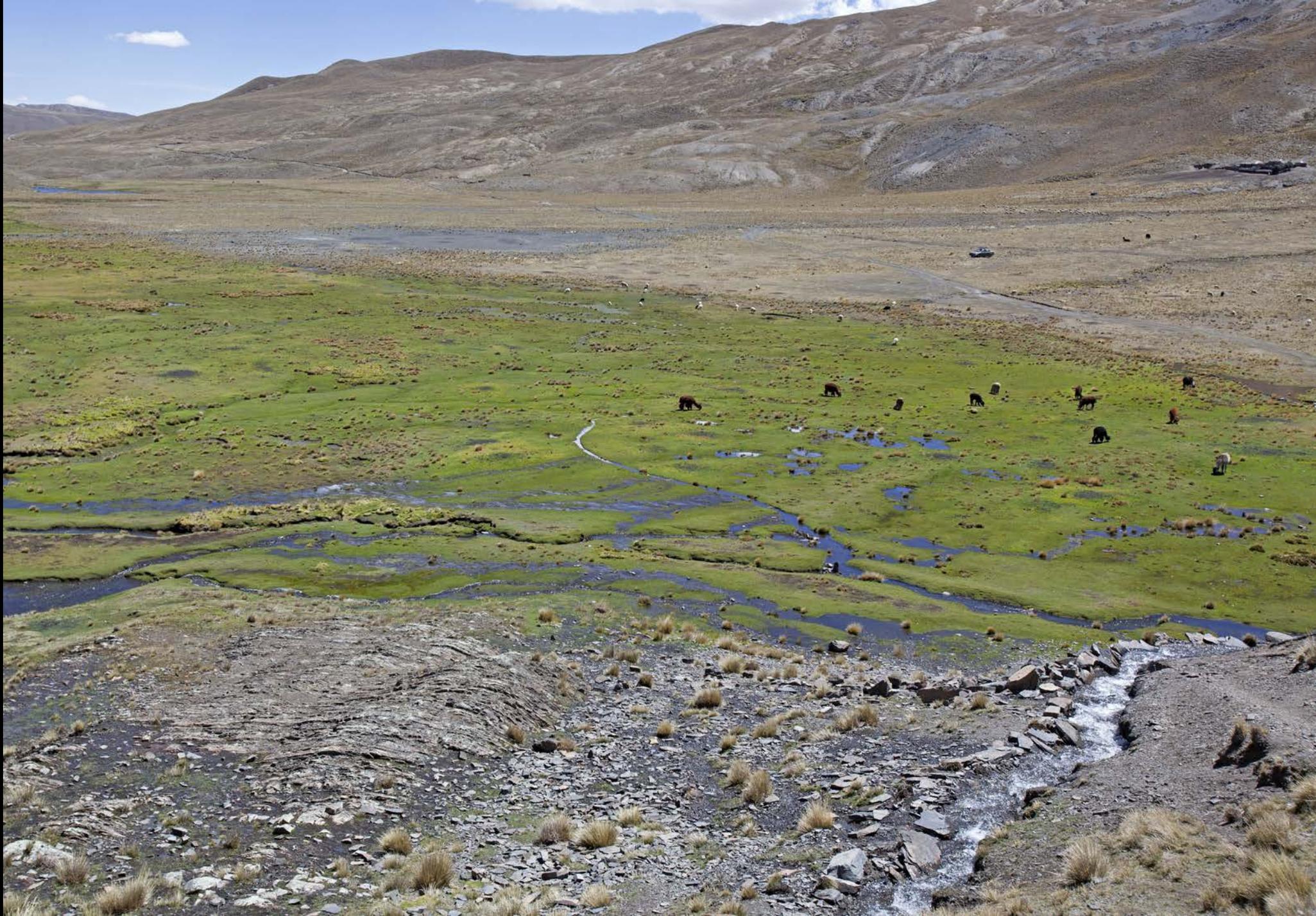




Bofedales: *Hacia una vision holística*

Olivier Dangles

IRD
Pontificia Universidad Católica del Ecuador



“La ciencia actual continúa fundamentando su legitimidad en los datos, que son verificados y vueltos a verificar en una búsqueda interminable de la verdad a través de la eliminación del error. [...]

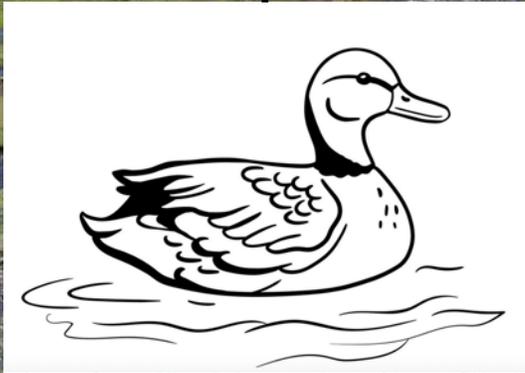
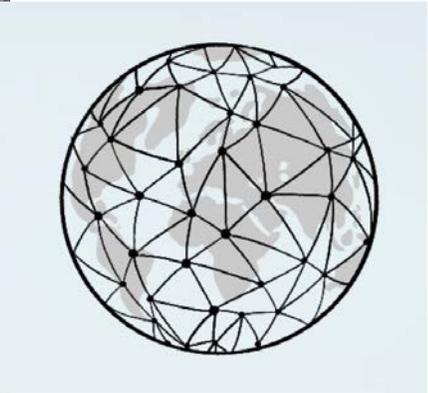
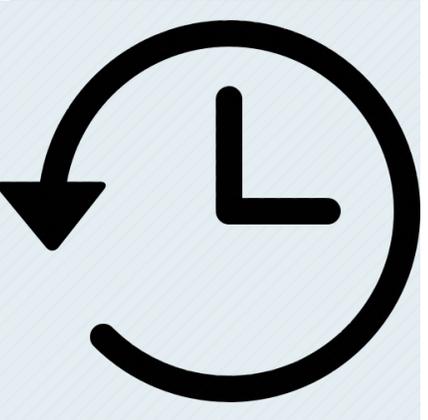
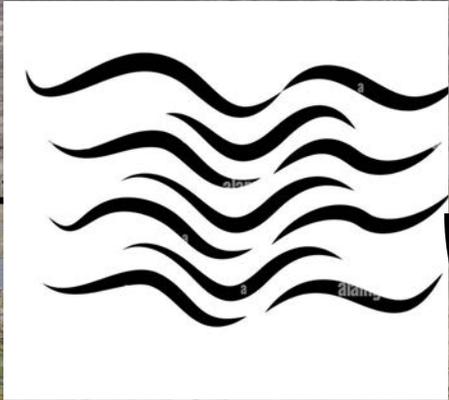
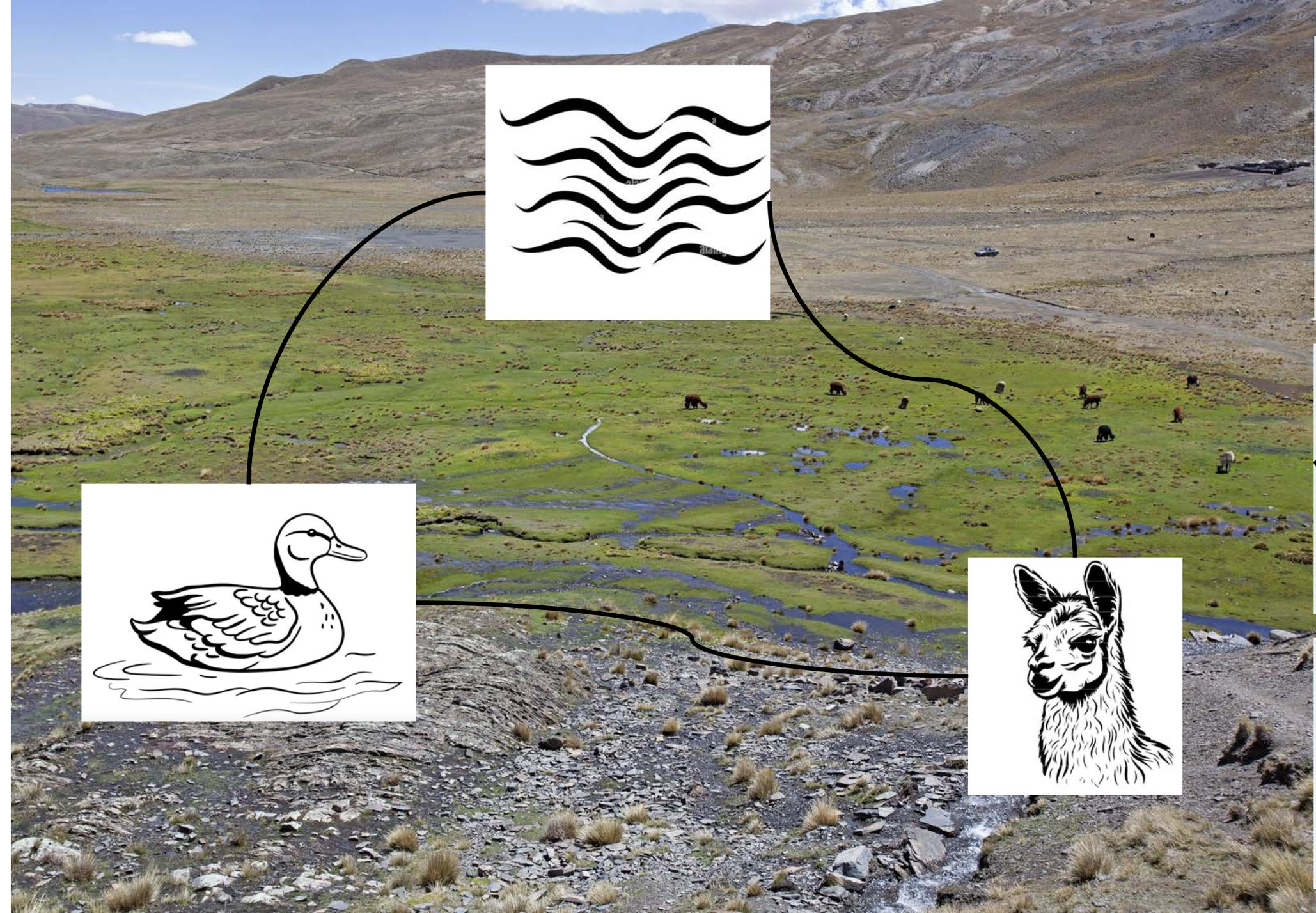
Con nuestras esperanzas y sueños sumergidos en el éter de la ilusión, la vida misma parece disminuida. Privada de su impulso creativo; ya no causa asombro ni admiración.”

Tim Ingold



El giro relacional de la ciencia

- Abre la definición de ciencia para incluir formas de conocimiento que son subjetivas: conexión con los sentidos, las representaciones mentales, la tierra, el espíritu.
- La naturaleza incluye experiencias empíricas: relaciones dinámicas entre mente, cuerpo, cultura y entorno.
- Borrar la dicotomía ser humano/naturaleza; racionalidad/emoción - La naturaleza incluye experiencias empíricas - relaciones dinámicas entre mente, cuerpo, cultura y entorno
- Entidades = relaciones complejas y evolutivas entre humanos y no humanos; se consideran acontecimientos, movimientos y procesos más que independientes.





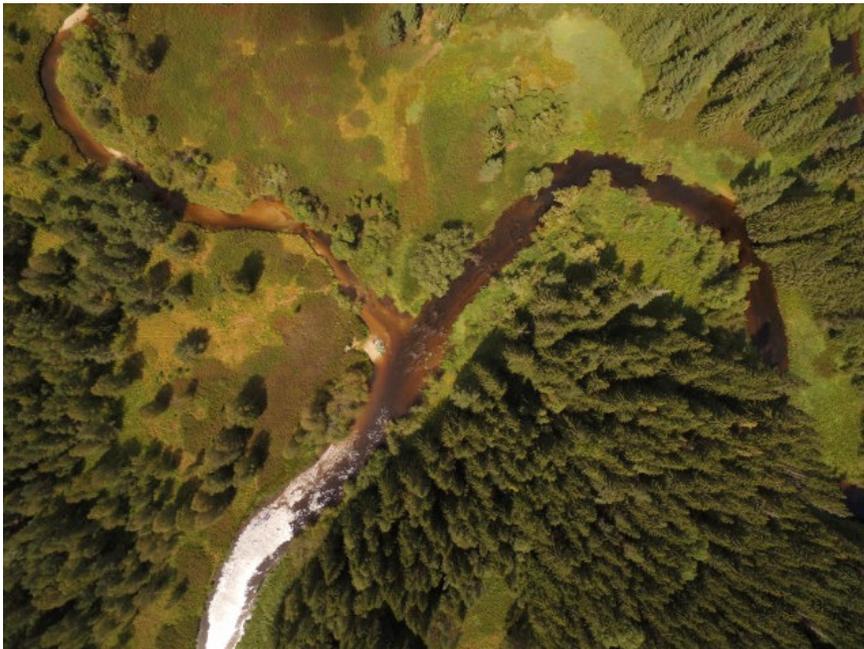


La música de la confluencia

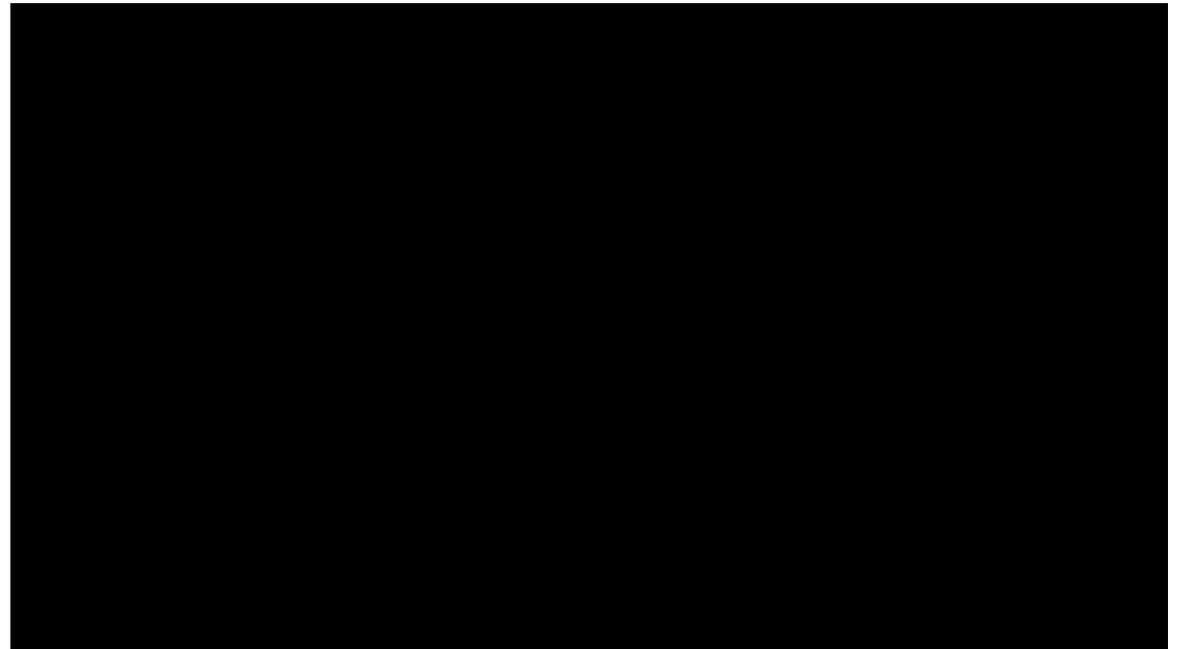
« *Dos manantiales brotan a la sombra del bosque de Bohemia, uno cálido y caudaloso, el otro frío y apacible. Atravesando los valles de Bohemia, se convierten en un caudaloso torrente.* »



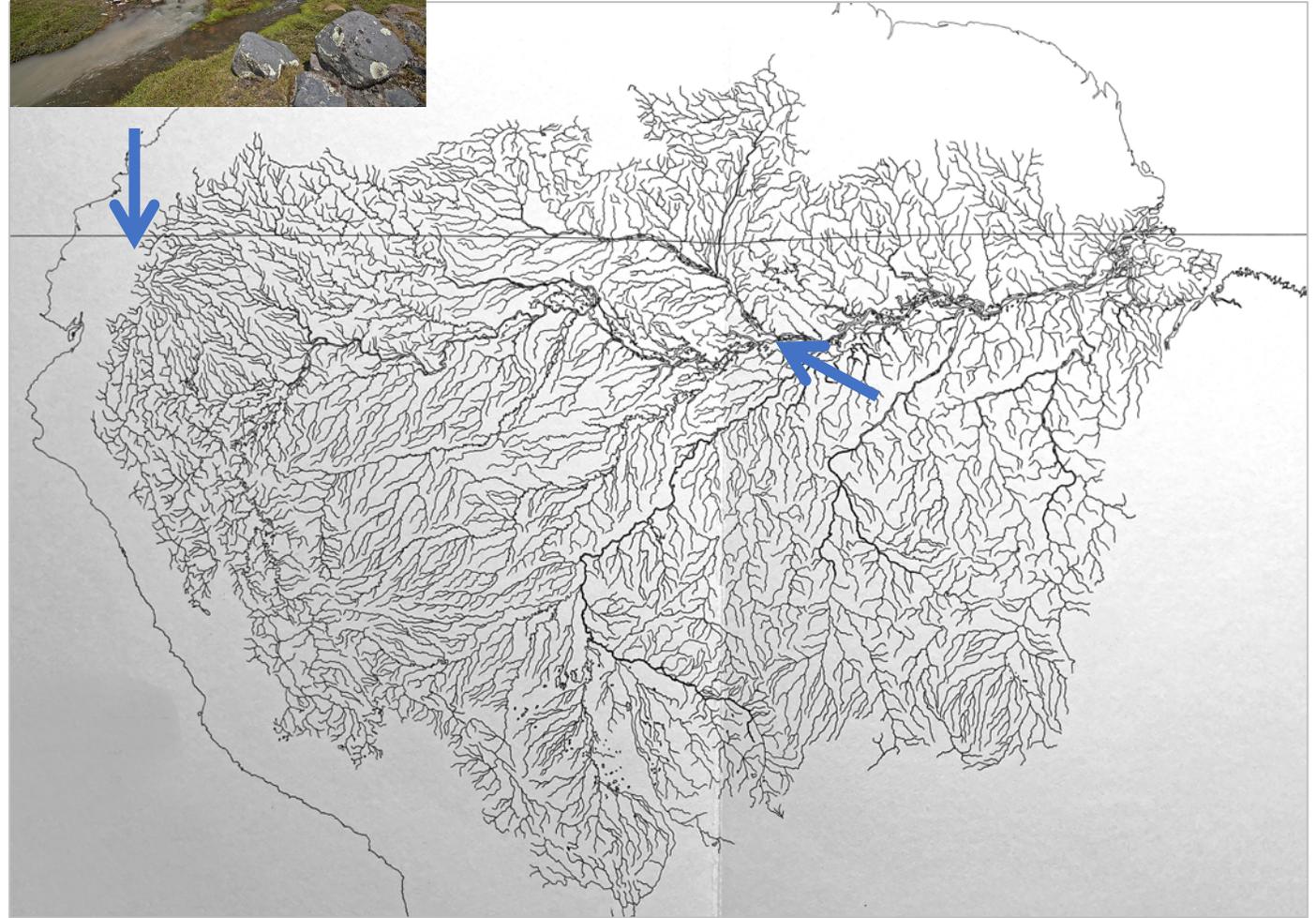
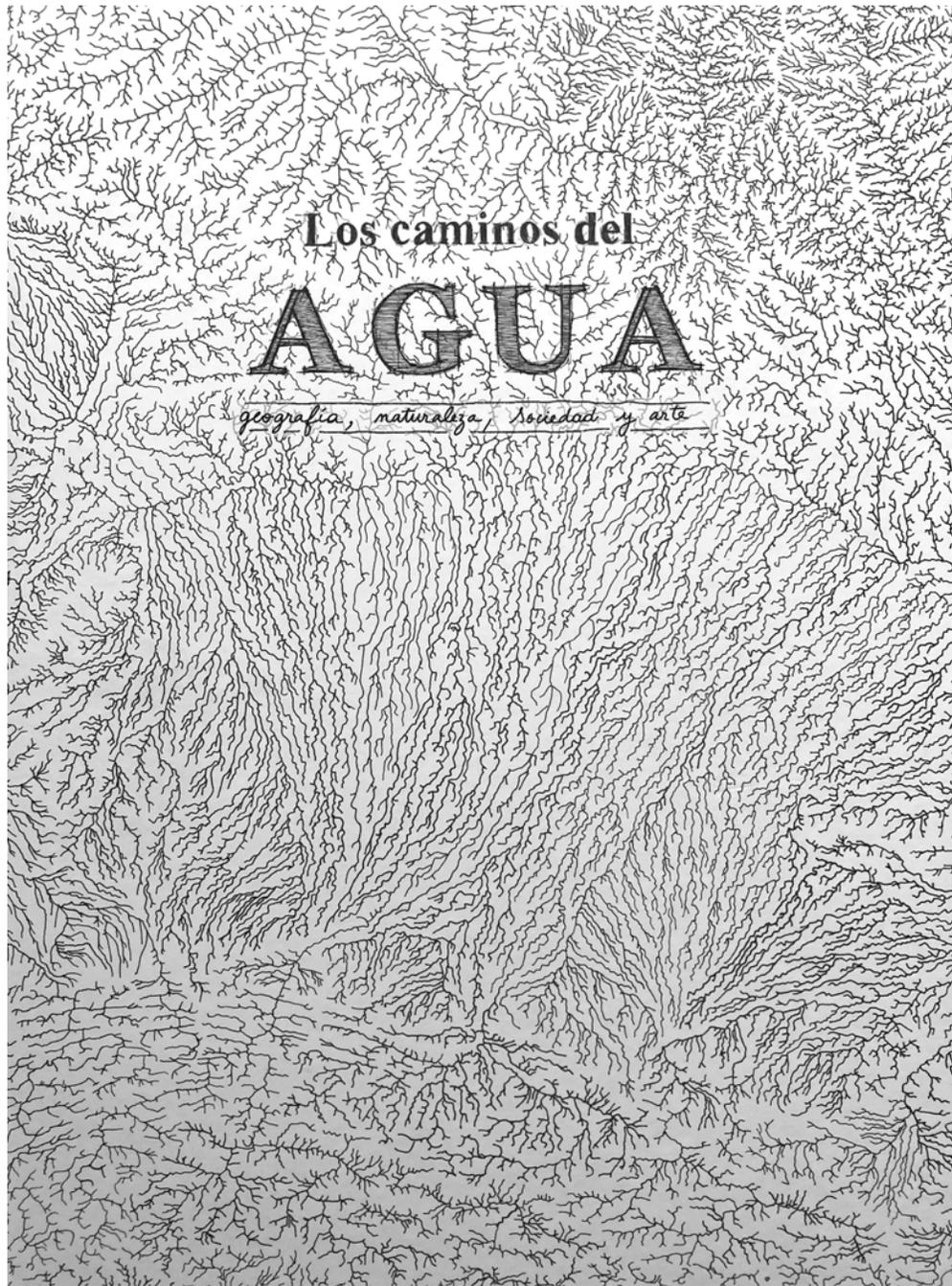
Bedřich Smetana
(1824-84)



<https://www.vltava-river.com/en/about-the-vltava-river>



<https://www.youtube.com/watch?v=ItAxKVP3JIU>



Loreta Castro Reguera

Amazonian Ecology: Tributaries Enhance the Diversity of Electric Fishes

Cristina Cox Fernandes,^{1,2*} Jeffrey Podos,¹ John G. Lundberg³

Neotropical rivers support a diverse array of endemic taxa, including electric fishes of the order Gymnotiformes. A comprehensive survey of the main channels of the Amazon River and its major tributaries (>2000-kilometer transect) yielded 43 electric fish species. Biogeographical analyses suggest that local mainstem electric fish diversity is enhanced by tributaries. Mainstem species richness tends to increase downstream of tributary confluences, and species composition is most similar between tributaries and adjacent downstream mainstem locations. These findings support a "nodal" or heterogeneous model of riverine community organization across a particularly extensive and diverse geographical region.

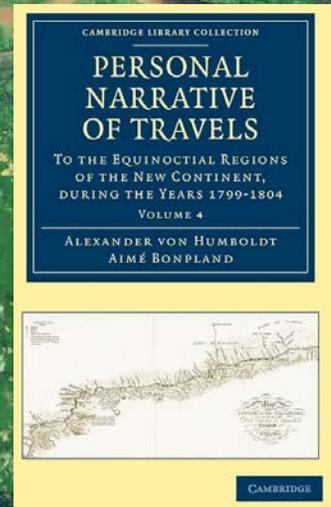


"Seis veces el volumen del río Mississippi de agua color café con leche [...] se unen aquí con dos veces el volumen del río Mississippi de agua color té negro para producir el mayor espectáculo hidrológico del planeta."

Robert Meade, hidrólogo

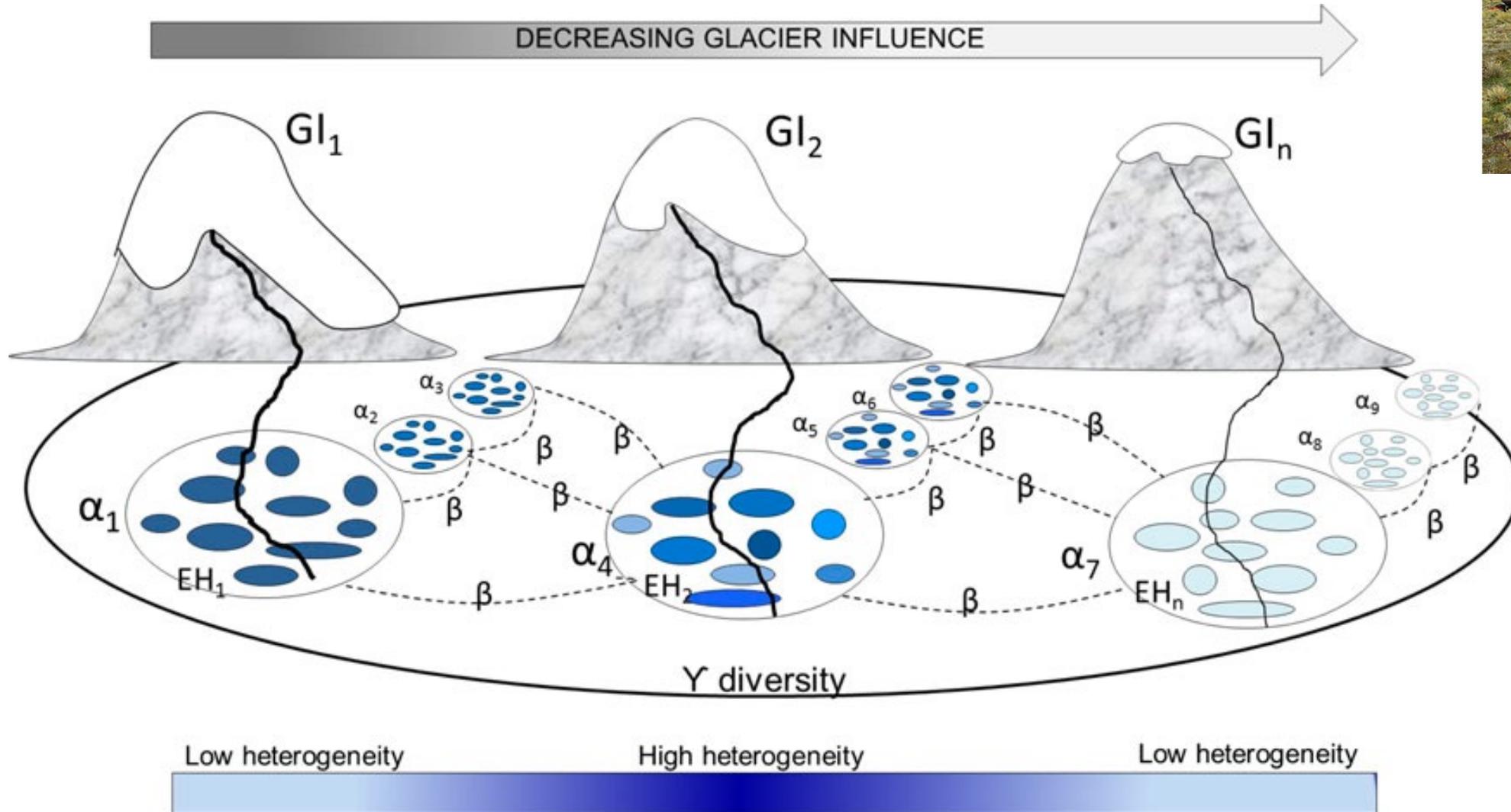
"Tráeme las aguas de tres o cuatro grandes ríos de estos países [...] al probar cada uno de ellos te diré, sin temor a equivocarme, de dónde fue tomada; ya sea que venga de un río blanco o de uno negro"

Anciano indígena



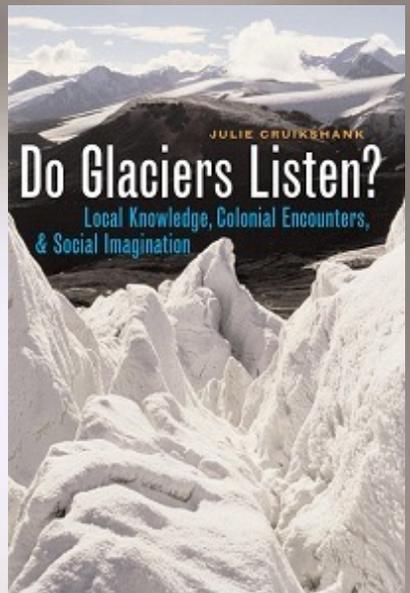
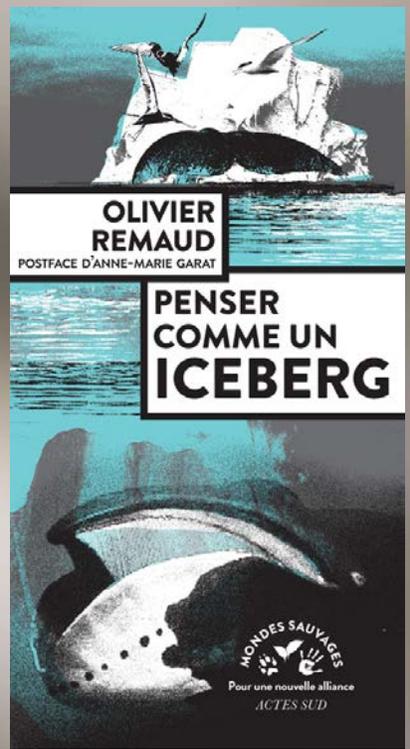
0 30 km

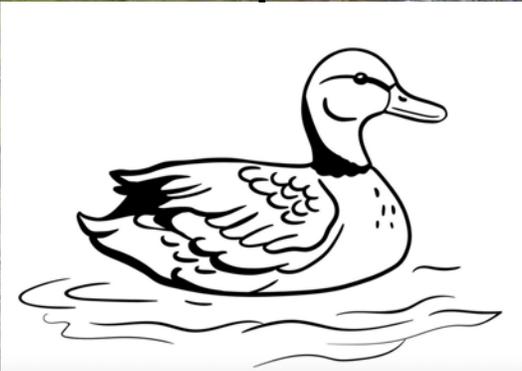
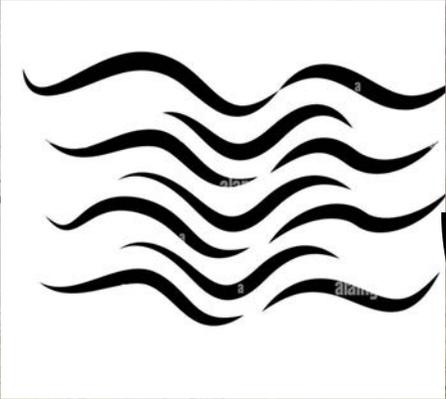
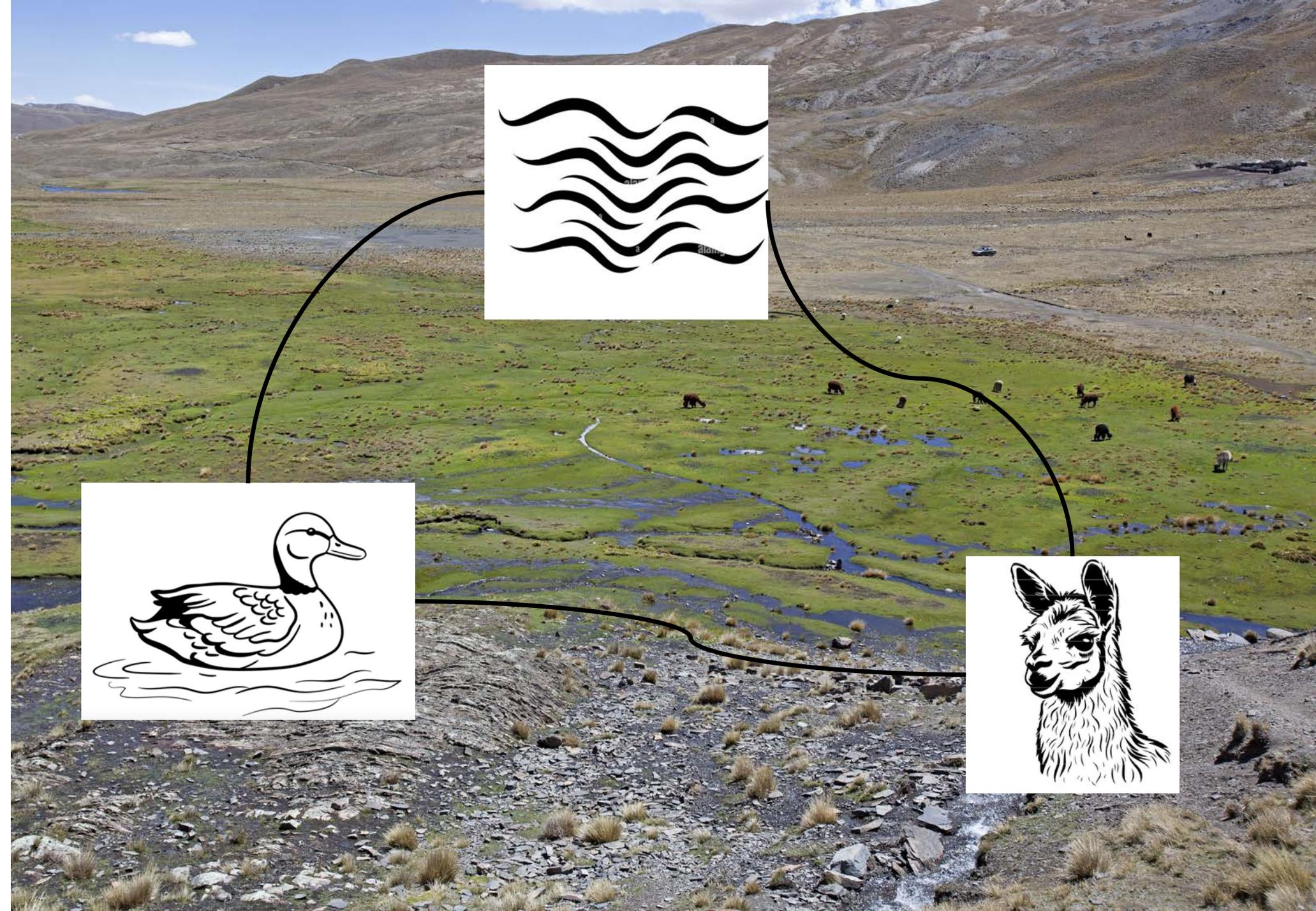
Glaciares y bofedales





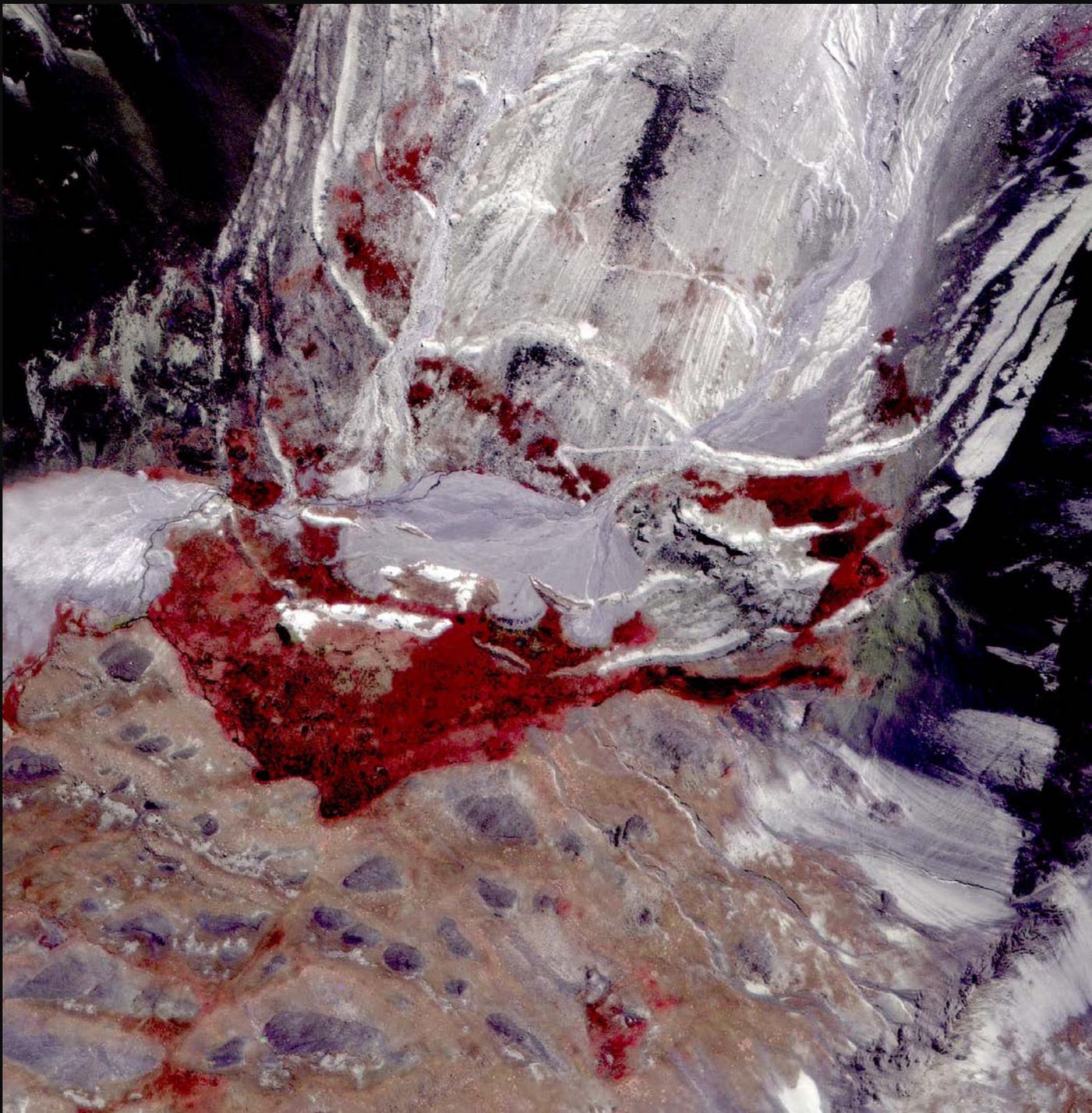
Glaciar Mer de Glace (1892)
Henry George Willink



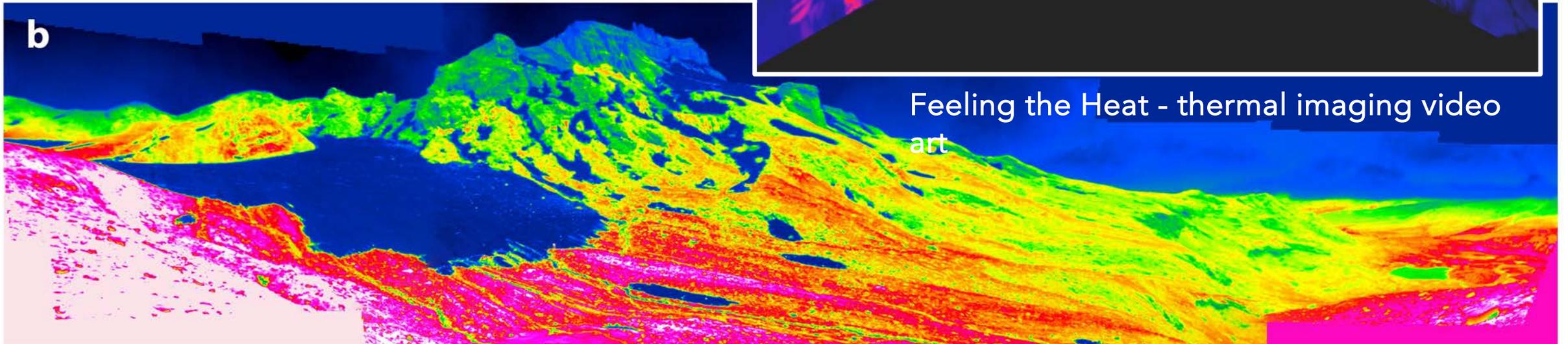
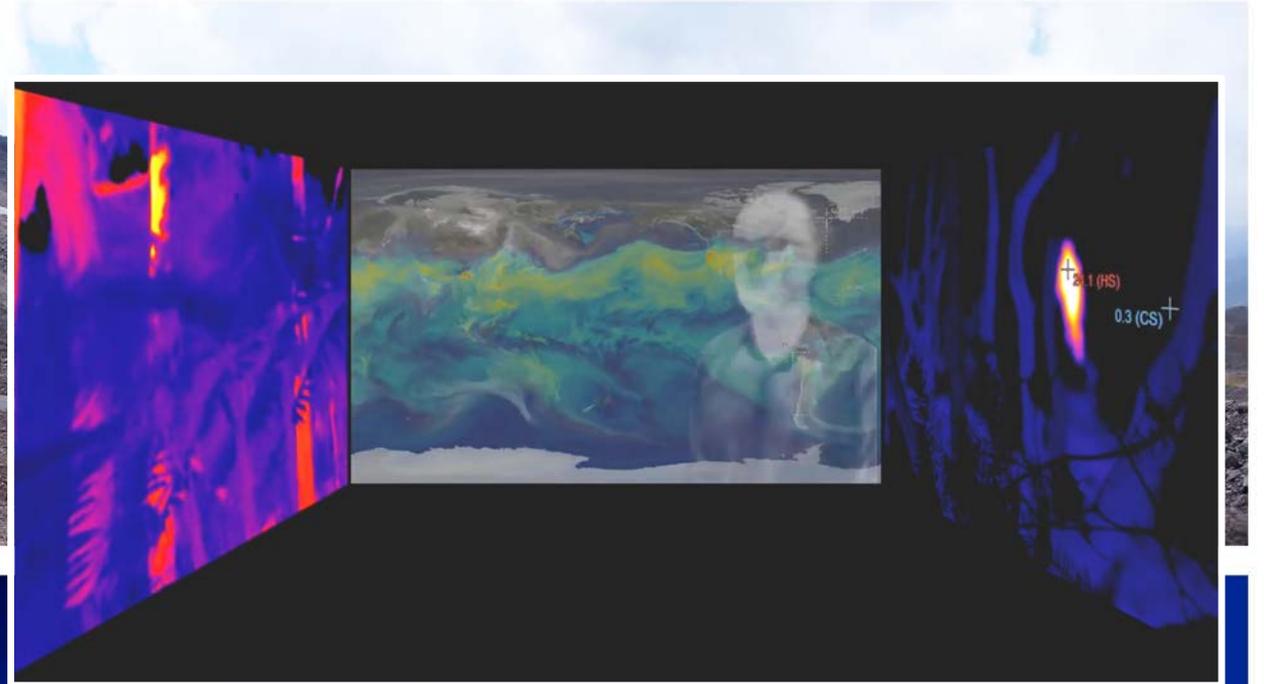


Que
parametro
estudiar
para una
vision
holística?

Como
medir
este
parámetro
?

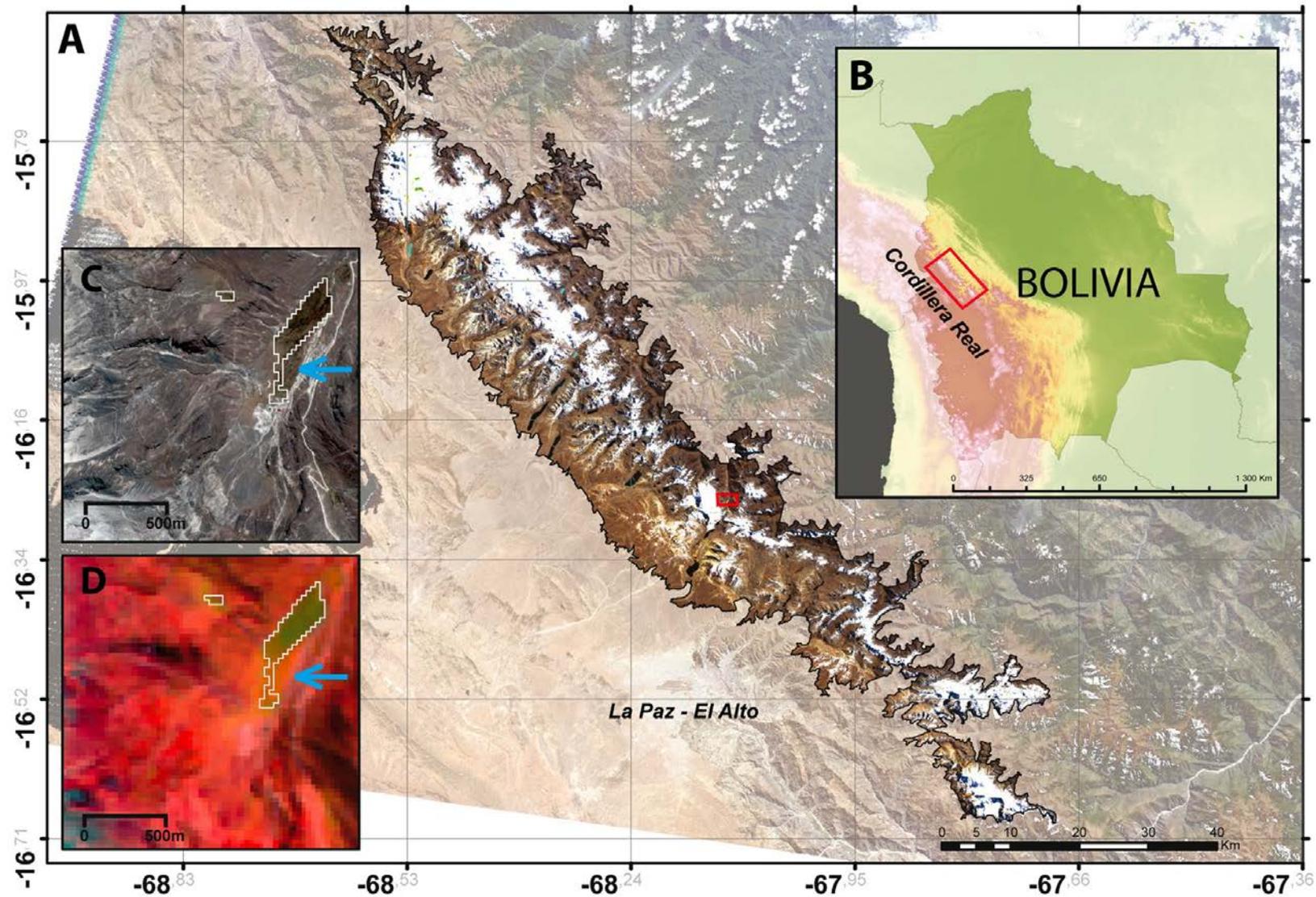


Microclimas y el arte de la termografía

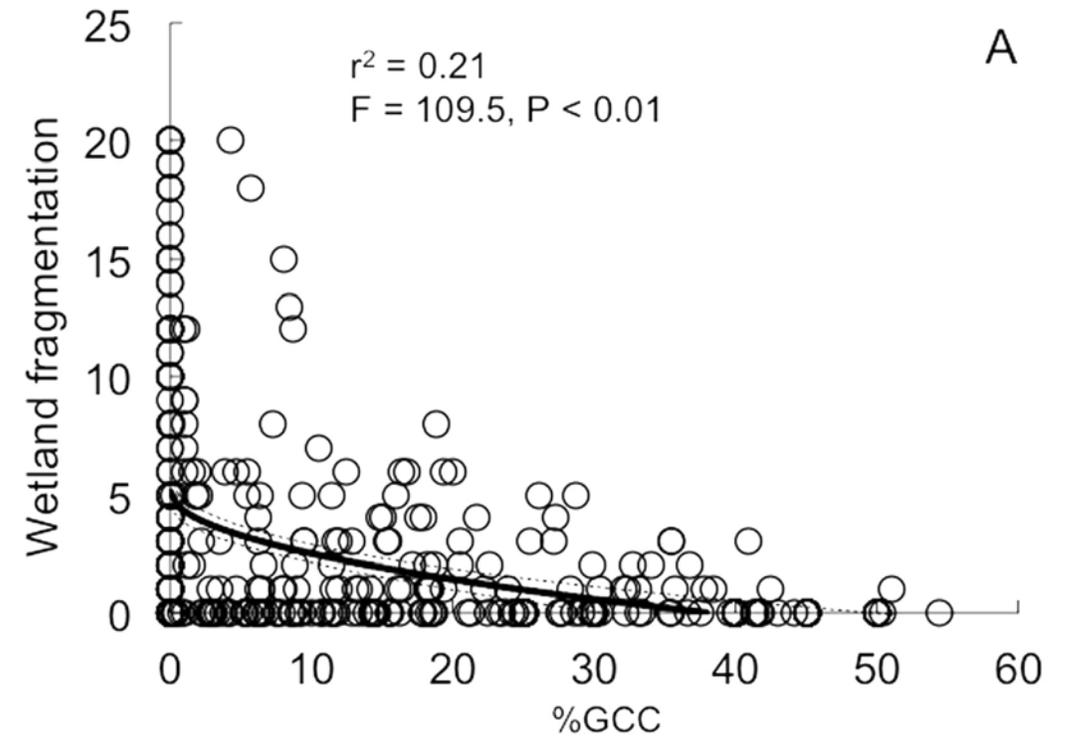
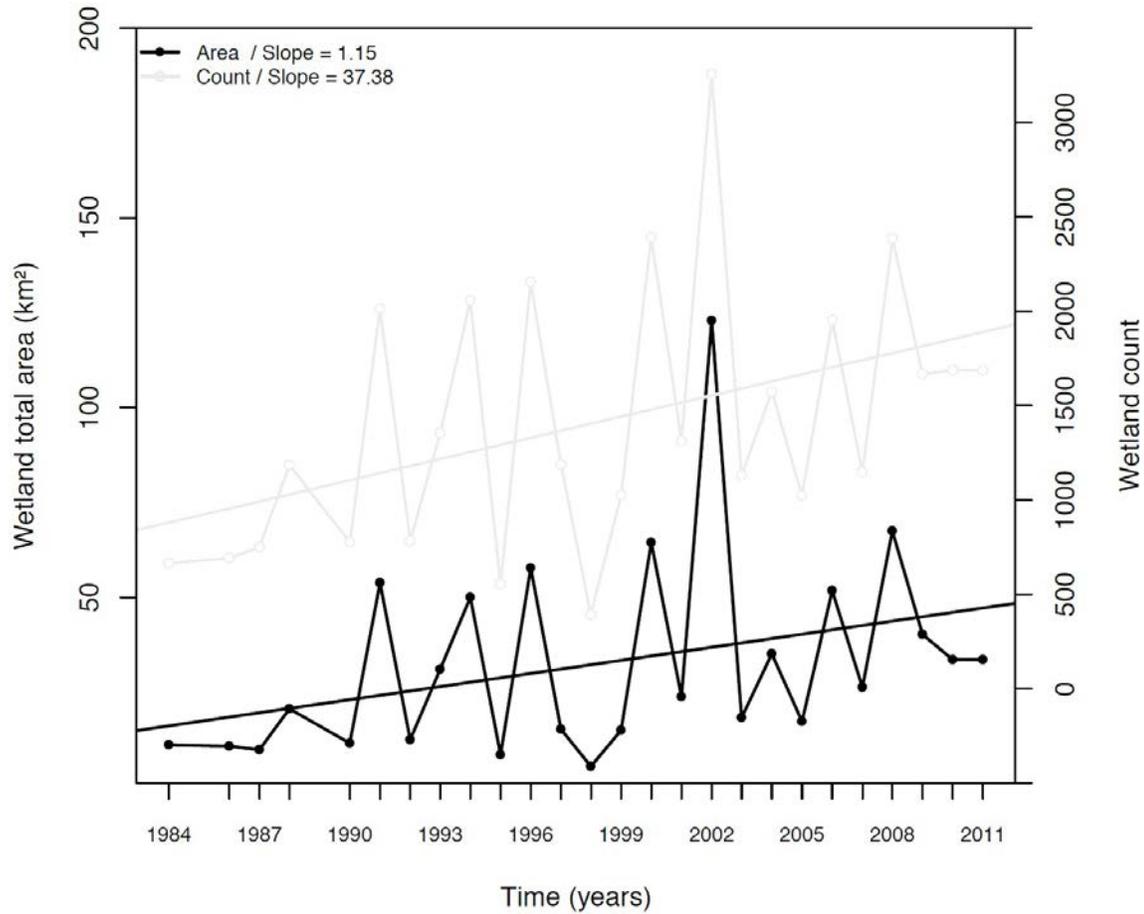


Feeling the Heat - thermal imaging video art

Bofedales Cordillera Real



Bofedales Cordillera Real



La música del cambio climático



RESEARCH ARTICLE

Ecosystem sentinels for climate change? Evidence of wetland cover changes over the last 30 years in the tropical Andes

Olivier Dangles^{1,2,3*}, Antoine Rabatel⁴, Martin Kraemer¹, Gabriel Zeballos^{5,6},
Alvaro Soruco⁷, Dean Jacobsen⁸, Fabien Anthelme⁹



Ricky Chaggar
ARU Cambridge

The image displays a musical score for a piece titled "La música del cambio climático". The score is arranged in two systems, each with ten staves. The instruments listed on the left of each system are: Flute, Alto Flute, Bass Flute, Triangle, Cymbal, Shaker, Wood Block, Glockenspiel, Vibraphone, Celesta, Contrabass, and Bass Drum. The notation includes various musical symbols such as notes, rests, and dynamic markings (p, mf, f, mp, ff). A large speaker icon is positioned between the two systems, indicating that the score is intended to be listened to. The score is written in a key signature of one flat and a 4/4 time signature.



Servicios ecosistémicos de los bofedales

Wetland services	Beneficiary	Value method	Aggregate economic value, US\$ year⁻¹	Economic value per unit of wetland, US\$ ha⁻¹
Water supply	Local households	Replacement cost	4125	9
Livestock grazing	Local households	Market price	156,502	323
Recreation	Regional and global tourists	Market price	8154	17
Biodiversity	Global population	Benefit transfer	101,850	210
Cultural/natural heritage, aesthetics	Local households	Contingent valuation	26,688	55

Comunidad de Carip, Gandarillas et al. (2016)

Table 10.3 Comparison of the percentage of wetlands showing the different Ramsar criteria in two altitudinal classes. Wetlands >3000 m, $N = 35$; wetlands <3000 m, mean of 100 randomized selections of 35 wetlands (of a total of 2210 Ramsar wetlands). Data extracted from the Ramsar Sites Information Service (<<https://rsis.ramsar.org/>>).

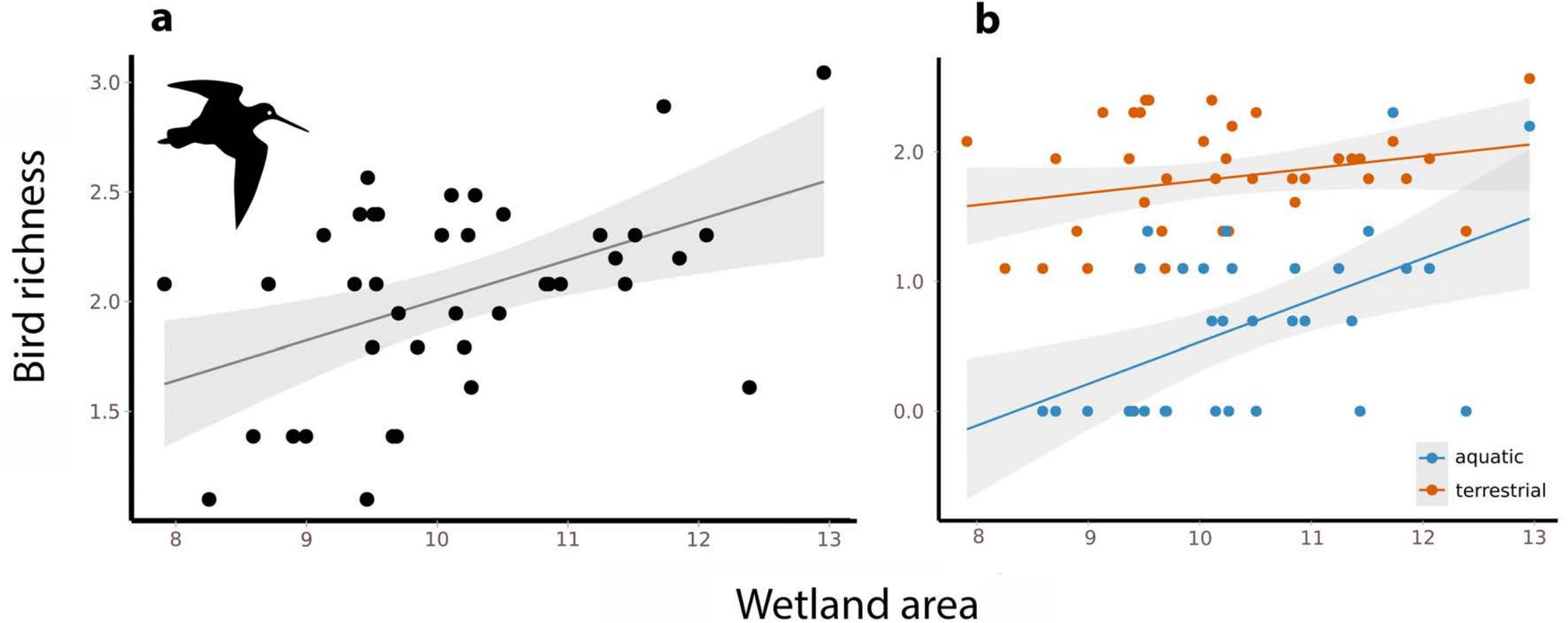
Ramsar criteria	% Wetlands <3000 m	% Wetlands >3000 m
1. Contains a representative, rare, or unique example of a natural or near-natural wetland type	68.0	91.4
2. Supports vulnerable, endangered, or critically endangered species or threatened ecological communities	74.5	100
3. Supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region	61.8	80.0
4. Supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions	56.9	62.8
5. Regularly supports 20,000 or more water birds	30.5	37.1
6. Regularly supports 1% of the individuals in a population of one species or subspecies of water bird	35.6	34.2
7. Supports a significant proportion of indigenous fish subspecies, species, or families	17.8	20.0
8. Is an important source of food for fishes, spawning ground, nursery, and/or migration path	25.5	11.4

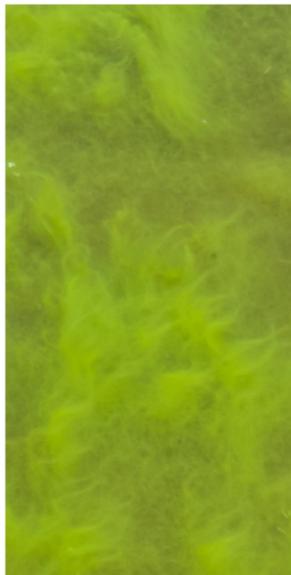
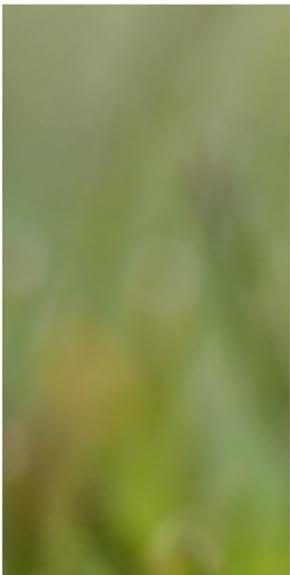
Bofedales y pájaros

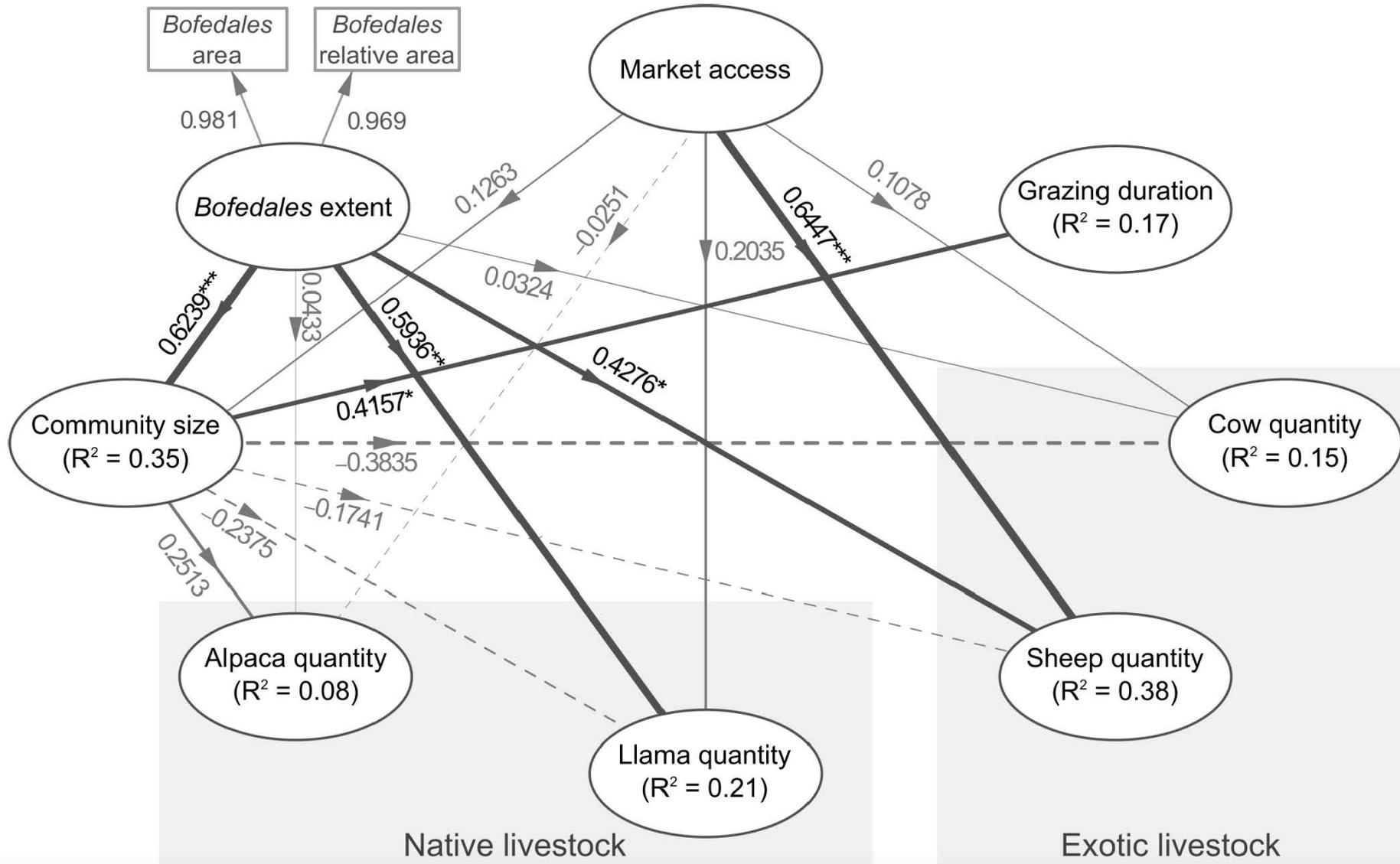


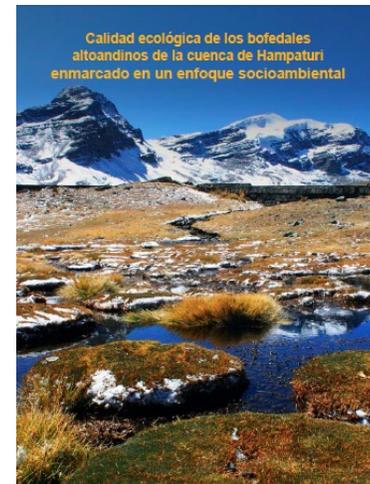
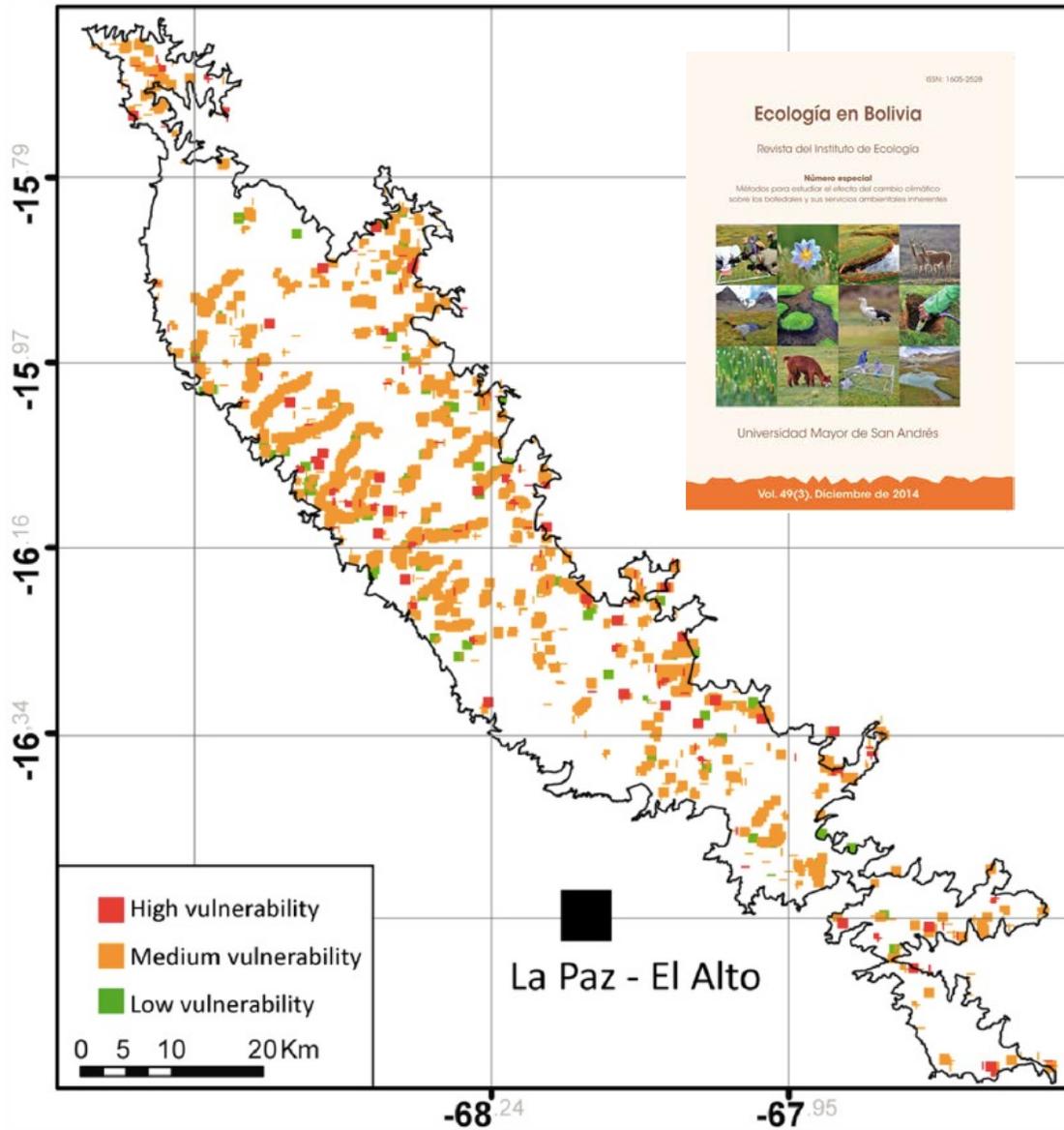


Bofedales y pájaros









“La ciencia actual continúa fundamentando su legitimidad en los datos, que son verificados y vueltos a verificar en una búsqueda interminable de la verdad a través de la eliminación del error. [...]

Con nuestras esperanzas y sueños sumergidos en el éter de la ilusión, la vida misma parece disminuida. Privada de su impulso creativo; ya no causa asombro ni admiración.”

Tim Ingold



Reflexión sobre estas palabras en el contexto de su proyecto

