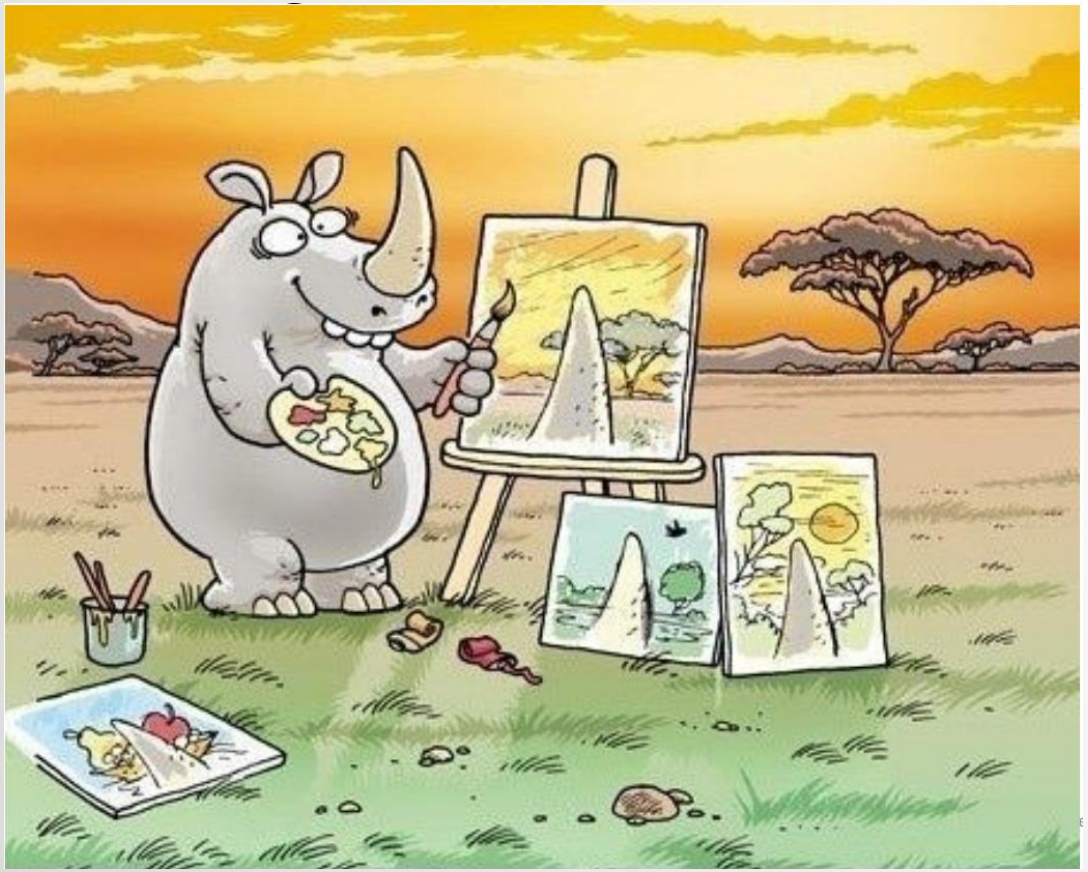
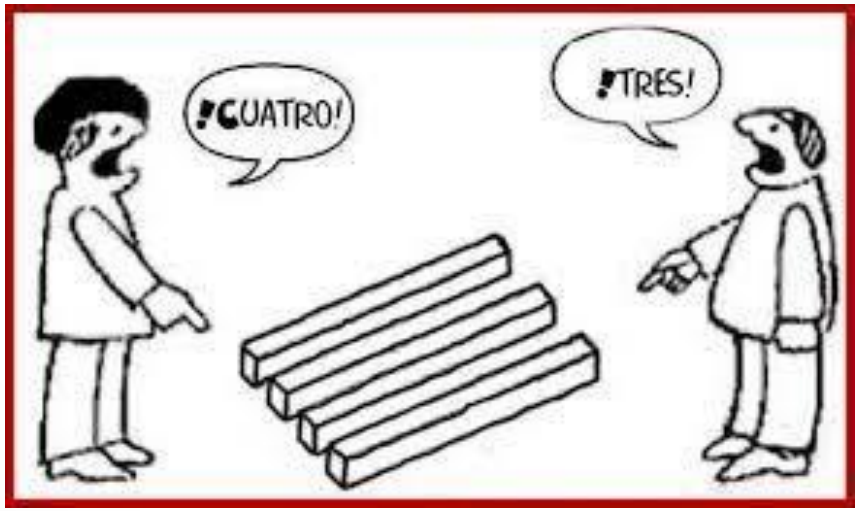
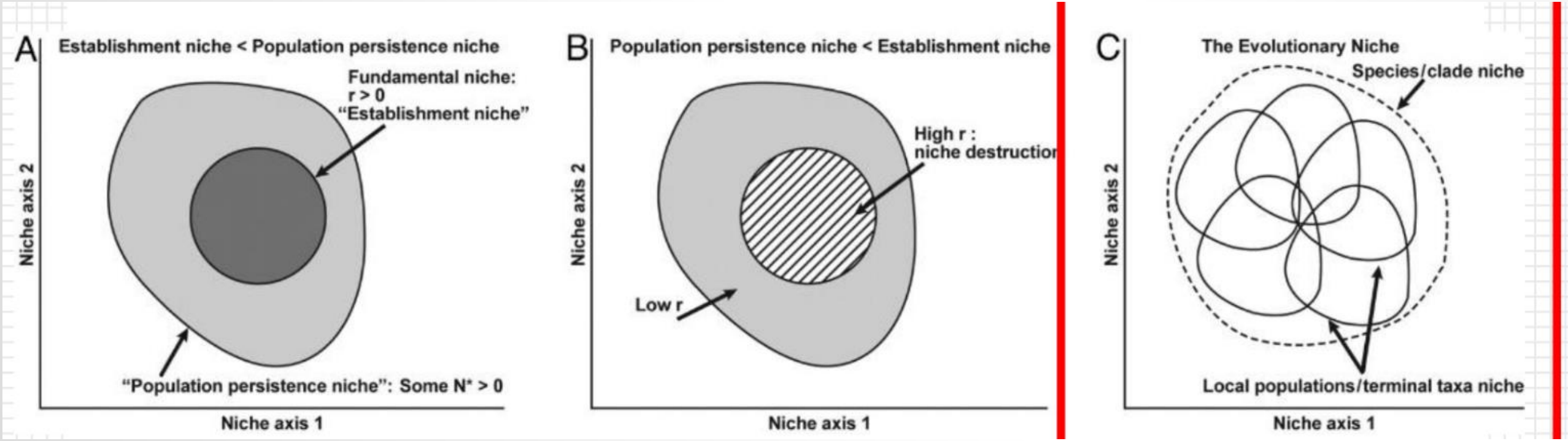
ESPACIO GEOGRÁFICO

Modelado de nicho

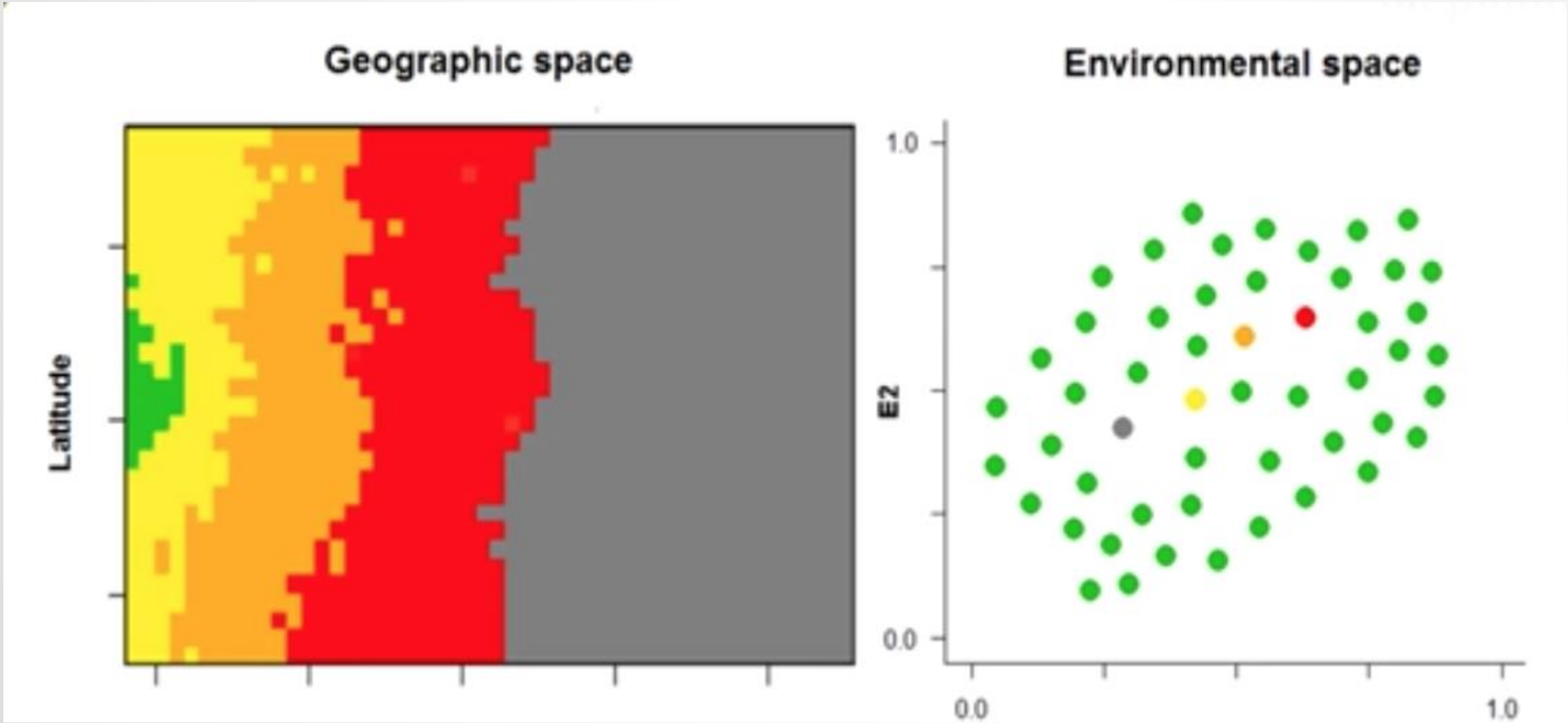
SESGO GEOGRÁFICO

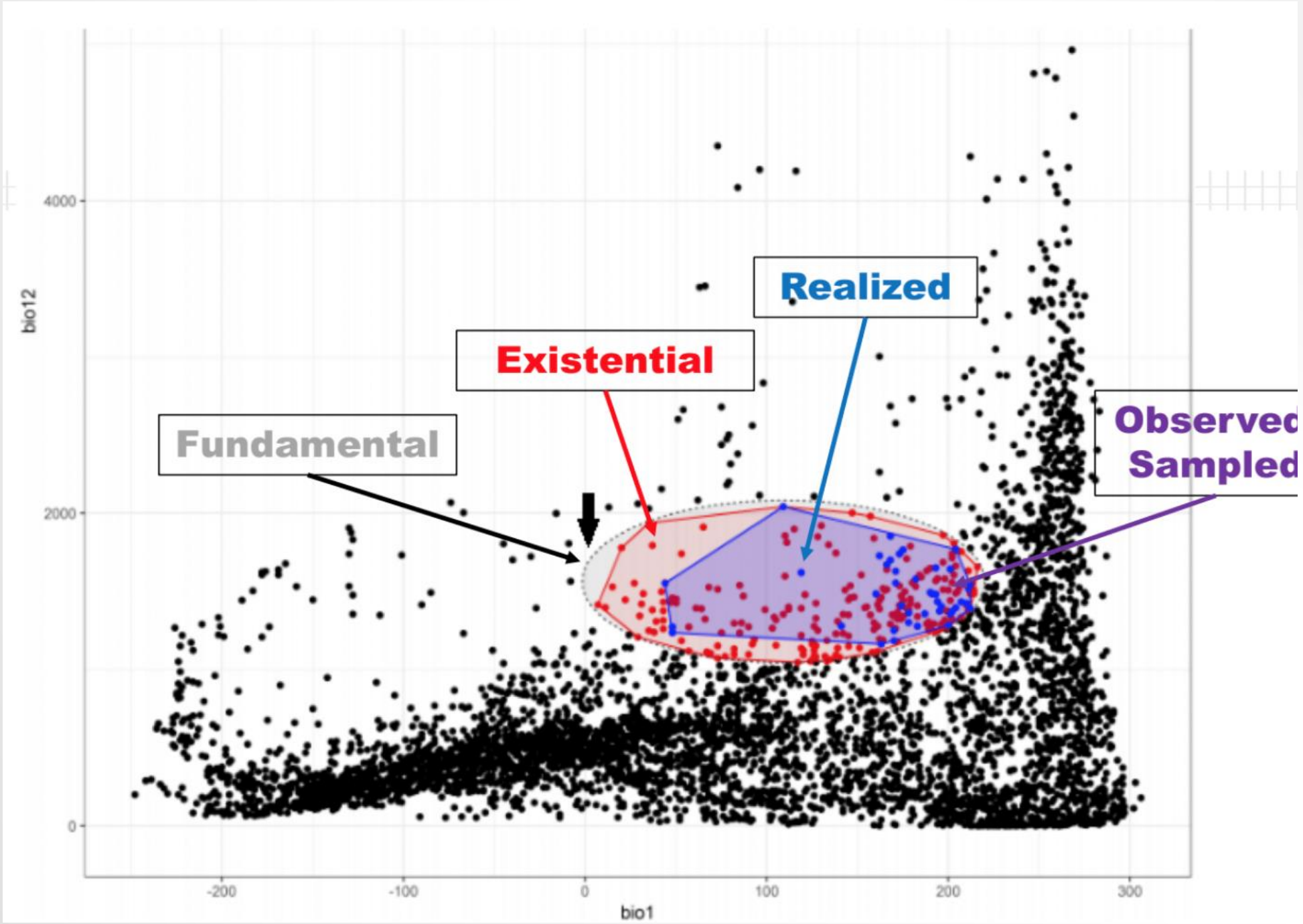


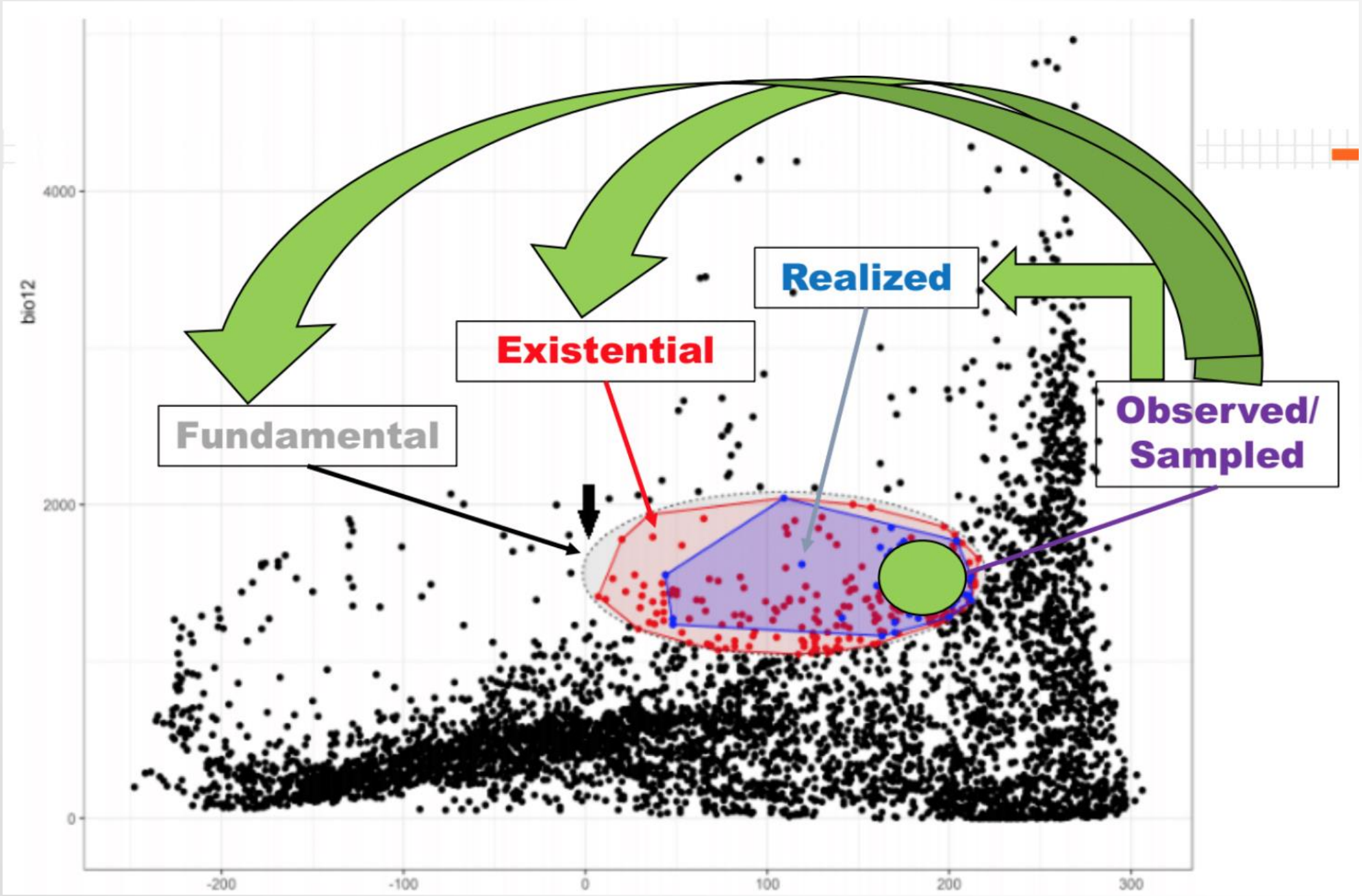


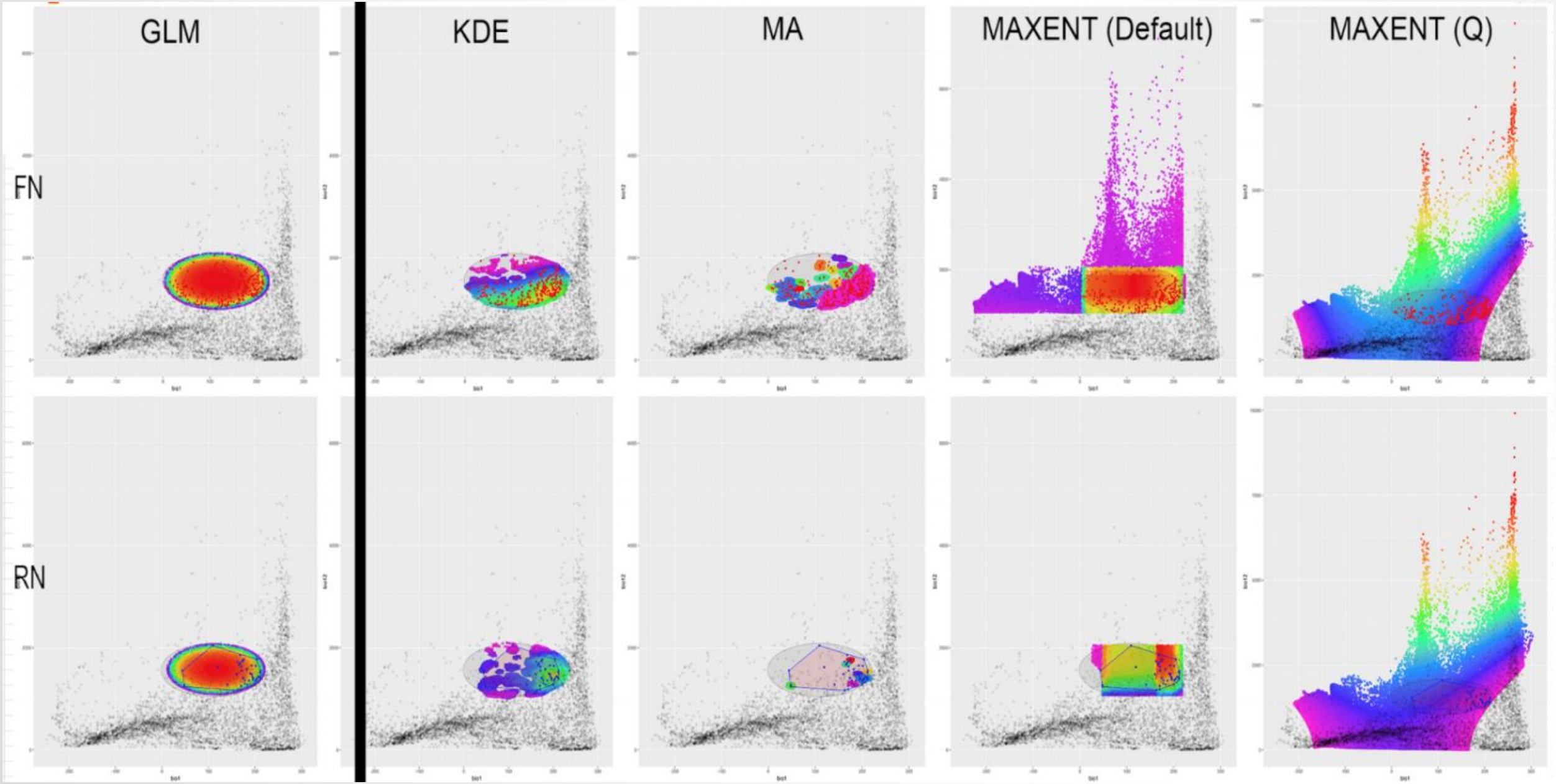


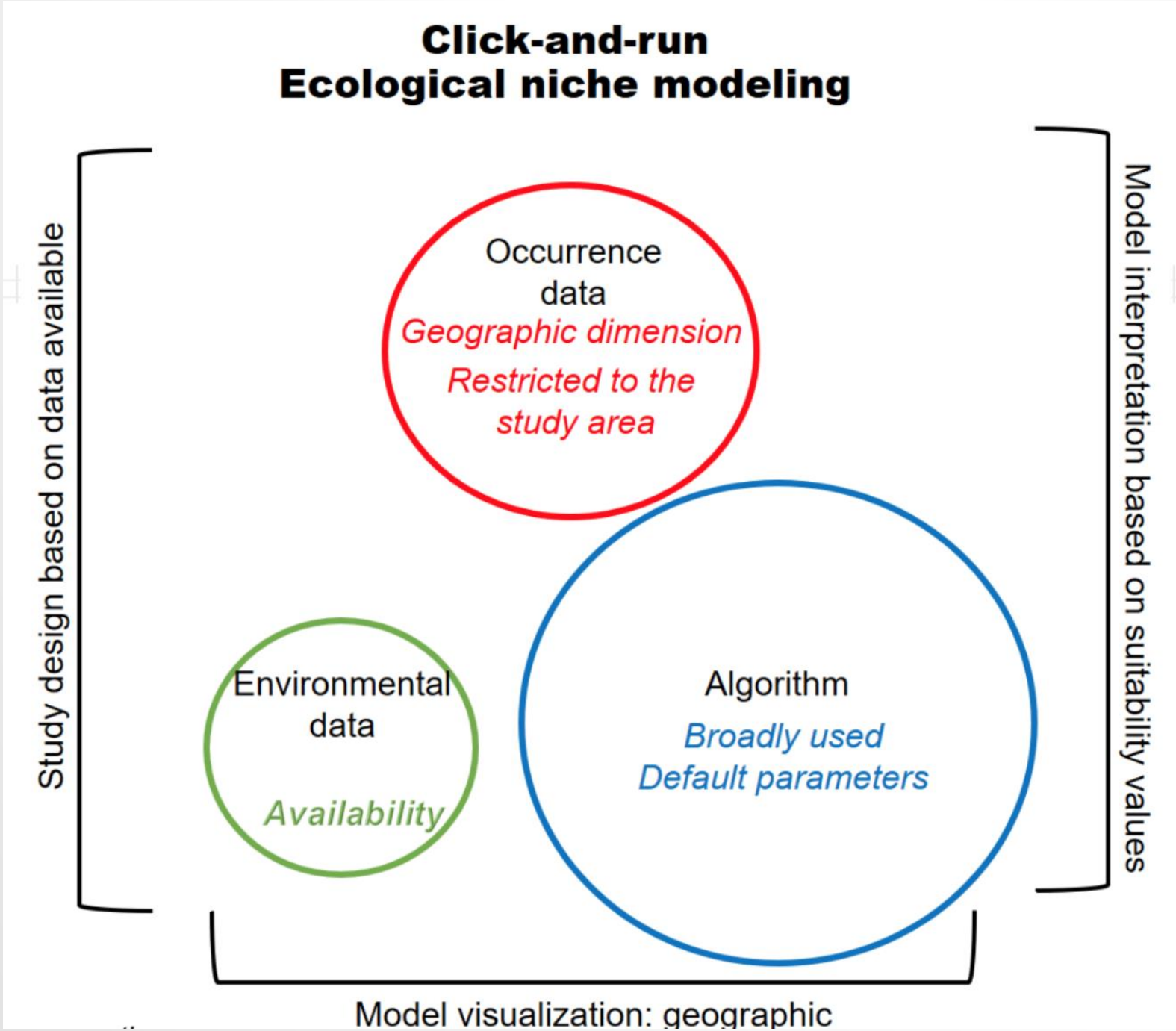
Bringing the Hutchinsonian niche into the 21st century: Ecological and evolutionary perspectives. *Proceedings of the National Academia of Sciencie USA*, *106*, 19659–19665.


Geographic space
Latitude
Environmental space
E2
1.0
0.0
0.0
1.0

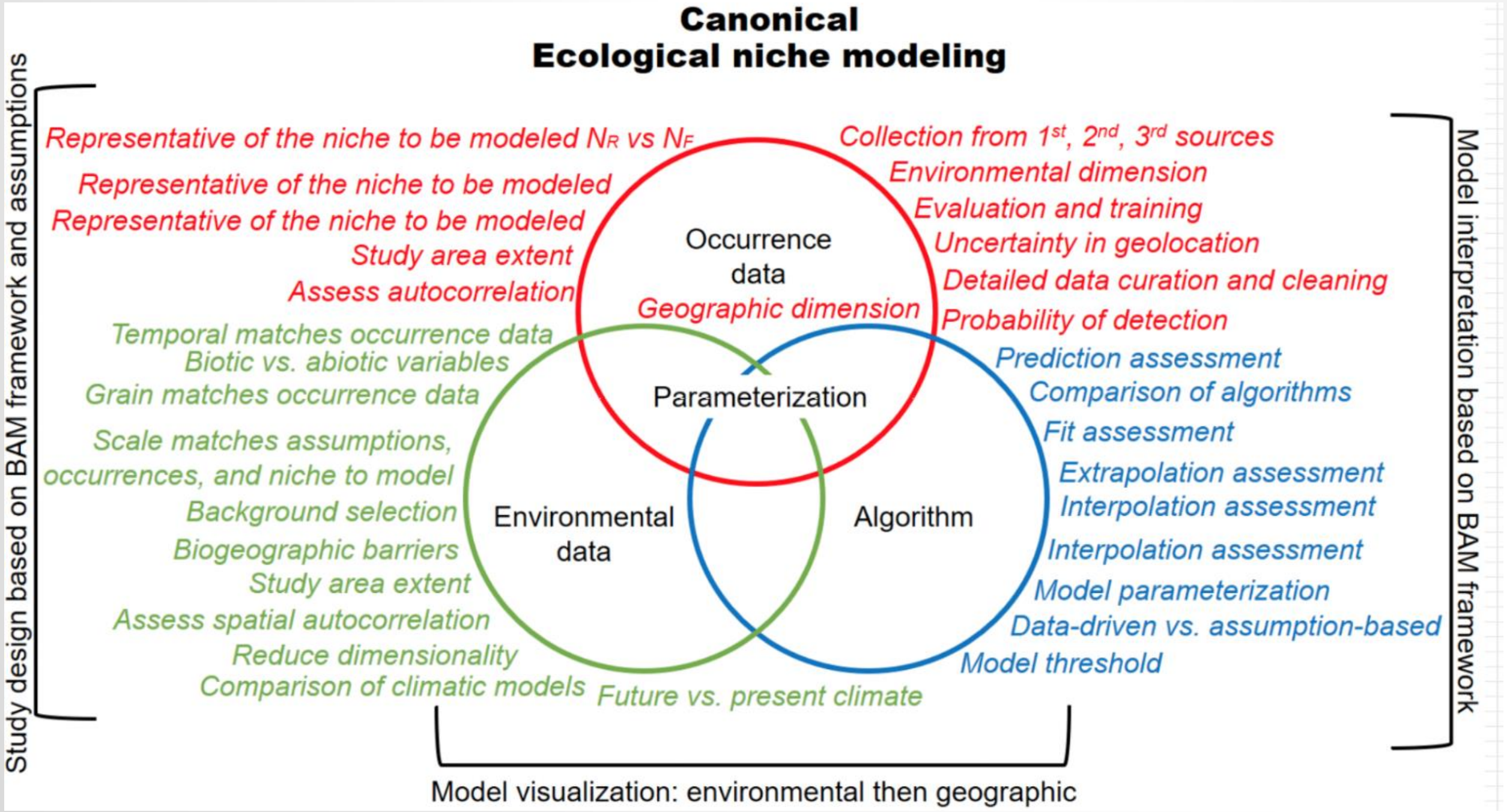

Realized
Existential
Fundamental
Observed
Sampled
bio12
bio1
4000
2000
0
-200
-100
0
100
200
300


Realized
Existential
Fundamental
Observed/
Sampled
bio12
4000
2000
0
-200
-100
0
100
200
300


GLM
KDE
MA
MAXENT (Default)
MAXENT (Q)
FN
RN


Click-and-run
Ecological niche modeling
Study design based on data available
Occurrence
data
Geographic dimension
Restricted to the
study area
Environmental
data
Availability
Algorithm
Broadly used
Default parameters
Model interpretation based on suitability values
Model visualization: geographic

Canonical
Ecological niche modeling



Zebra mussel *Dreissena polymorpha* (*Pallas, 1771*)

EVOLUTIONARY, BIOGEOGRAPHIC, AND POPULATION GENETIC RELATIONSHIPS OF DREISSENID MUSSELS 405

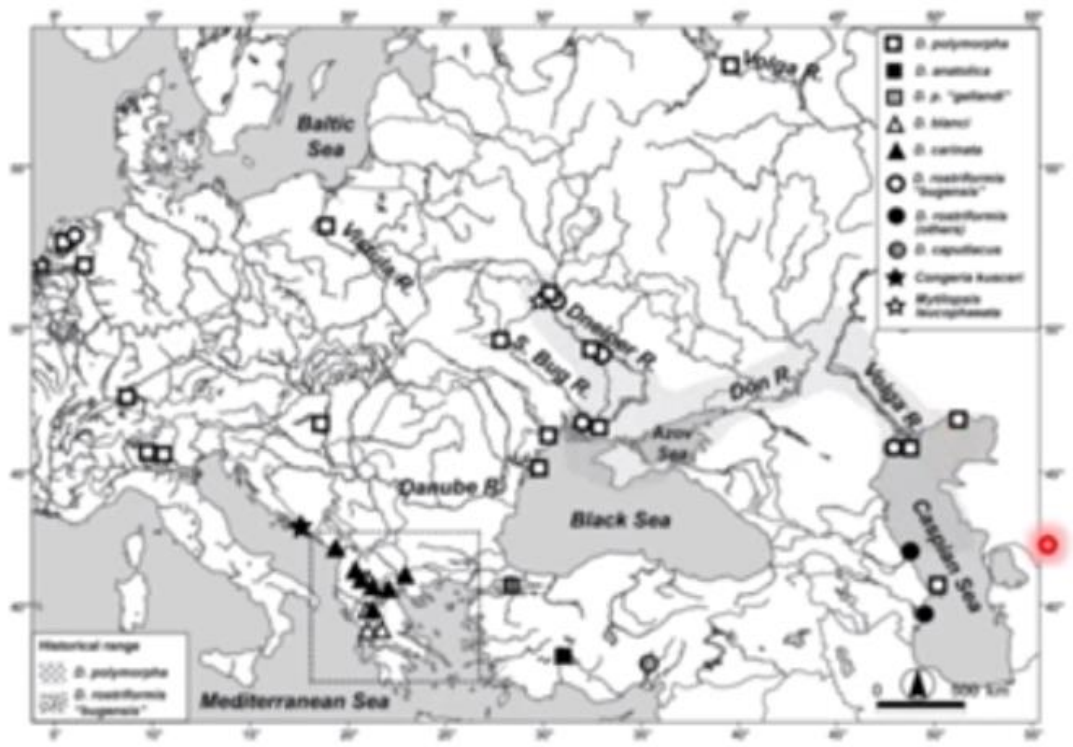
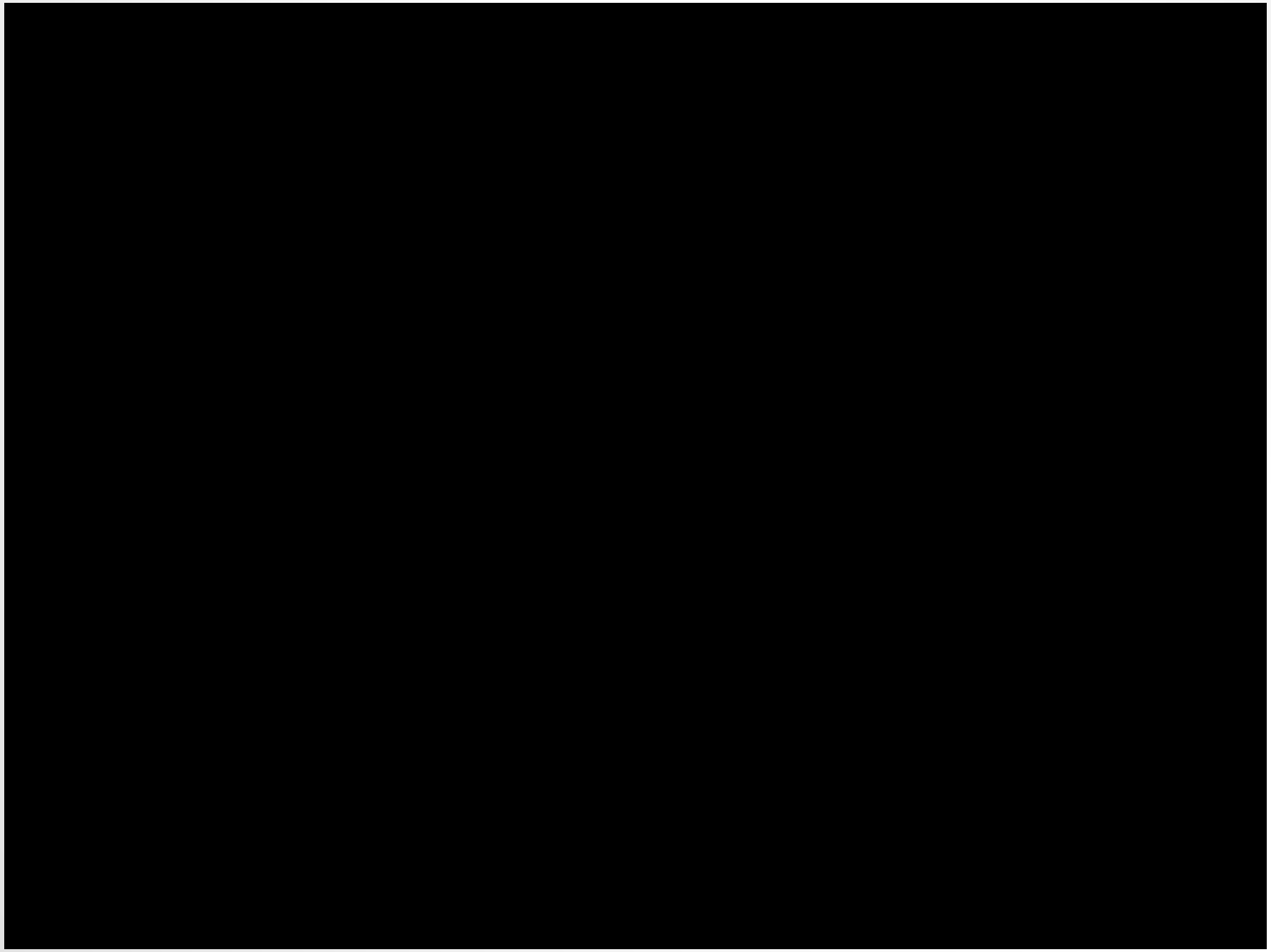


Figure 26.1 Locations of sites in Eurasia where dreissenid taxa were collected for DNA sequencing and phylogenetic analyses (see Table 26.1). Shaded areas denote original historic ranges of *D. polymorpha* (zebra mussel) and *D. rostriformis "bugensis"* (quagga mussel). A close-up view of the area delineated by the dotted square (Balkan region) is given in Figure 26.2.

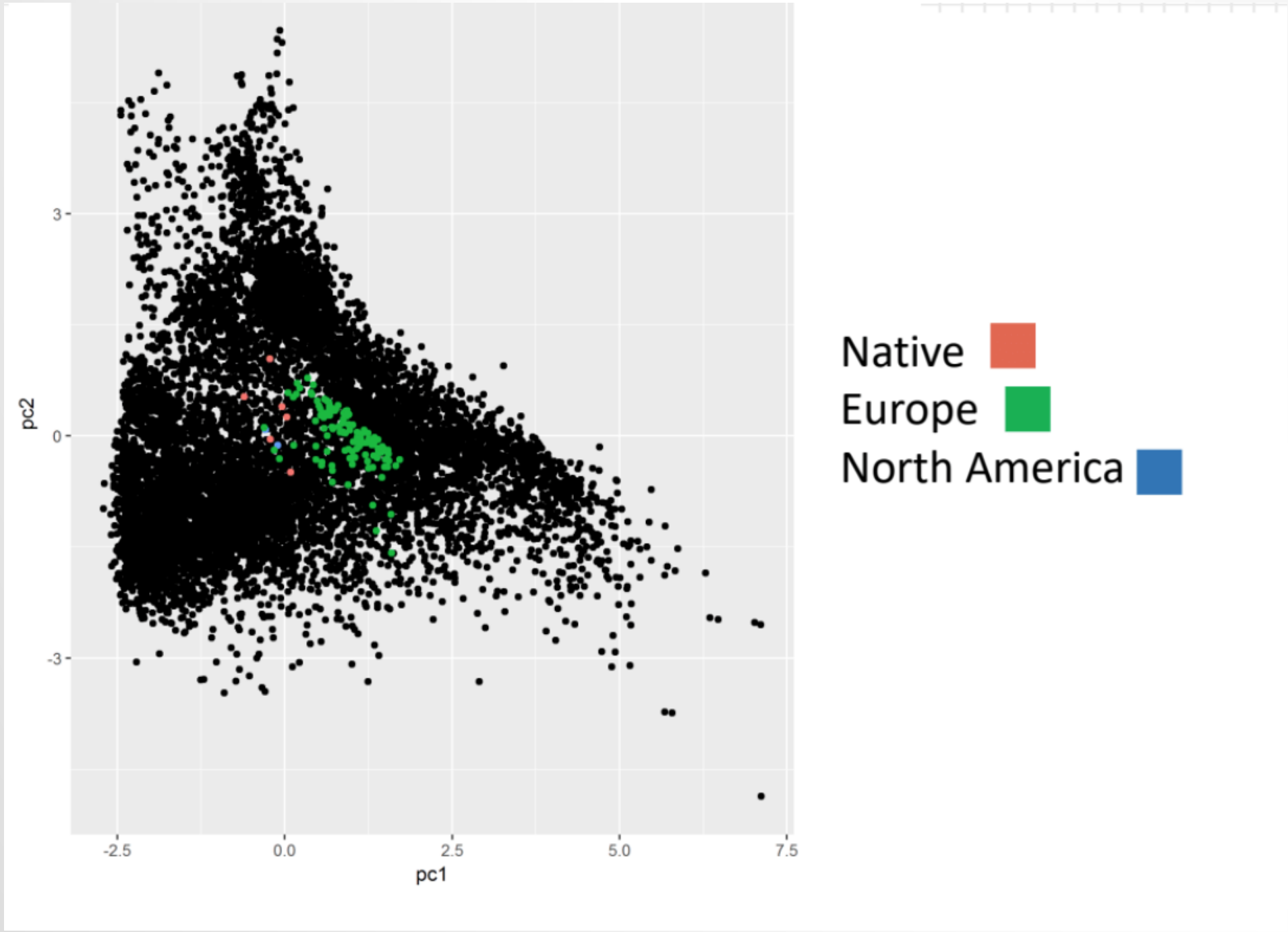
Stepien et al. CRC Press: 2013. doi:10.1201/b15437-33

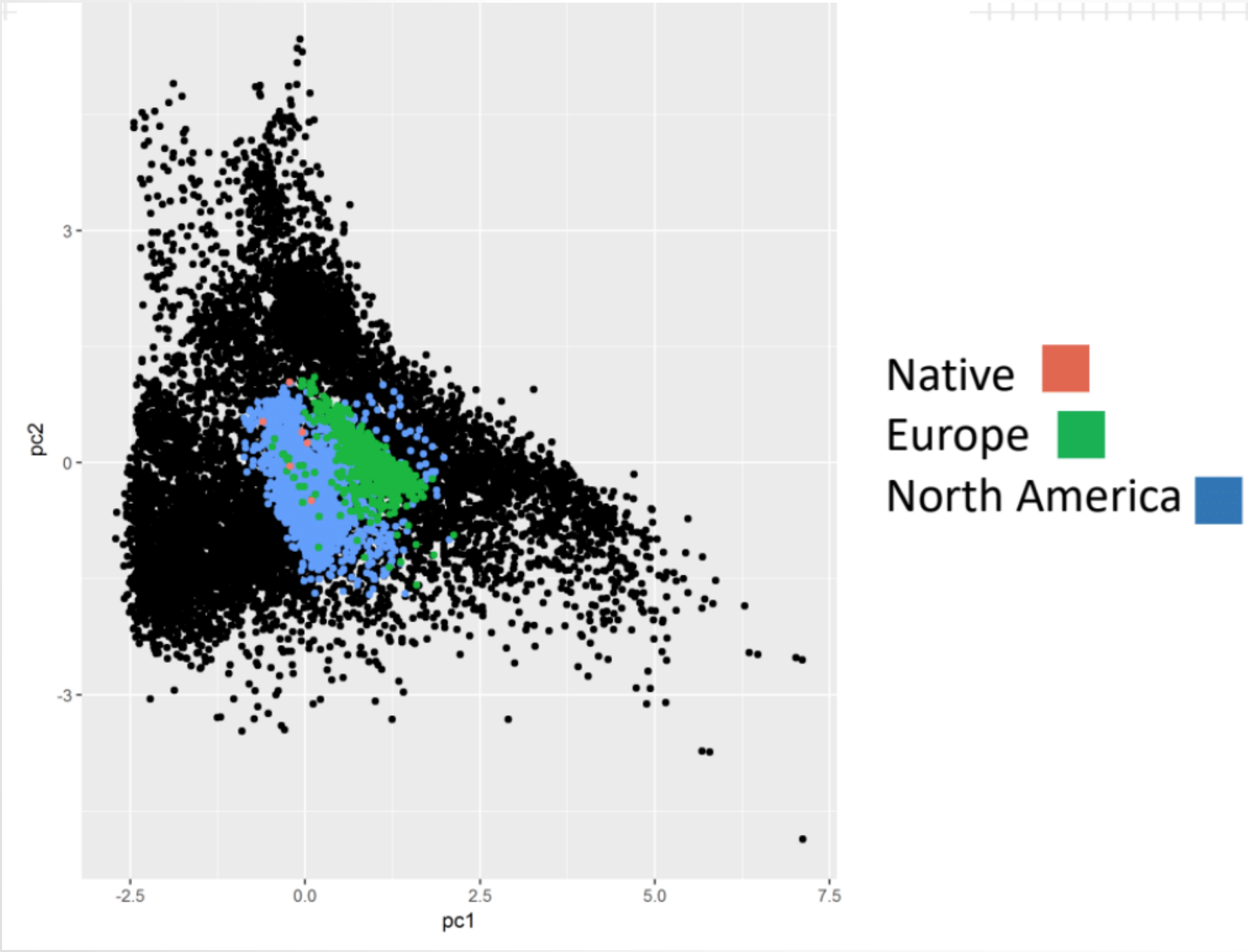

CANADA
Hudson Bay
Labrador Basin
Labrador Sea
NORTH ATLANTIC OCEAN
North Sea
NORWAY
ESTO
LATVIA
LITH.
Moscow
U.K.
DEN.
London
BELA.
POLAND
UKRAINE
Paris
FRANCE
ROM.
SERB.
BULG.
ITALY
SPAIN
PORTUGAL
Istanbul
TURKEY
GREECE
Mediterranean Sea
CYP
SYR
LEB
ISR
Cairo
IRAQ
JORD.
MOROCCO
ALGERIA
LIBYA
SAUDI
New York
Los Angeles
North American Basin

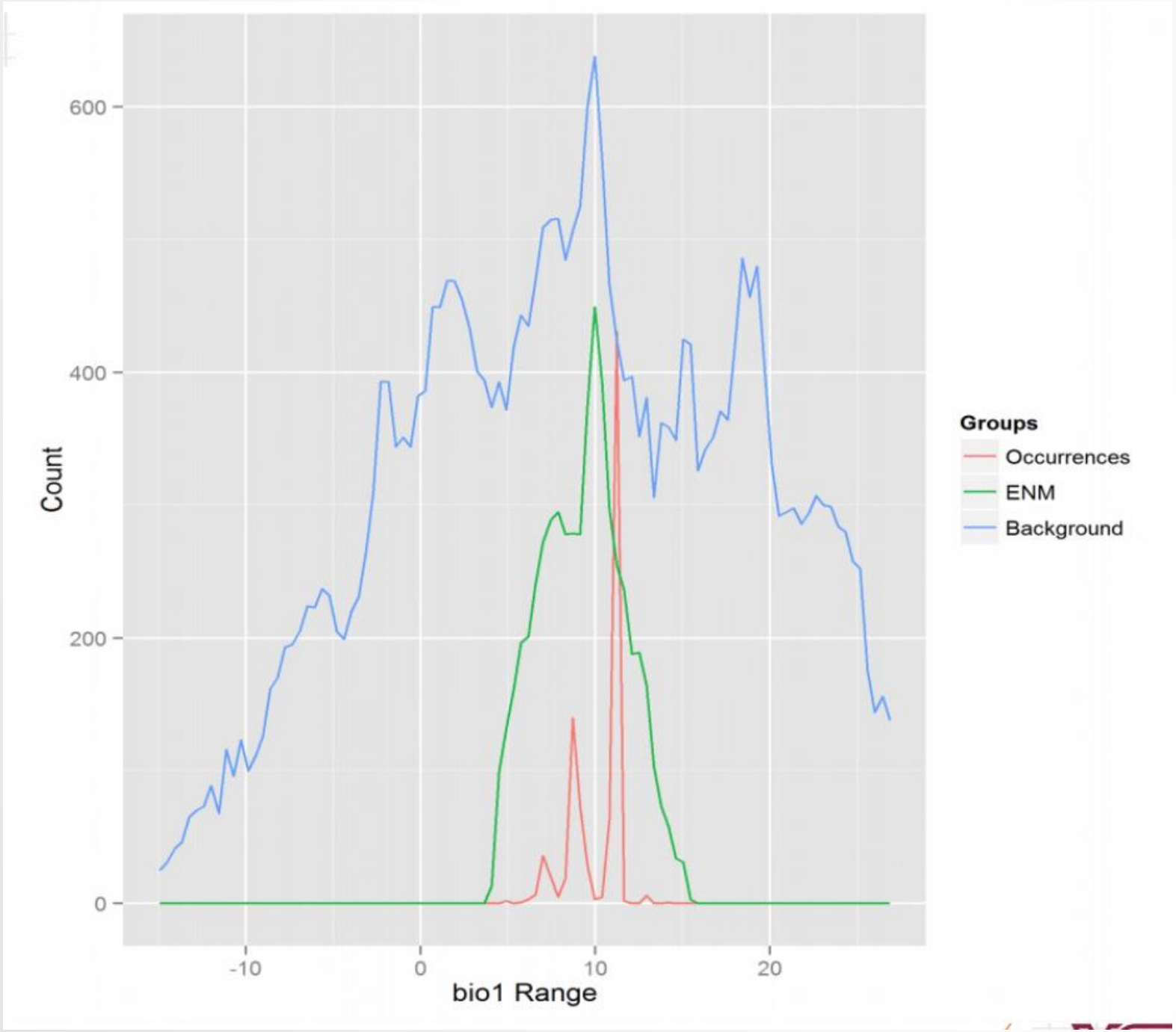


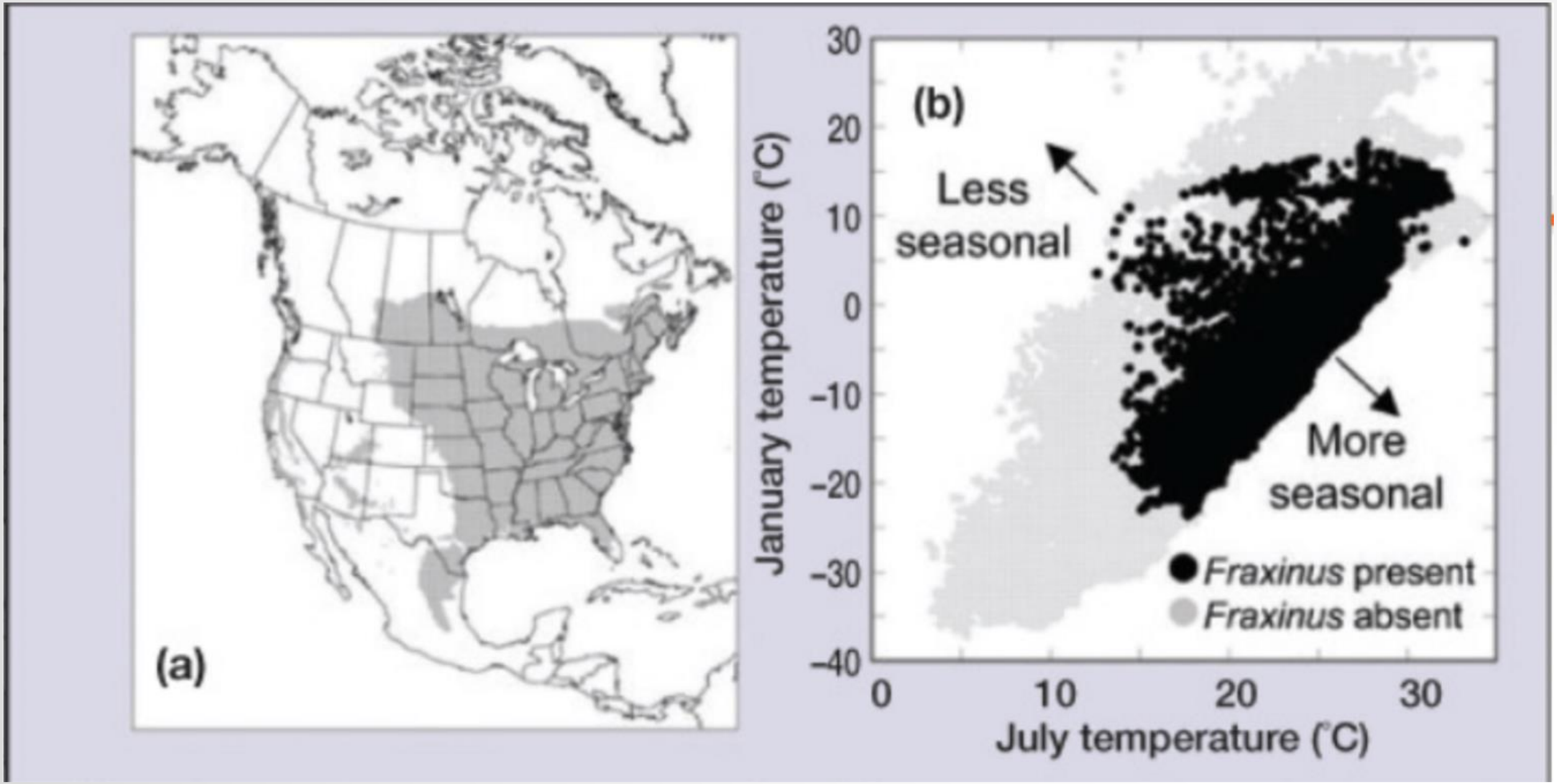
Variables

Variable	Original resolution	Period	Unit	Source
Standard deviation of EVI	Monthly, 1 km	2001-2012	Index (-1 to 1)	(28)
Mean potential incoming solar radiation	8-day, 1 km	2012	x*365/8 kWh/m^2	(28)
Mean value the daytime LST	8-day, 1 km	2011-2012	degree Celsius	(28)
Standard deviation of the daytime LST	8-day, 1 km	2011-2012	degree Celsius	(28)
Topographic Wetness	1 km	2009	Index (x/10+10)	(28)
Long-term precipitation Nov/Dec/Jan	Monthly, 30 arc-second	1950-2000	millimeters	(29)
Long-term precipitation May/Jun/Jul	Monthly, 30 arc-second	1950-2000	millimeters	(29)
Percent Calcisols	1 km	1980-2009	%	(28)

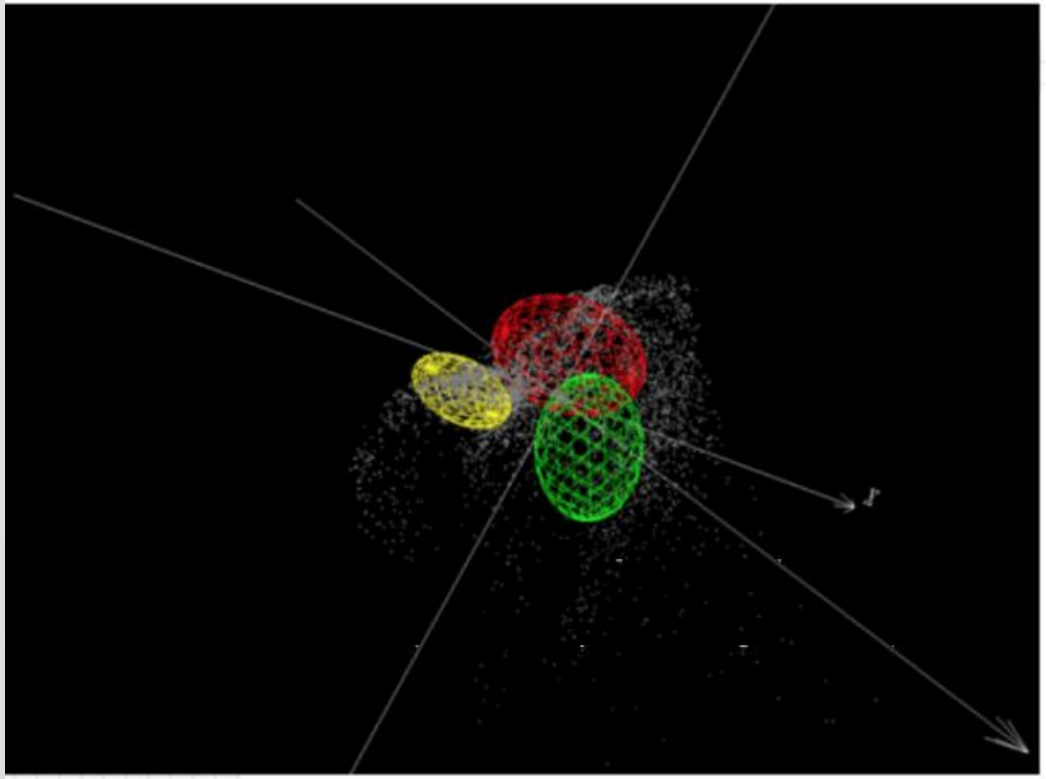

3
0
-3
pc2
-2.5
0.0
2.5
5.0
7.5
pc1
Native
Europe
North America

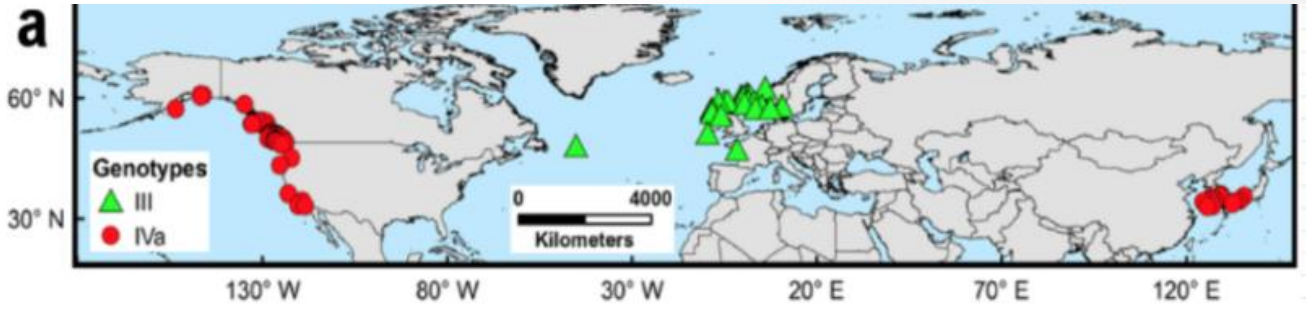

3
0
-3
pc2
-2.5
0.0
2.5
5.0
7.5
pc1
Native
Europe
North America

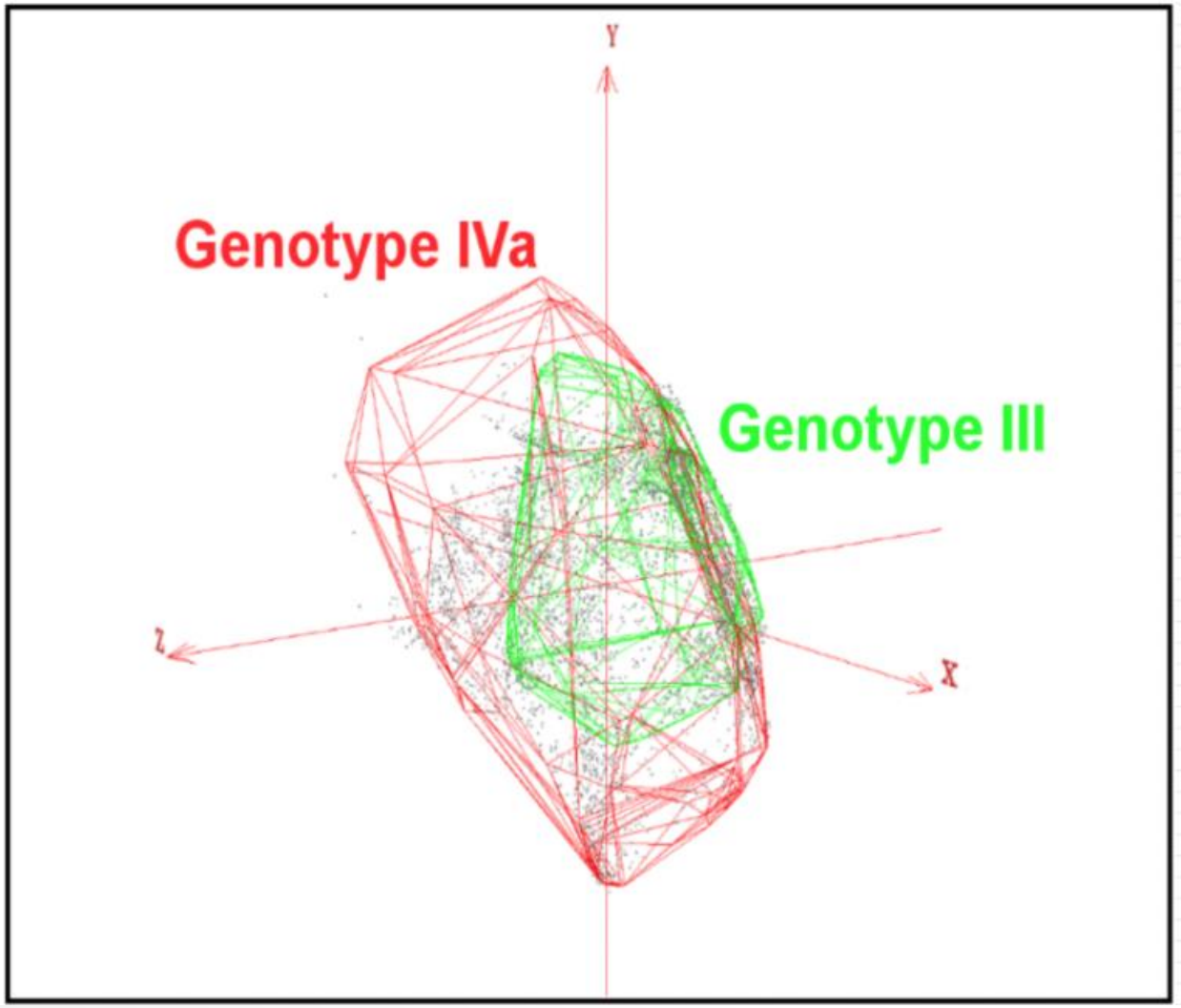

600
400
200
0
Count
-10
0
10
20
bio1 Range
Groups
Occurrences
ENM
Background


(a)
(b)
Less seasonal
More seasonal
Fraxinus present
Fraxinus absent
January temperature (°C)
July temperature (°C)
30
20
10
0
−10
−20
−30
−40
0
10
20
30

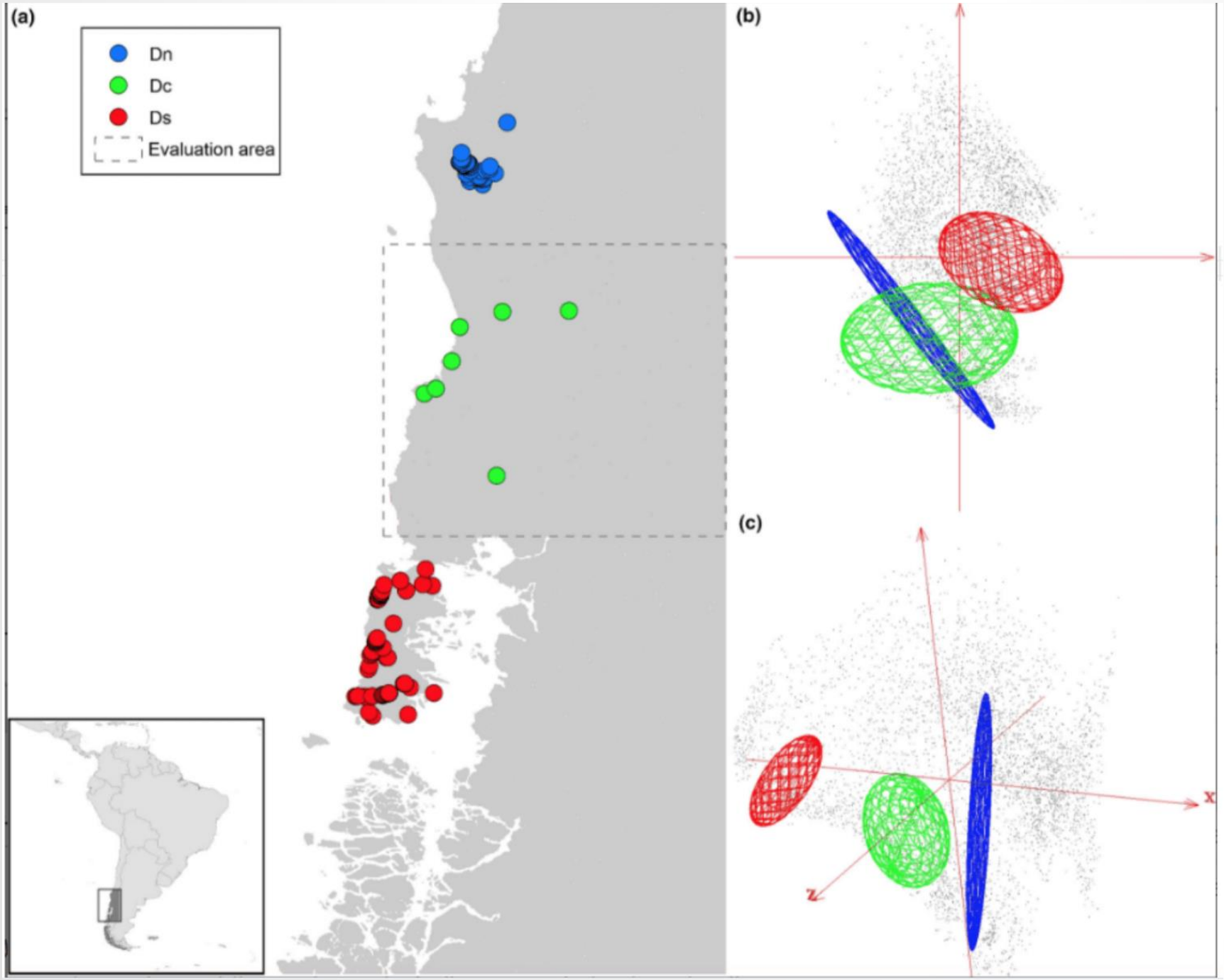
3 dimensions







NicheA


(a)
Dn
Dc
Ds
Evaluation area
(b)
(c)
x
z

Resumen

- Sesgo ambiental
- Sesgo geográfico
- Diferentes nichos
- Información del espacio geográfico diferente al del espacio ambiental
- Ya se colonizó todos los climas o hay una barrera
- Visualización en 3D además de ser visualmente llamativo nos da más información
- Teoría mayor abundancia en el centro del nicho, mayor diversidad genética en el centro del nicho