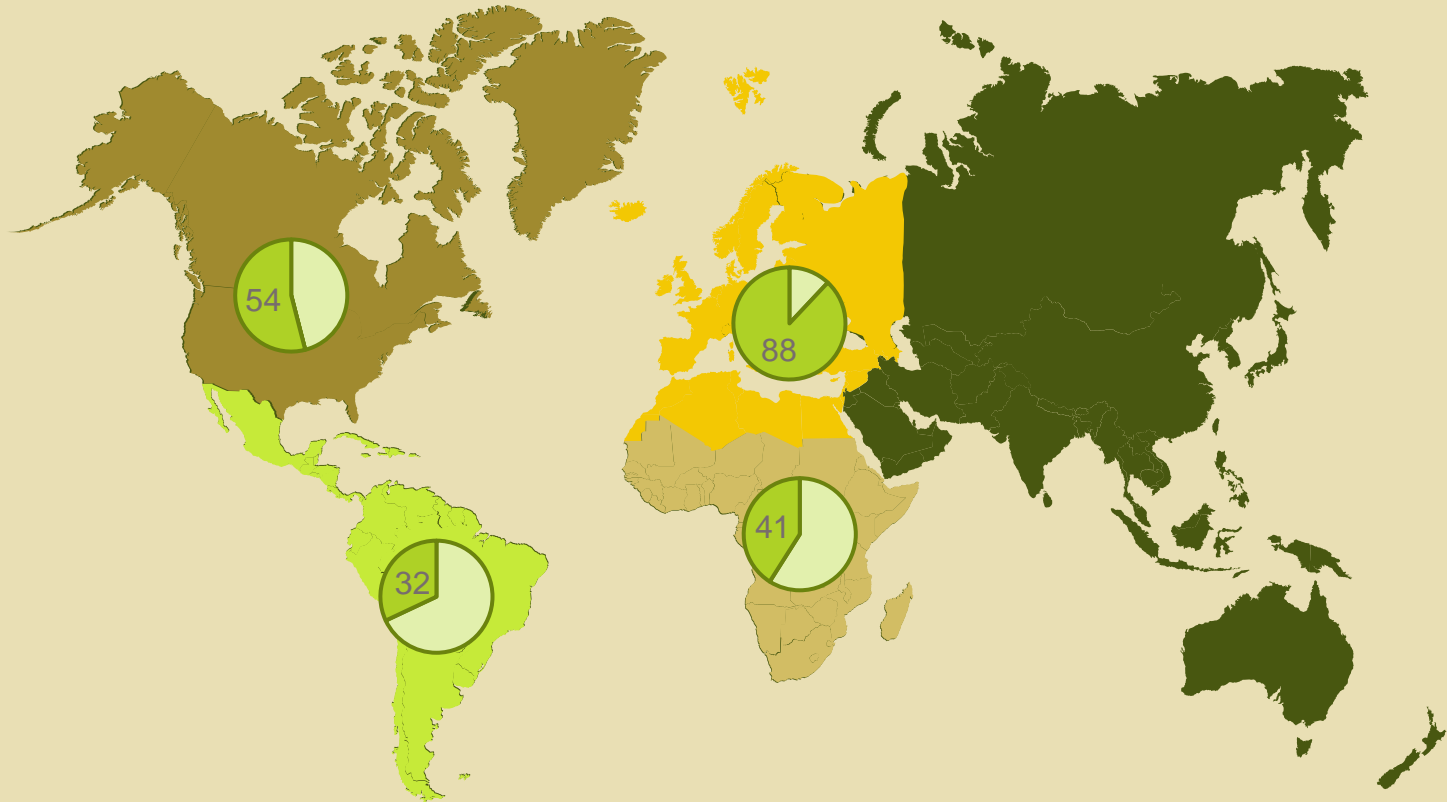
# Preliminary step







# Macaronesian bryophytes



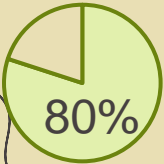
# Macaronesian endemics



Endemic species

>40%

Mediterranean  
affinities for  
endemics



Endemic species

<10%

Tropical affinities  
for endemics



# Endemics from Europe?

Macaronesia



Fst

0 → 1

*Grimmia montana*




Europe



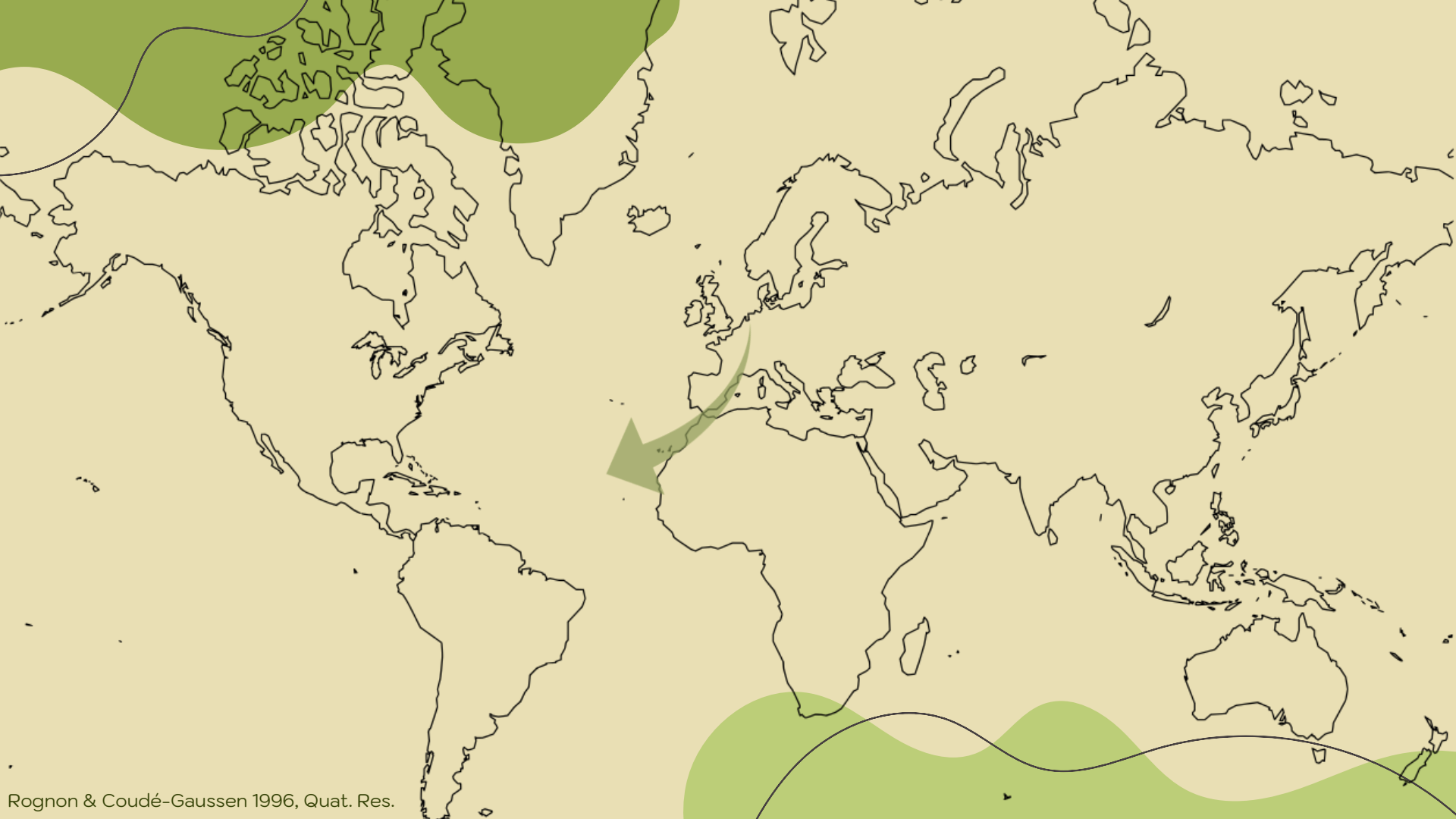


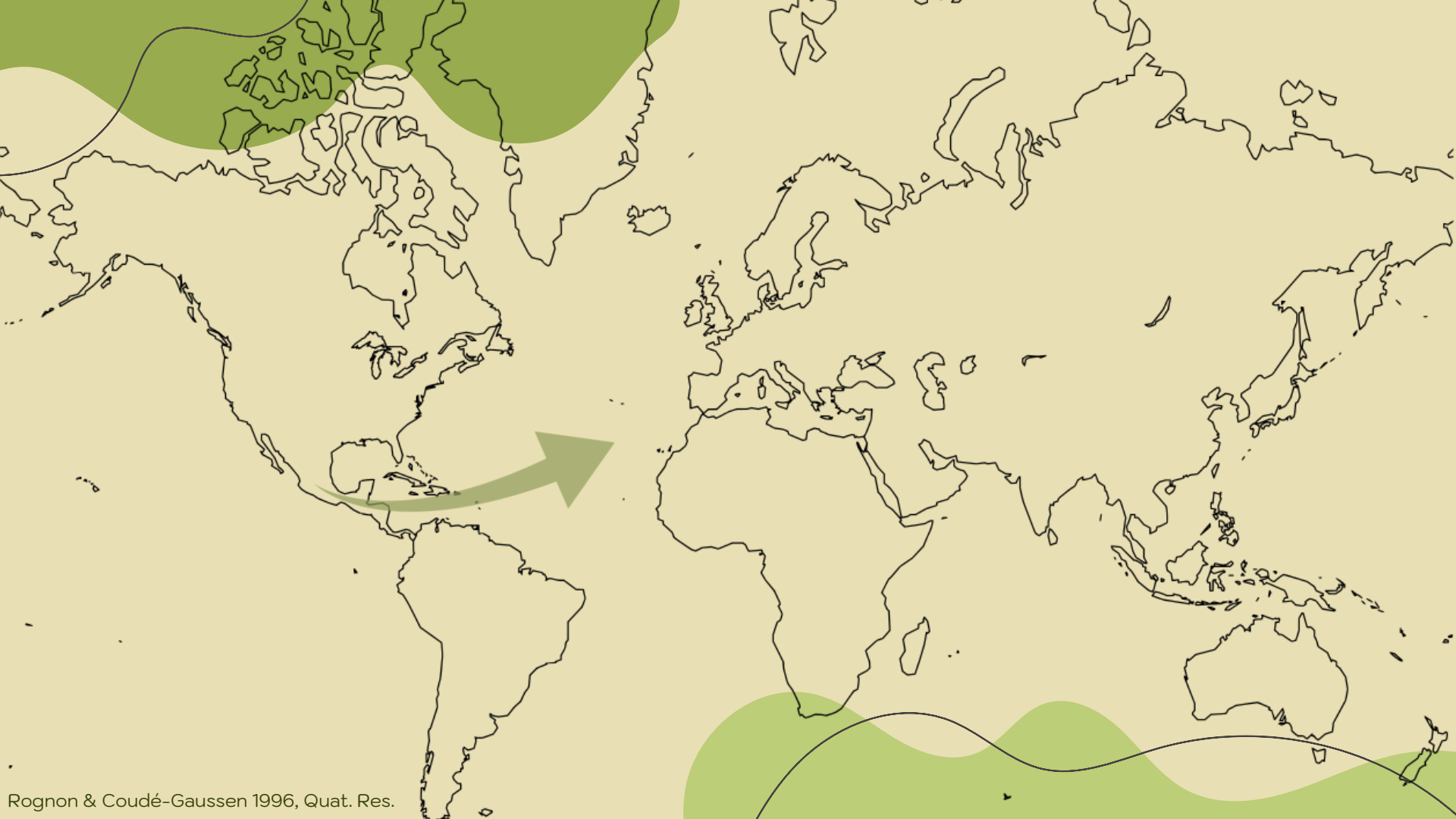
# Hypothesis

The colonization source of Macaronesia depends on the main wind direction, which varies over time.









# Method: Endemic Species

¿ Endemics origin ?

- Published available phylogenies

- Standardisation  
BEAST1

$I_1$	=	CAGATCCCAA	...	TATGAGCCAT
$I_2$	=	ACGACGAAAG	...	CATGAGACAG
.				
.				
.				
$I_n$	=	CCAAACGATC	...	ATGTGCGTGC
		<i>locus 1</i>	...	<i>locus z</i>

14 published phylogenies

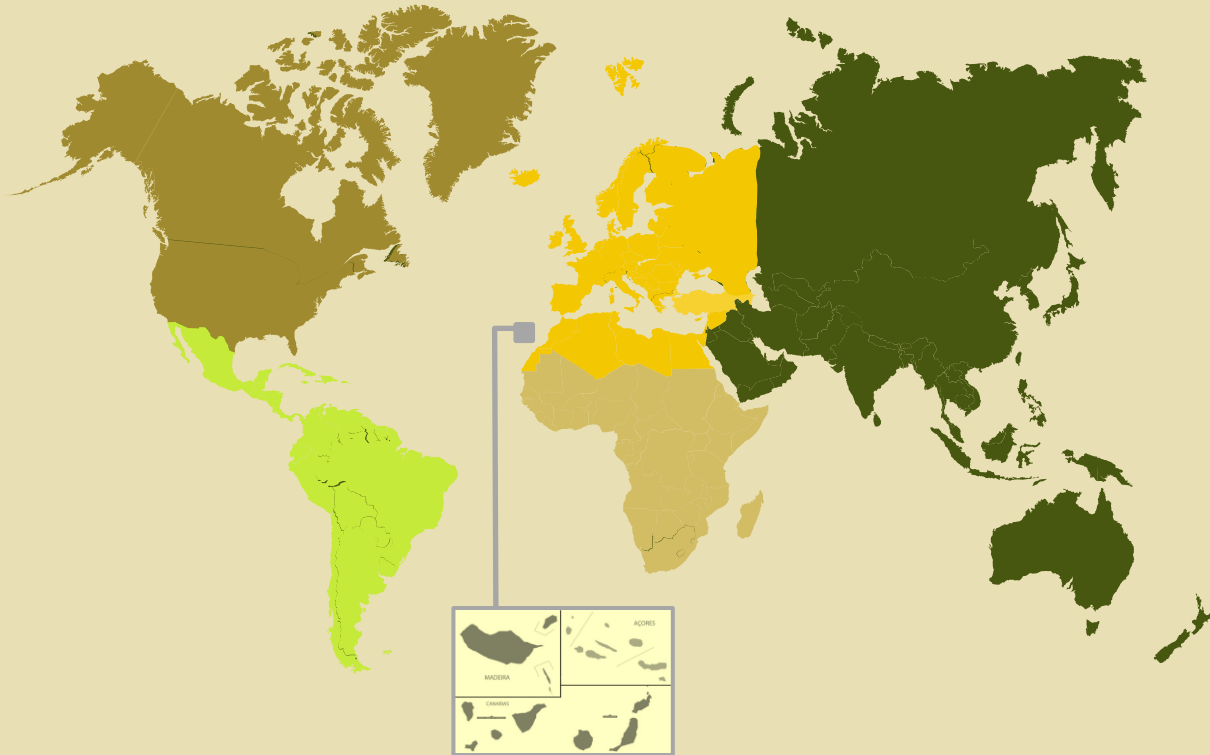
8 analyzed

# Method: Endemic Species

¿ Endemics origin ?

- Ancestral Area Reconstruction

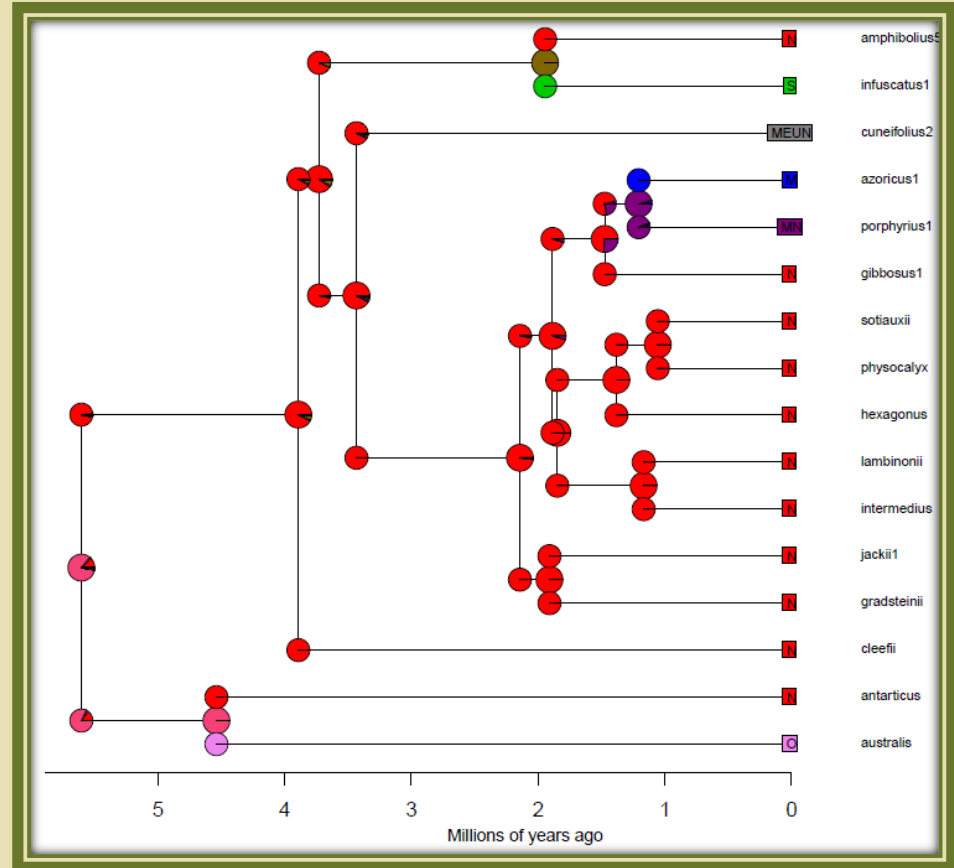
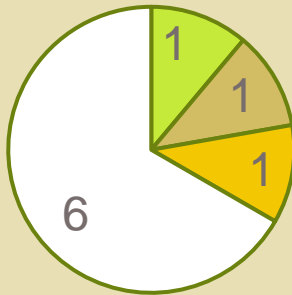
=> BioGeoBEARS



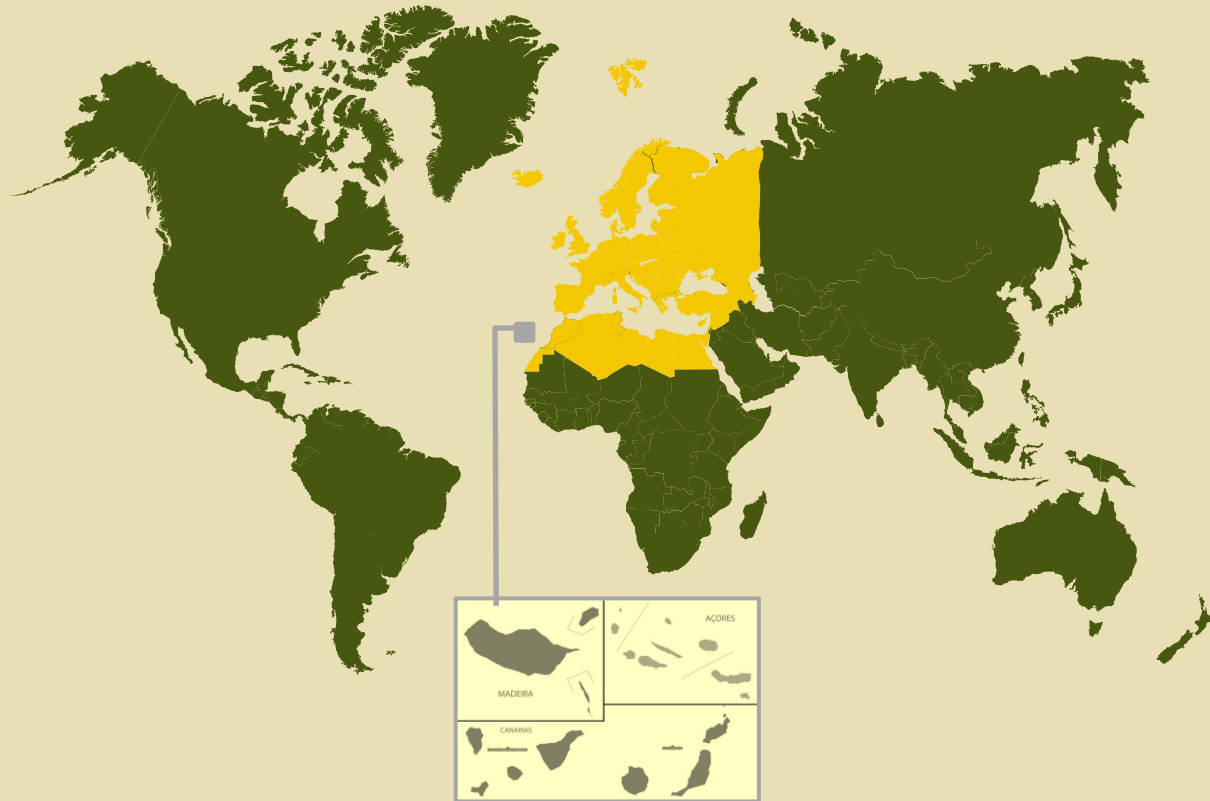
# Method: Endemic Species

¿ Endemics origin ?

- Ancestral Area Reconstruction



# Method: Non-Endemic Species



Coalescence  
analyses

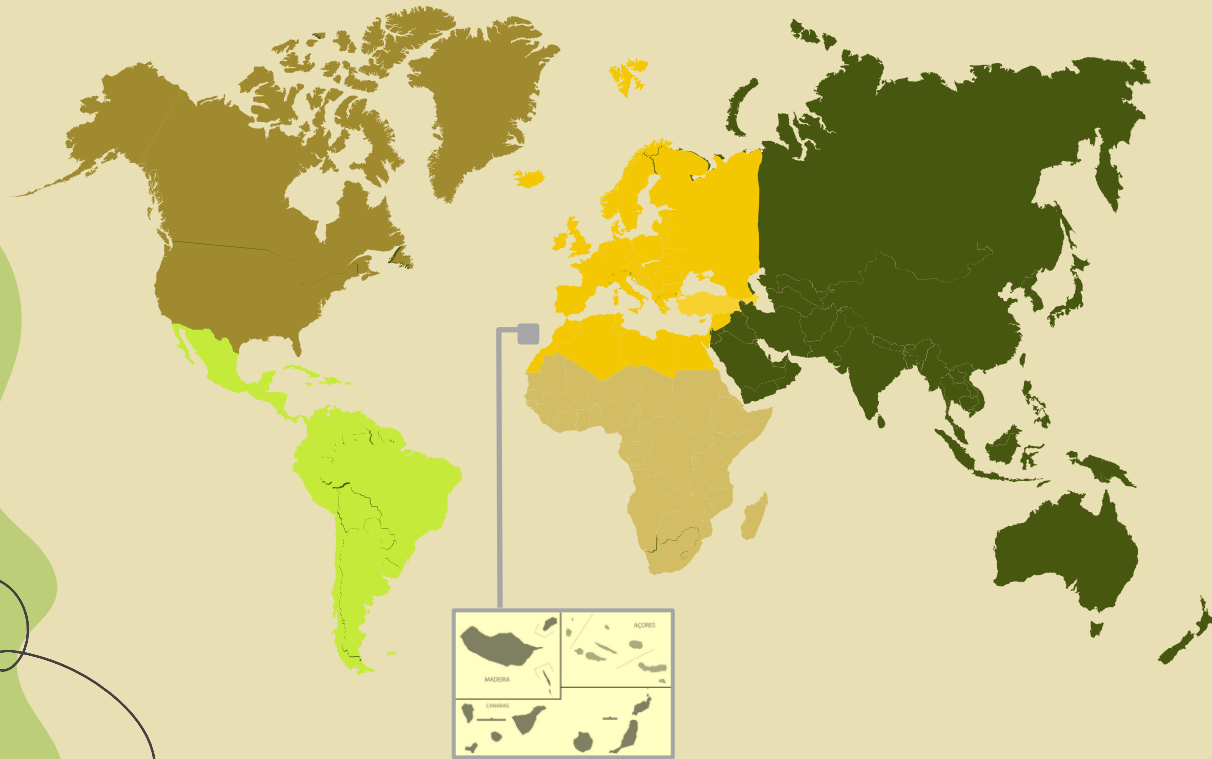
Simulations  
3 origins  
2 periods



Example: *Metzgeria furcata*



# Example: *Metzgeria furcata*



Present in Europe

BUT

Azorean  
population clusters  
within North  
American  
populations



# Thank you

Do you have any questions?

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**CREDITS:** This presentation template was created by **Slidesgo**, and includes icons by **Flaticon**, and infographics & images by **Freepik**

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