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# Investigación

Uso de datos de iNaturalist  
en la investigación

Florencia Grattarola  
NaturalistaUY (iNaturalist Uruguay)



## Segundo Foro

- 10 al 15 de febrero 2025 -



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de México y Latinoamérica

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# Paysandú - Uruguay

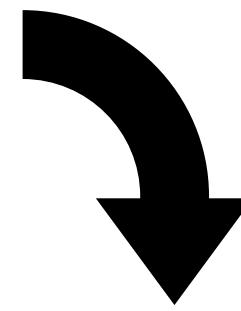


# Praga - República Checa



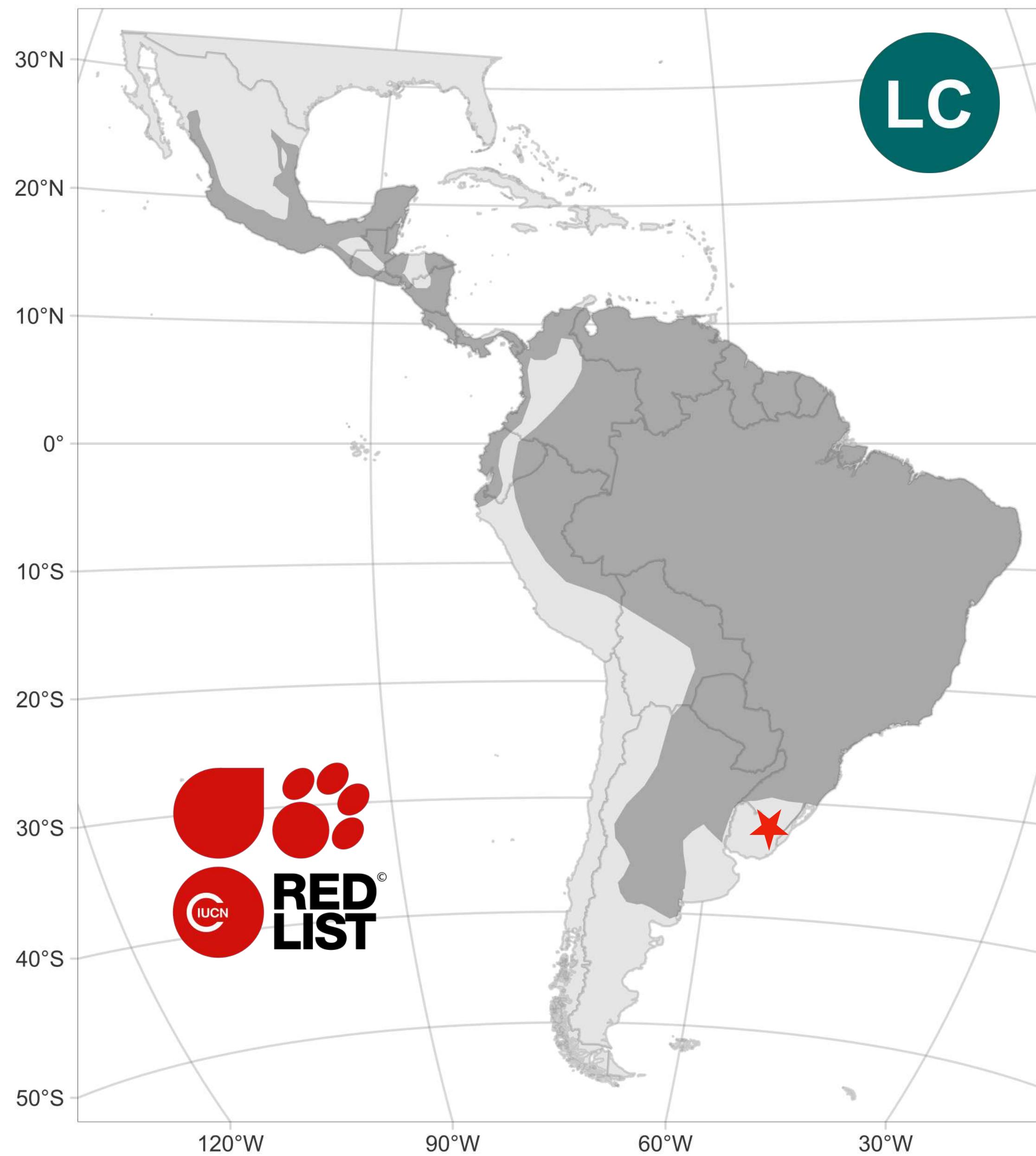
# Agenda

## Casos de uso de datos de iNaturalist en la investigación



- 1 Cambios temporales en la distribución geográfica de **carnívoros** en la **Región Neotropical**
- 2 Estado de invasión de un **planta** no nativa en **Uruguay**
- \* Destaque a quienes ayudan a sostener NaturalistaUY, ¡mujeres!

# Cambios temporales en la distribución geográfica de carnívoros Neotropicales



No existen datos  
temporales estandarizados  
para estas especies en la  
región

¿Cómo podemos estudiar cómo cambia su  
distribución en el tiempo con datos insuficientes?

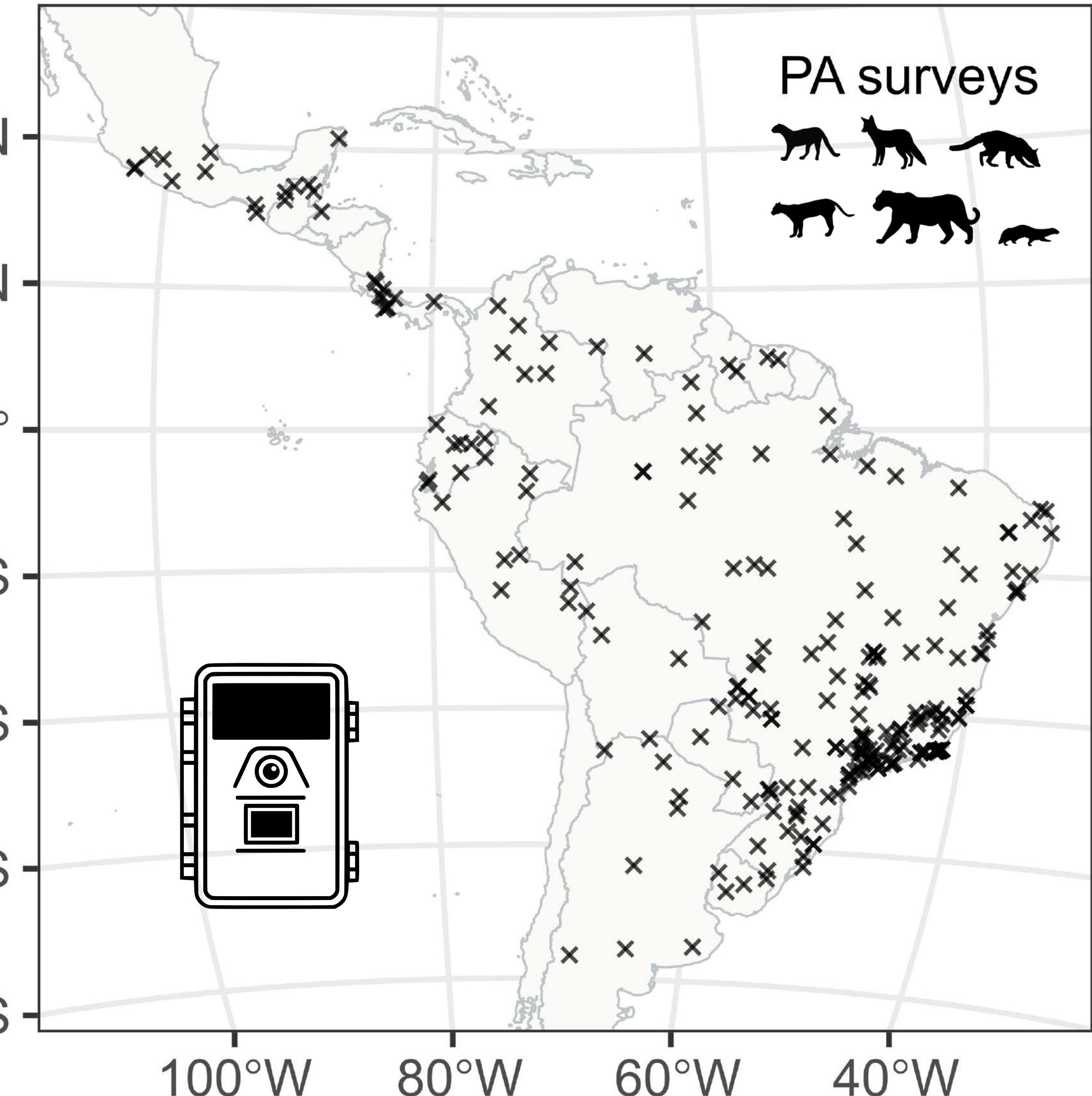
**datos de sólo presencia**

**(a)**



**datos de presencia ausencia**

**(b)**



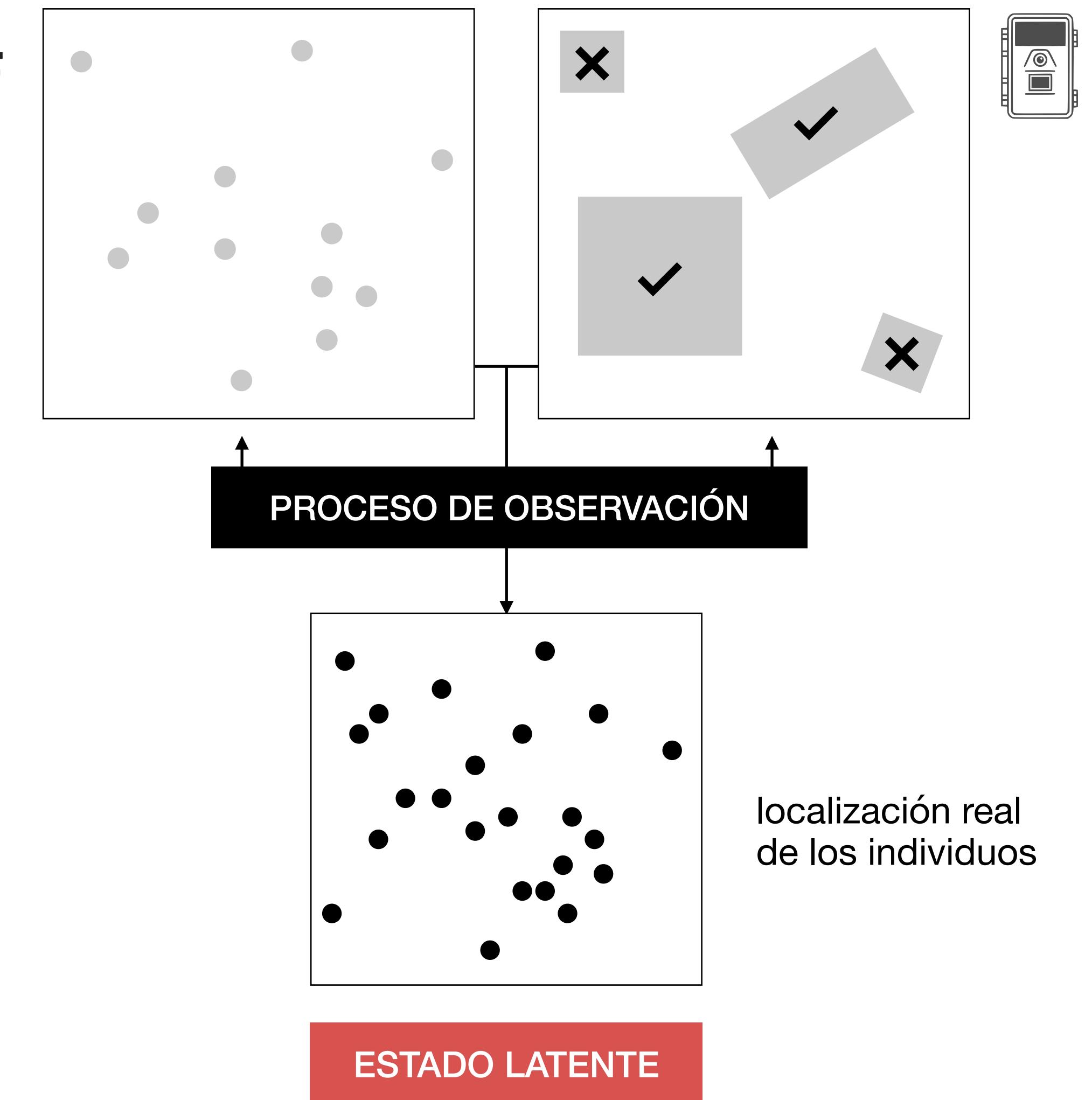
# Modelo ISDM

## Bayesiano



- **Tiene en cuenta**
  - La variación en el esfuerzo de muestreo y en área de estudio.
  - La accesibilidad del lugar y el país donde fue tomado el dato.
- **Incluye**
  - Componente espacial (autocorrelación).

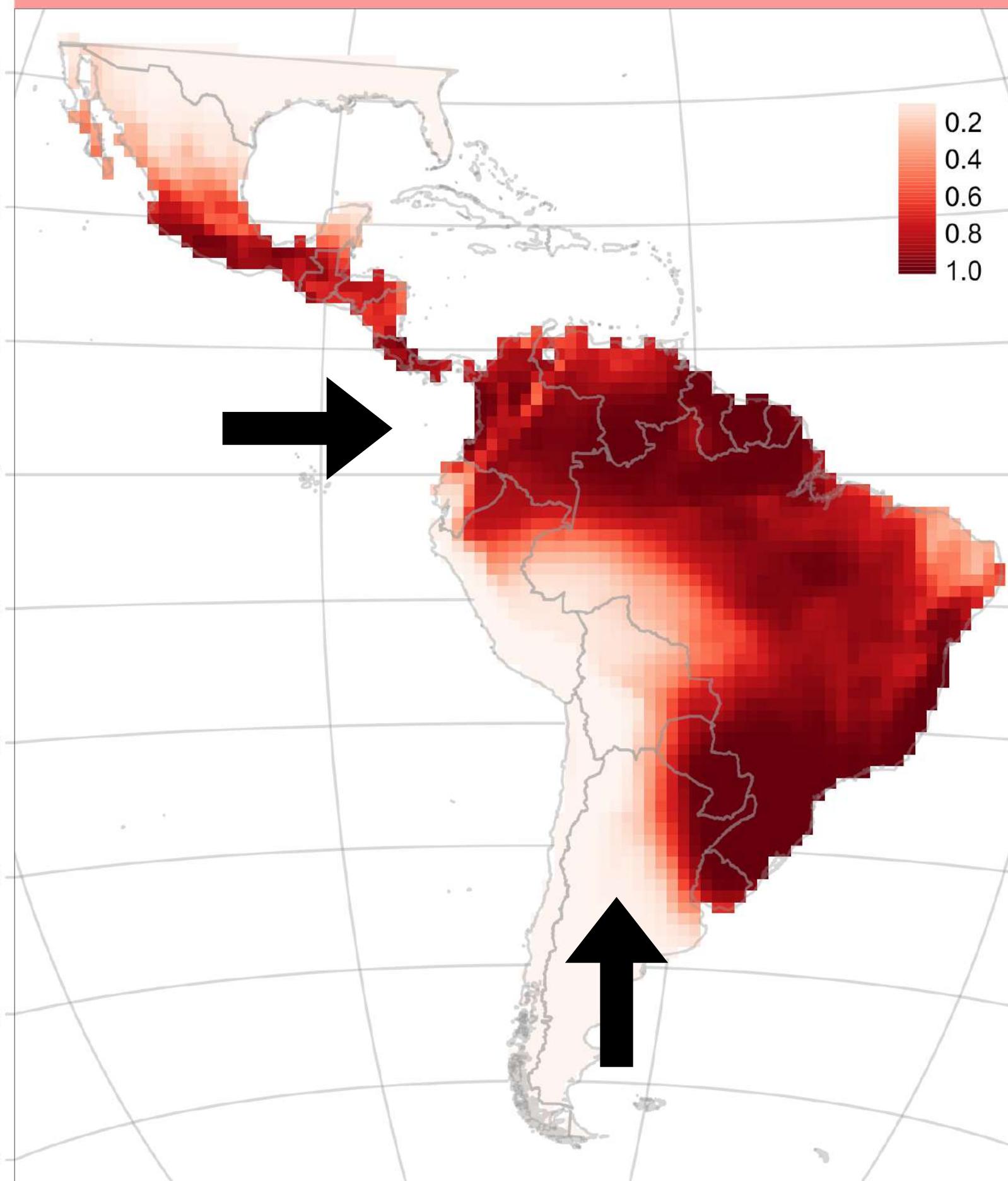
DATOS OBSERVADOS



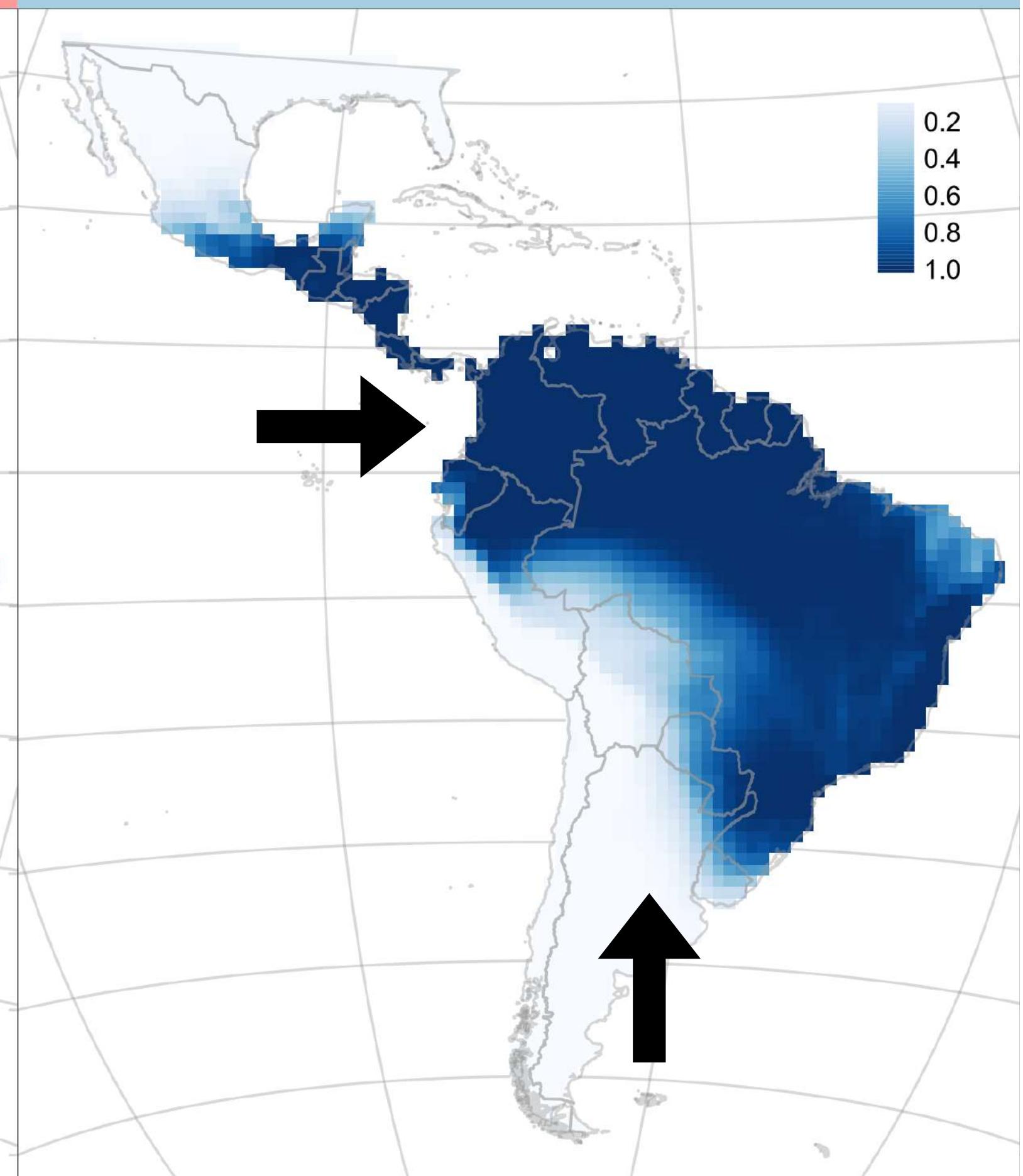
Rango UICN



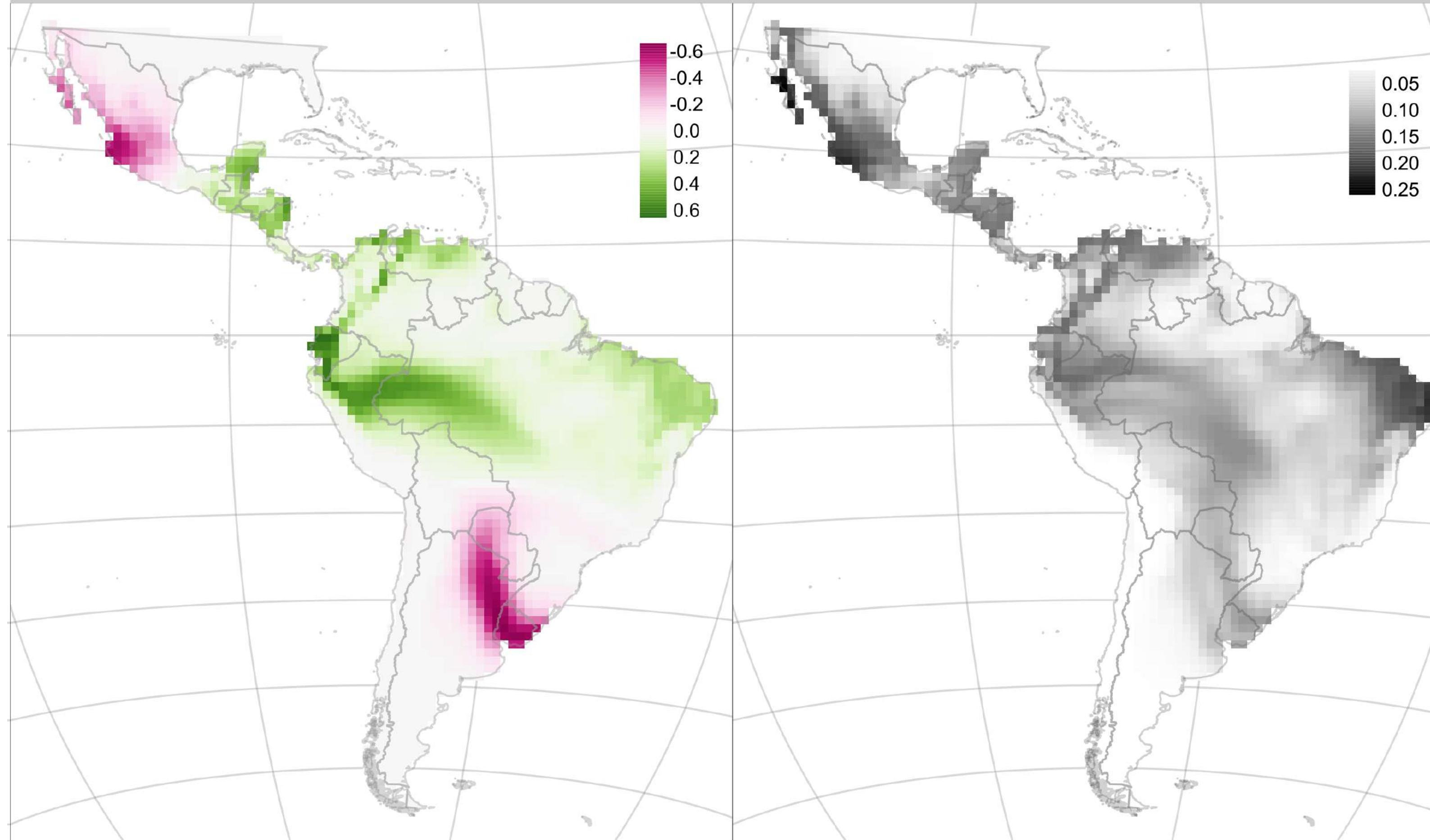
Rango<sub>tiempo1</sub> (2000-2013)



Rango<sub>tiempo2</sub> (2014-2021)

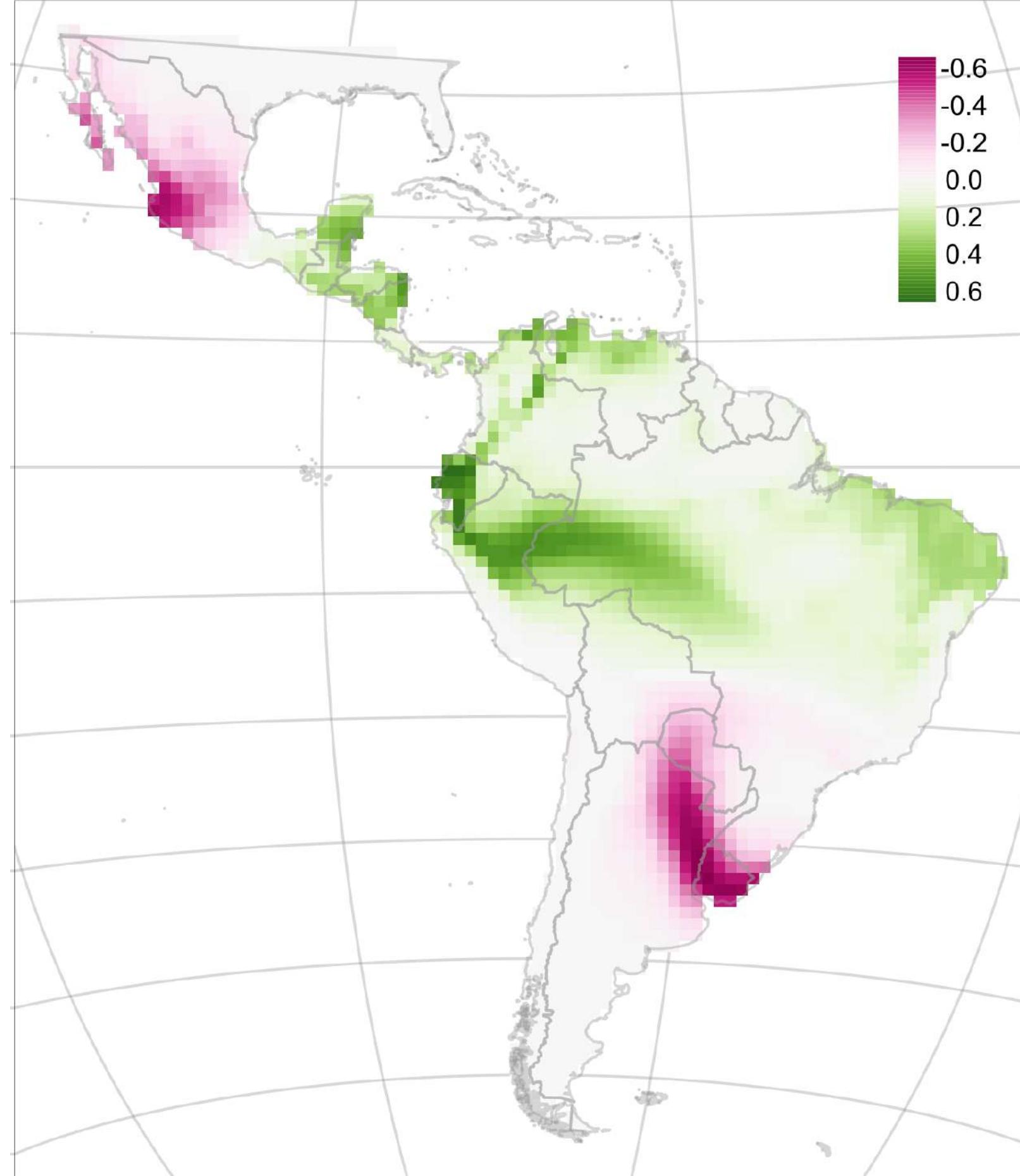


Rango<sub>tiempo2</sub> - Rango<sub>tiempo1</sub>

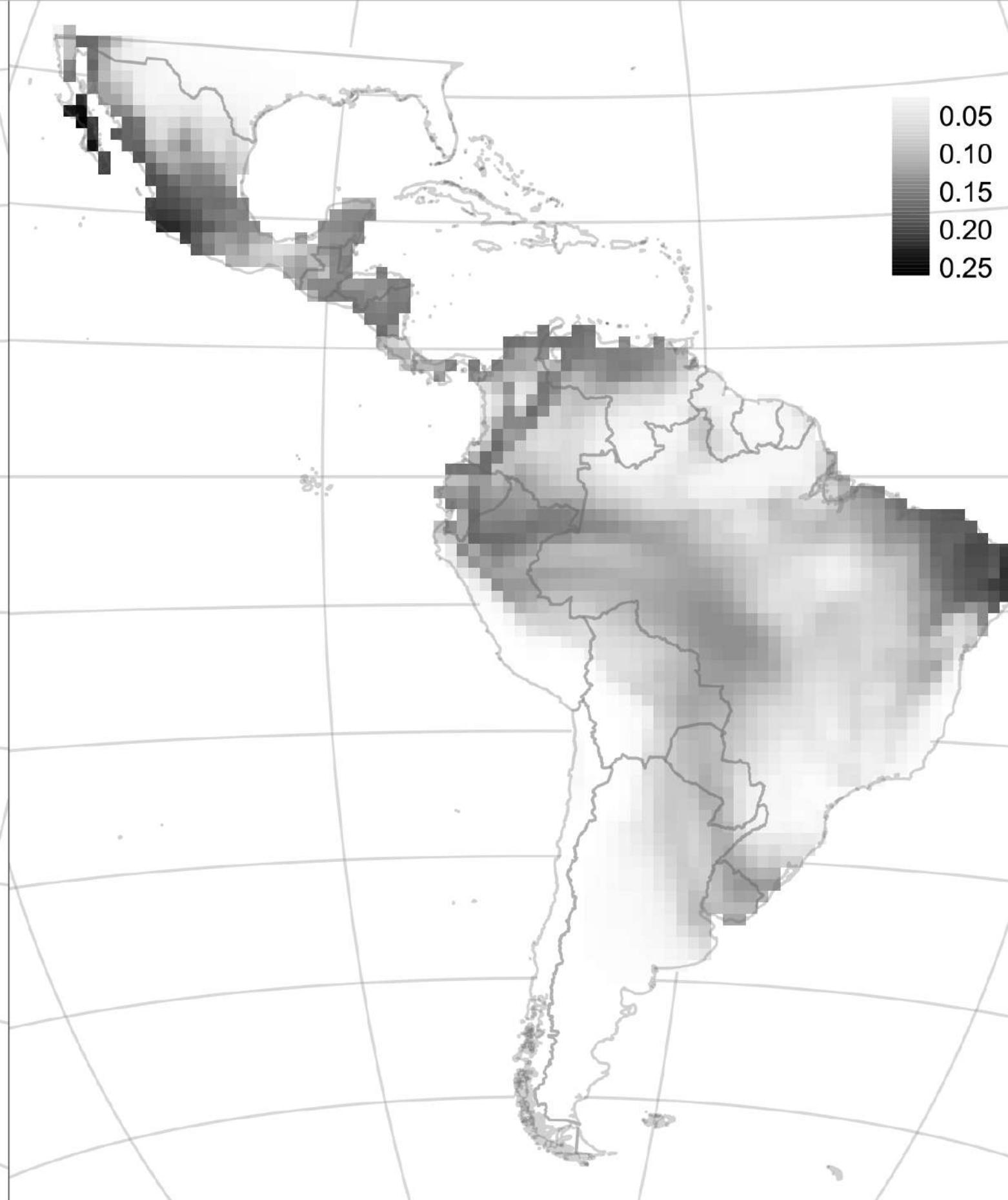


Incertidumbre (SD)

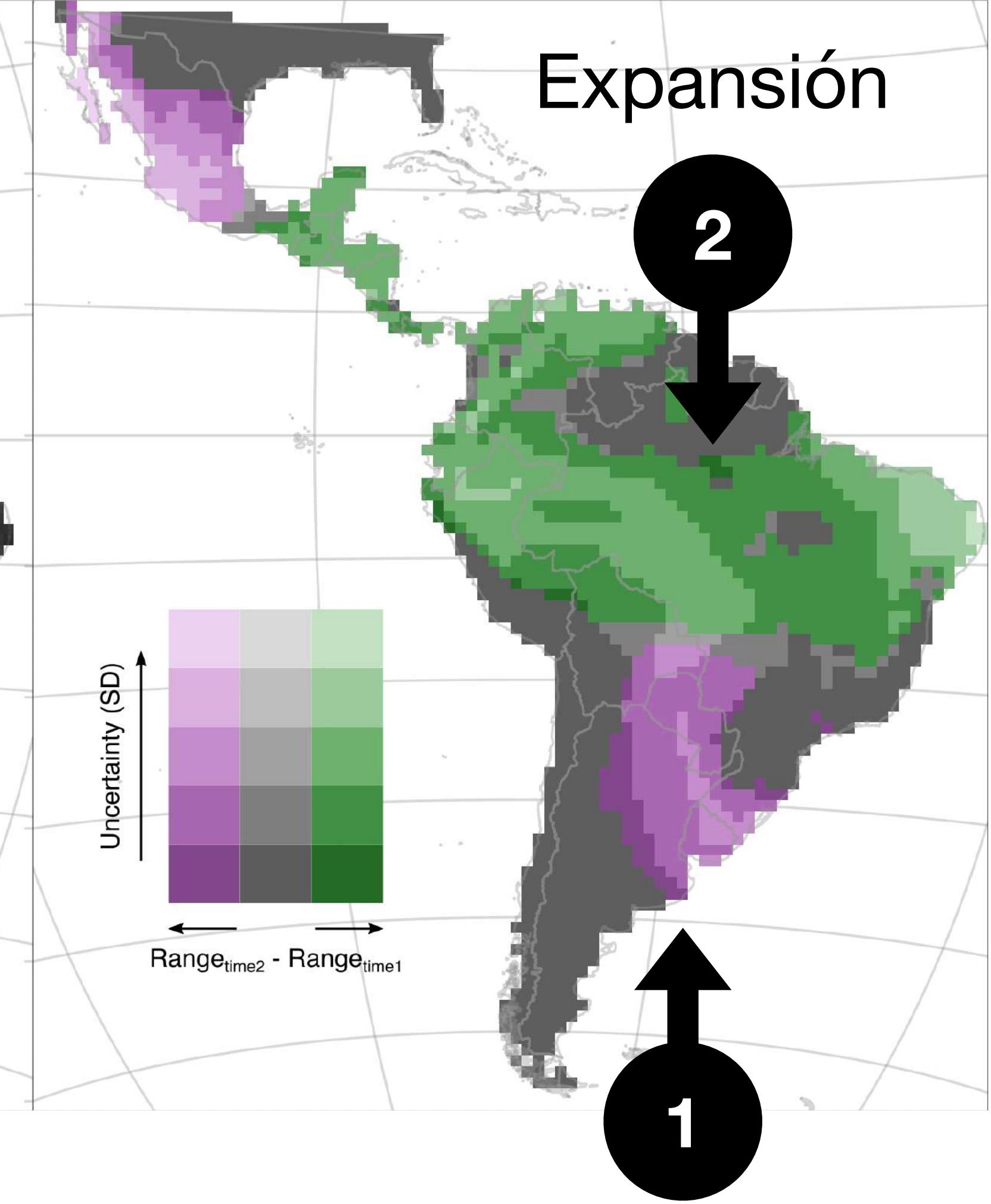
$\text{Rango}_{\text{tiempo}2} - \text{Rango}_{\text{tiempo}1}$



Incertidumbre (SD)



$\text{Rango}_{\text{tiempo}2} - \text{Rango}_{\text{tiempo}1} * \text{SD}$



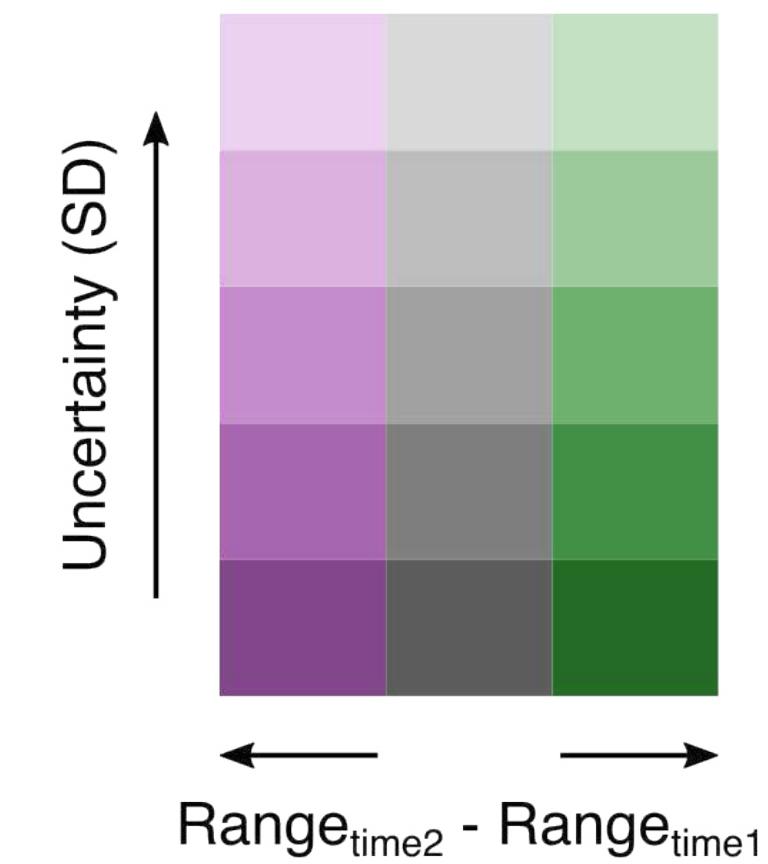
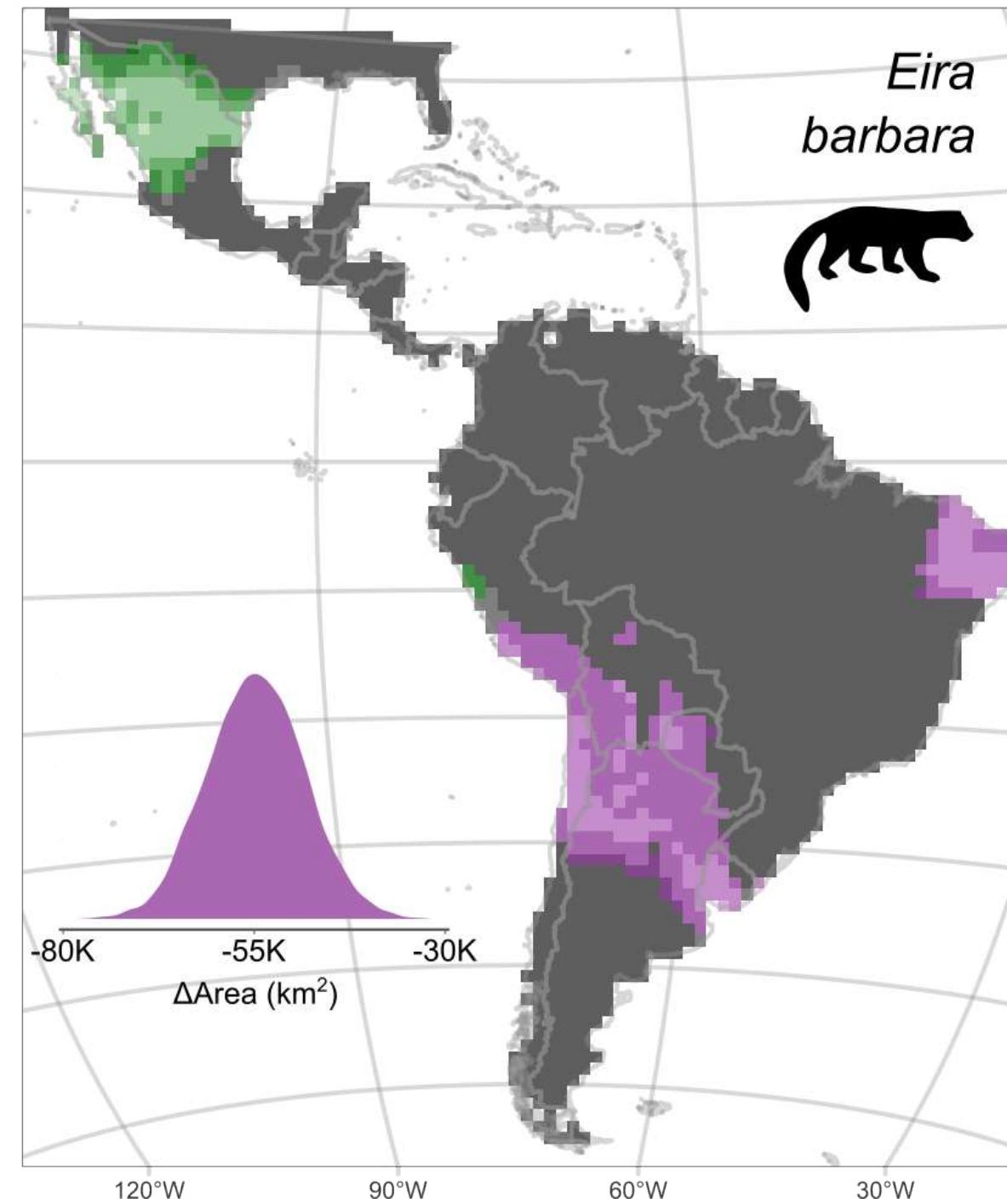
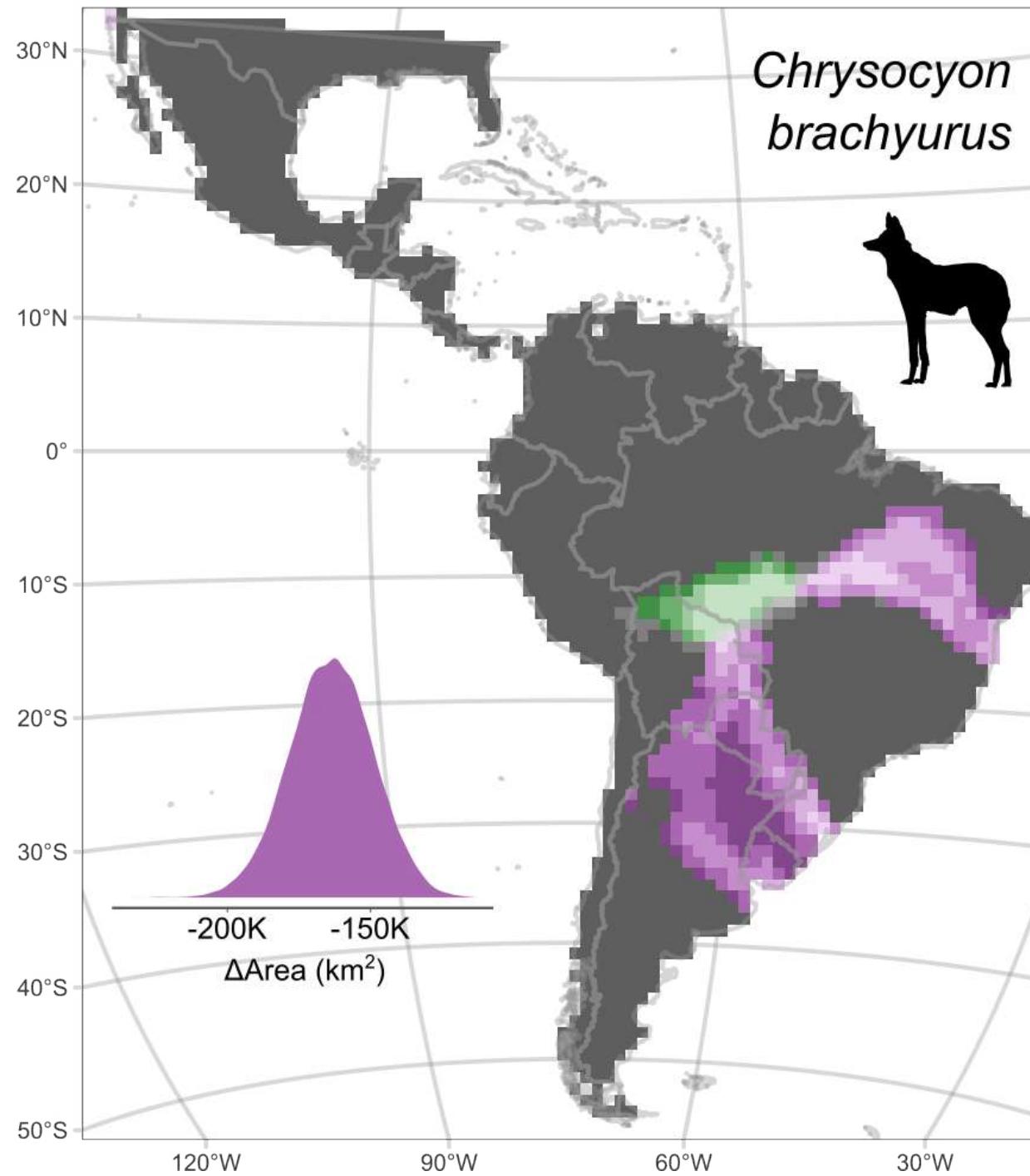
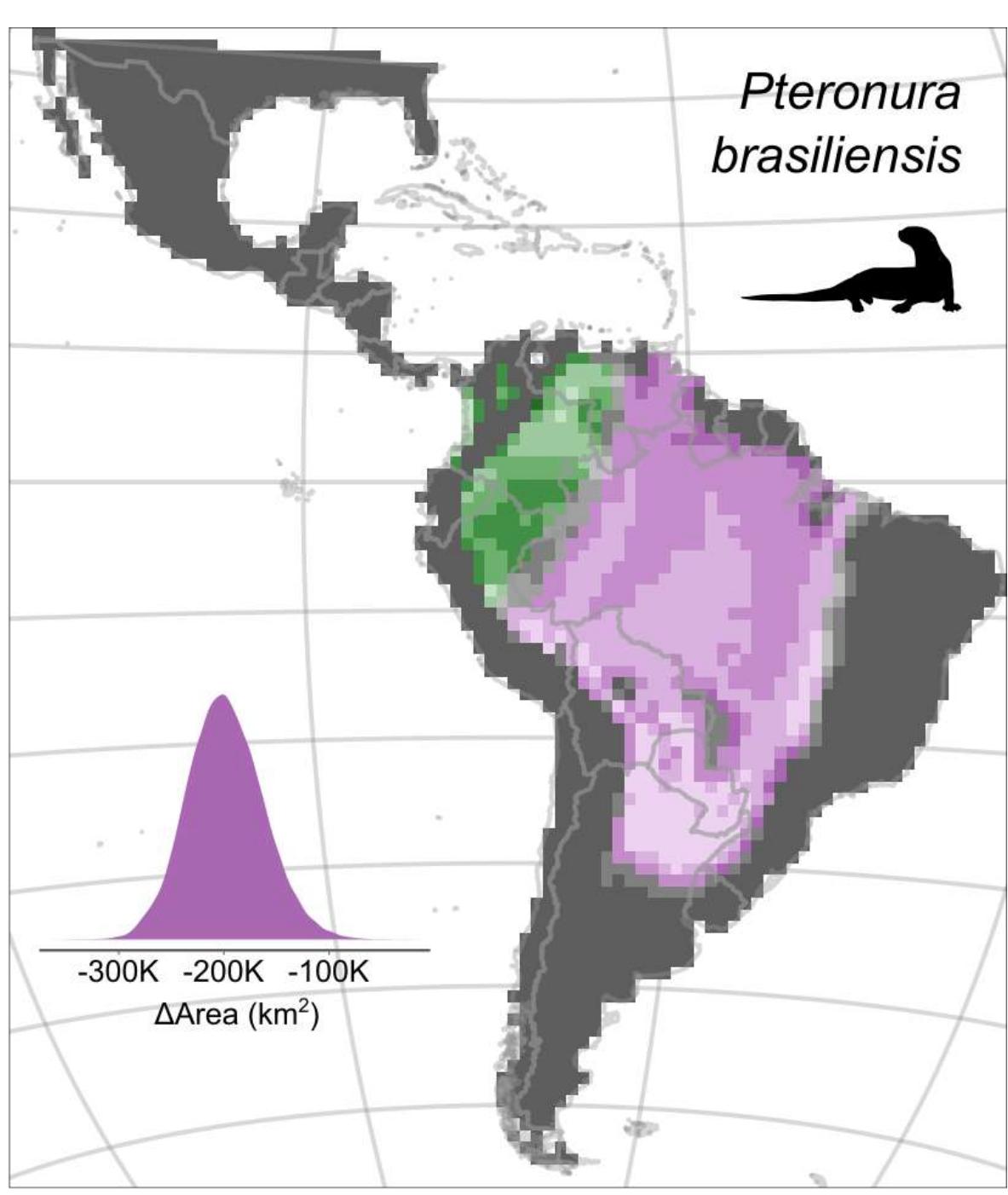
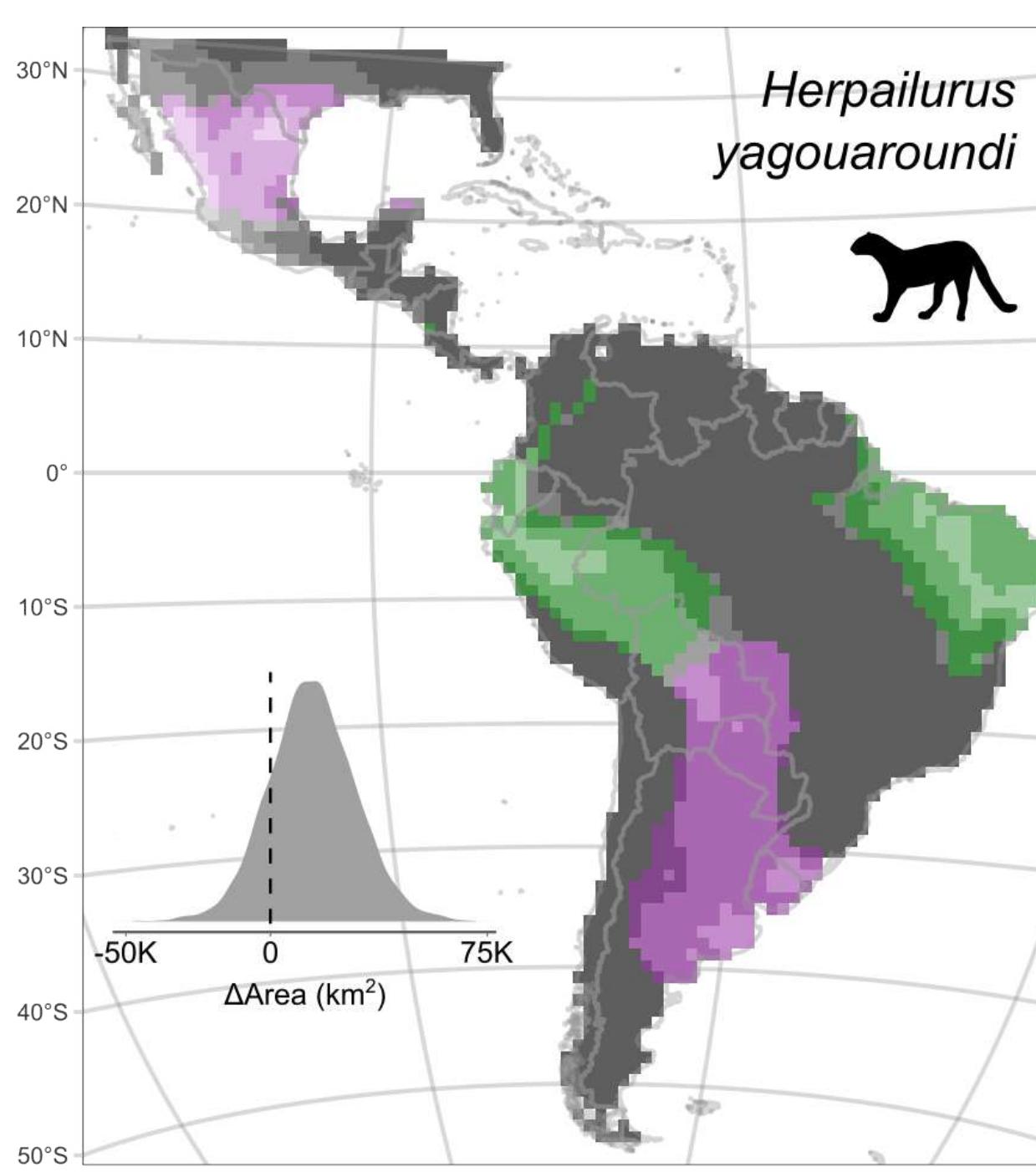
Contracción

1

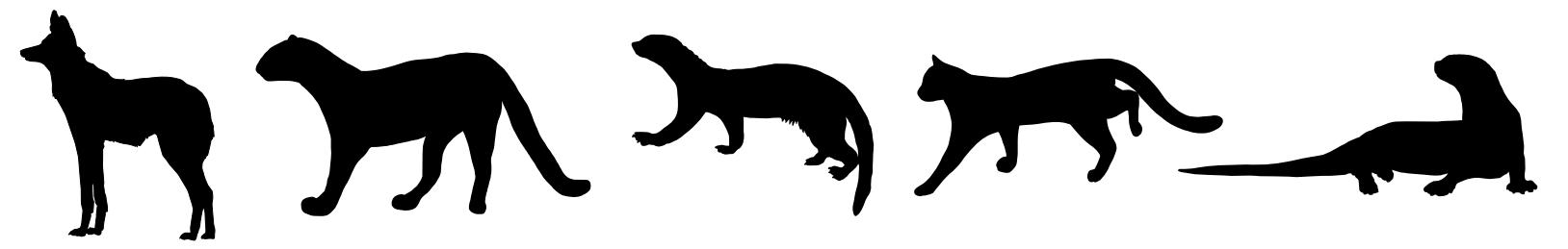
2



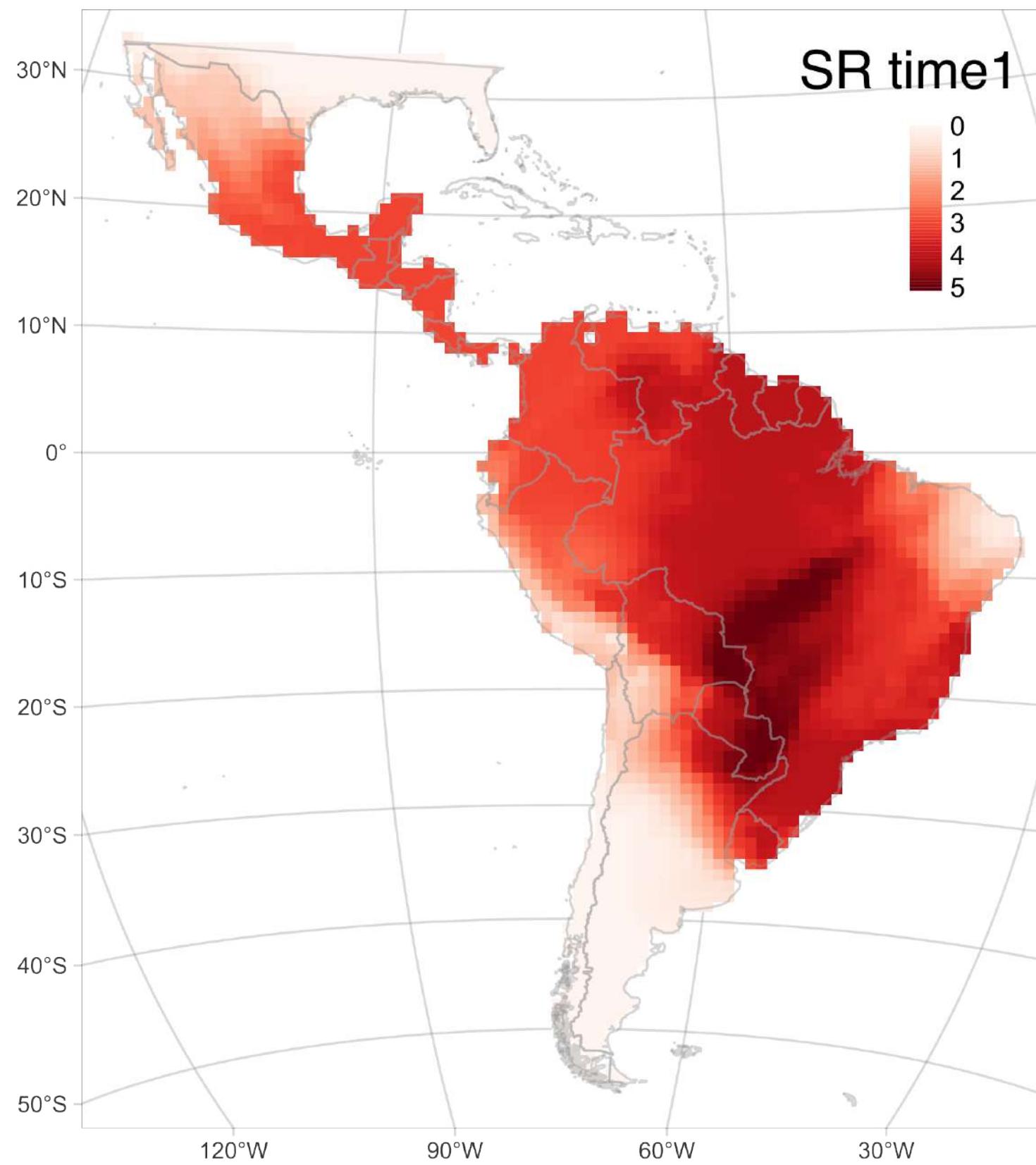
yaguarundí (*Herpailurus yagouaroundi*) por @hhulsberg, aguará guazú (*Chrysocyon brachyurus*) por @constanzamcl, eira (*Eira barbara*) por @christoph\_moning, margay (*Leopardus wiedii*) por @bigsam, and lobo de río gigante (*Pteronura brasiliensis*) por @npdowling (iNaturalist.org).



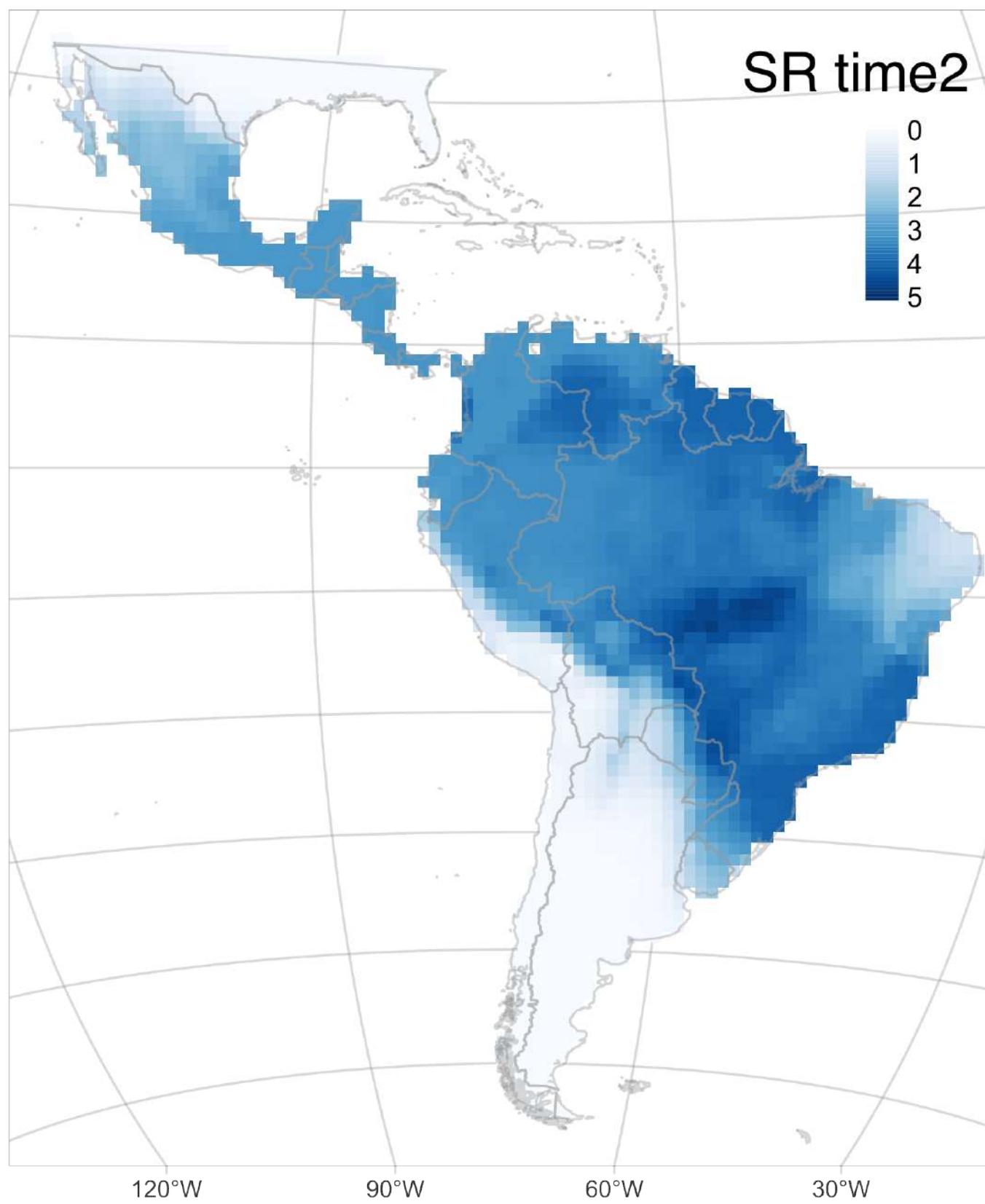
# Riqueza de especies



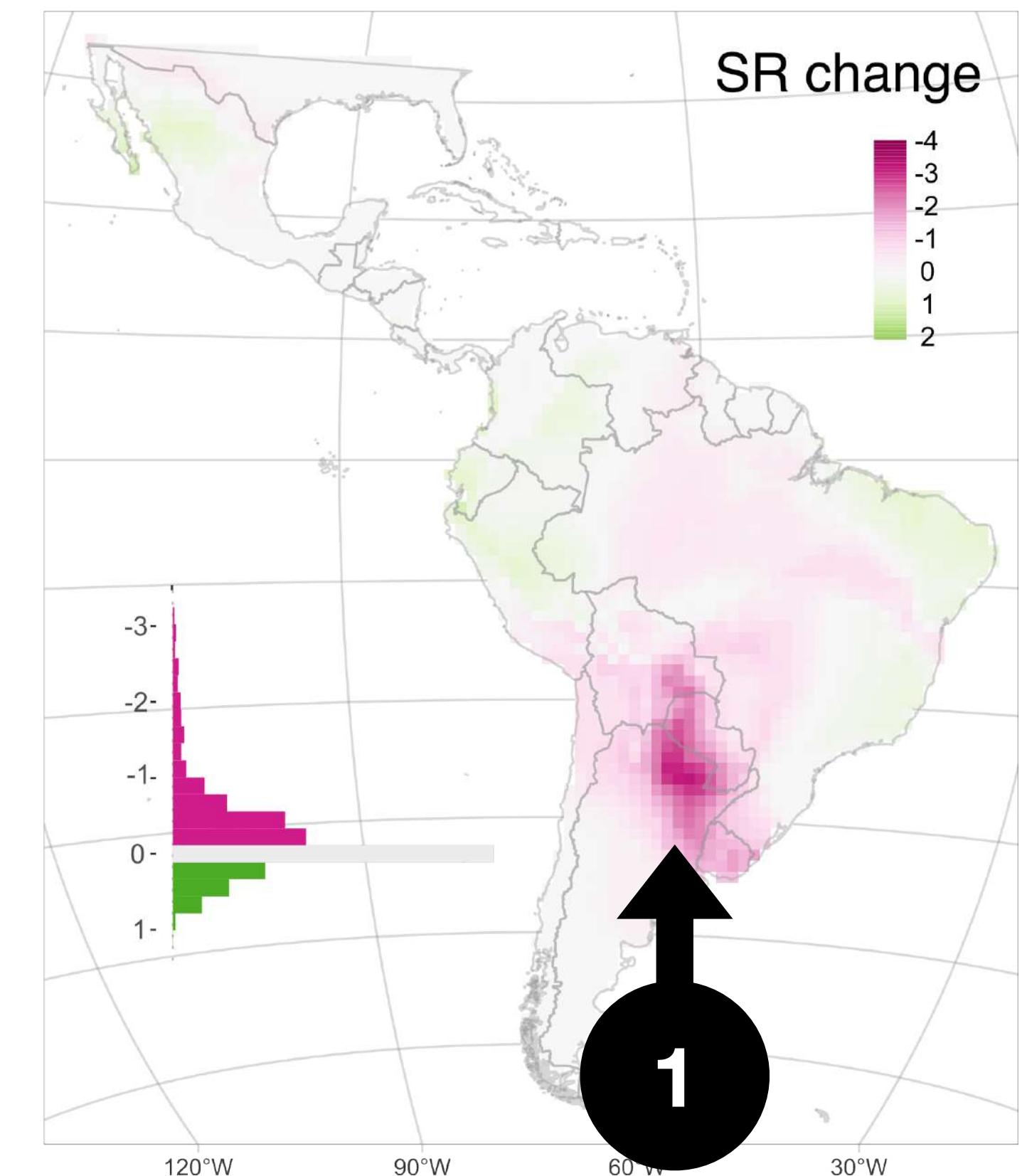
A



B



D



Pérdida

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DOI: 10.1111/jbi.14622

RESEARCH ARTICLE

# Integrating presence-only and presence-absence data to model changes in species geographic ranges: An example in the Neotropics

Florencia Grattarola<sup>1</sup>  | Diana E. Bowler<sup>2,3,4</sup> | Petr Keil<sup>1</sup>

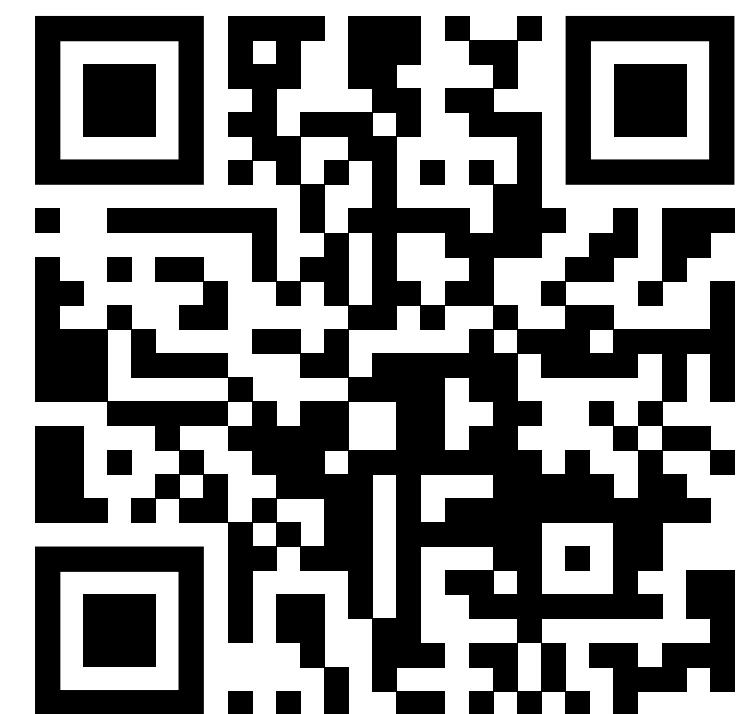
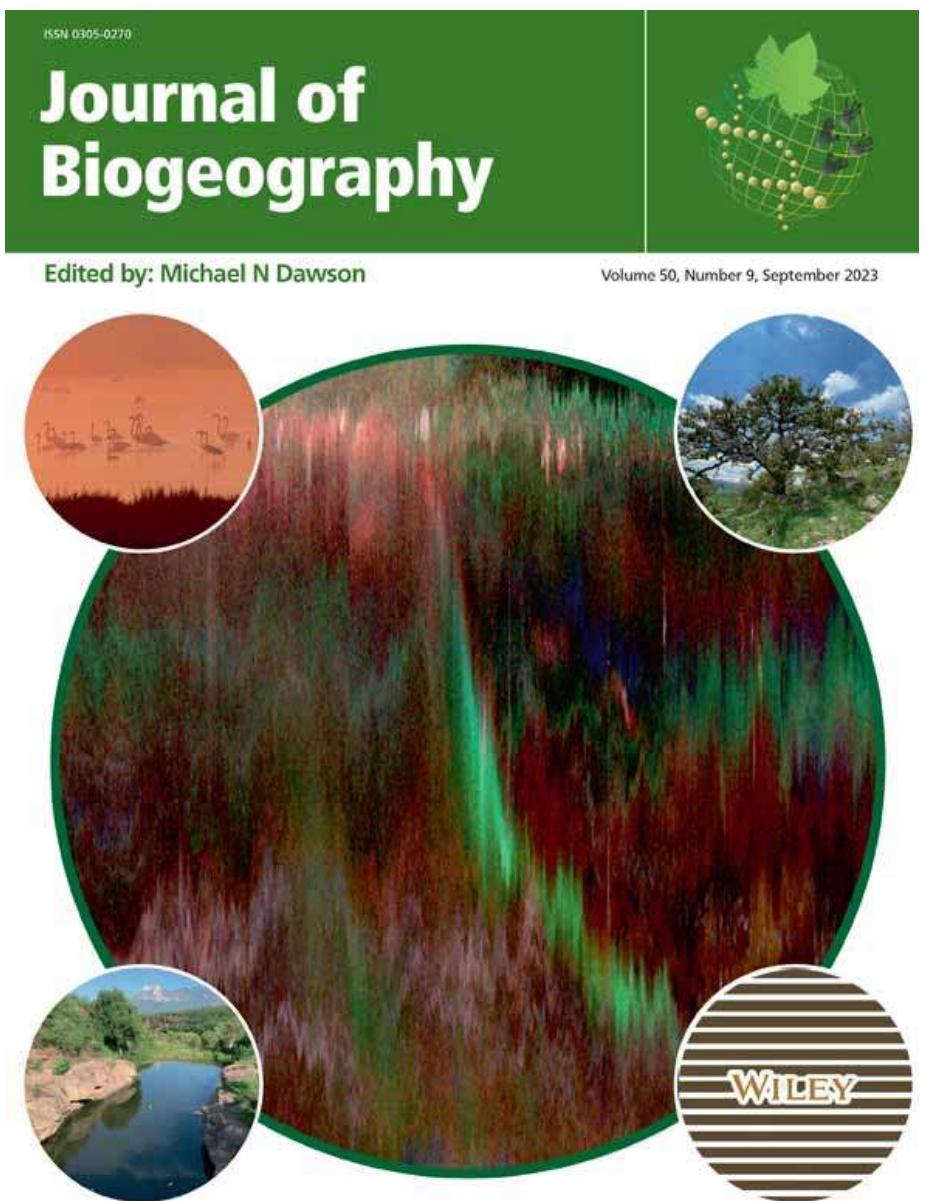


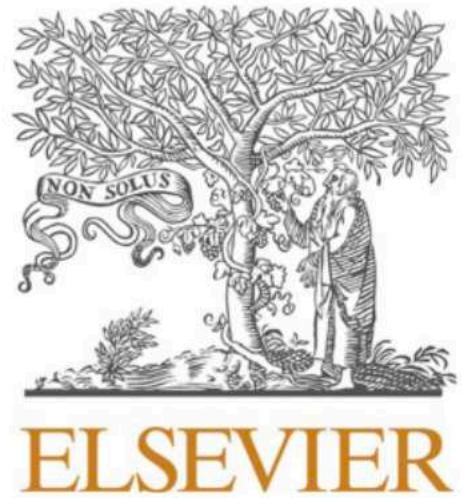
<https://doi.org/10.1111/jbi.14622>

Journal of  
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# Global Ecology and Conservation

journal homepage: [www.elsevier.com/locate/gecco](http://www.elsevier.com/locate/gecco)

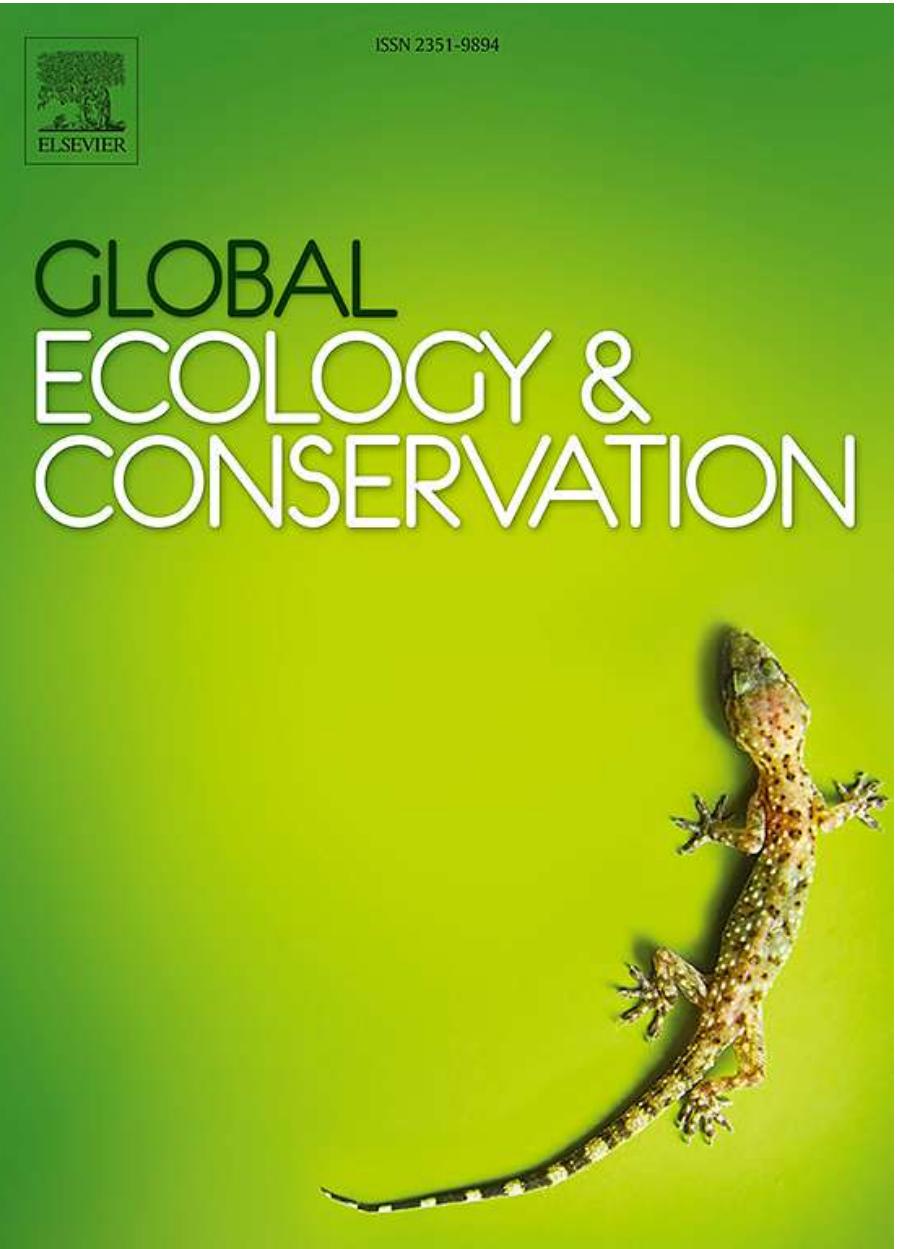
## A continental-wide decline of occupancy and diversity in five Neotropical carnivores

Florencia Grattarola <sup>\*,1</sup>, Kateřina Tschernosterová <sup>2</sup>, Petr Keil

Faculty of Environmental Sciences, Czech University of Life Sciences Prague, Kamýcká 129, Praha – Suchdol 16500, Czech Republic



<https://doi.org/10.1016/j.gecco.2024.e03226>



# MIAU: An analysis-ready dataset on presence-only and presence-absence data of Neotropical carnivores (Mammalia, Carnivora) from 2000 to 2021

Florencia Grattarola<sup>1</sup>, Kateřina Tschernosterová<sup>1</sup>, Petr Keil<sup>1</sup>

<sup>1</sup> Faculty of Environmental Sciences, Czech University of Life Sciences Prague, Kamýcká 129, Praha - Suchdol, 16500, Czech Republic

Corresponding author: Florencia Grattarola ([flograttarola@gmail.com](mailto:flograttarola@gmail.com))



<https://doi.org/10.3897/natureconservation.58.140644>



# Estado de invasión de un planta no nativa en Uruguay



@flo\_grattarola

**No existen datos oficiales  
sobre su introducción y  
presencia en el país**

**¿Cuál es el estado de invasión de  
*Carpobrotus edulis* en Uruguay?**

# Descarga de datos

Observaciones para el país



204 entre 16/03/2008 y 10/05/2023

La **Uña de Gato** o **Garra de León** (*Carpobrotus edulis*) es una planta **exótica invasora** en nuestro país



!

¿Andás por la costa? **¡Ayudanos a registrarla!**

# Análisis fotográfico

Densidad



@andresferz

Fenología



@andresferz

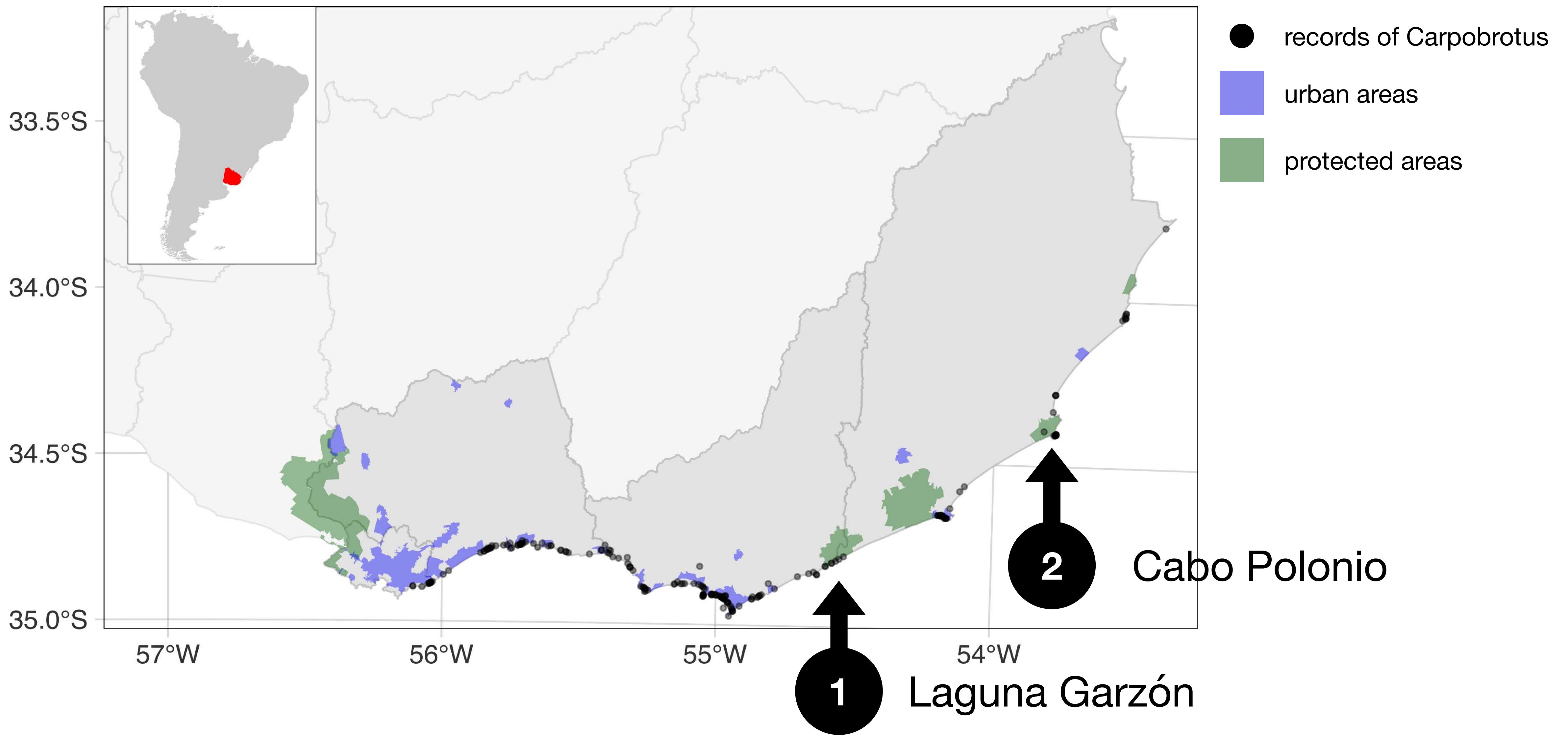
# Análisis fotográfico

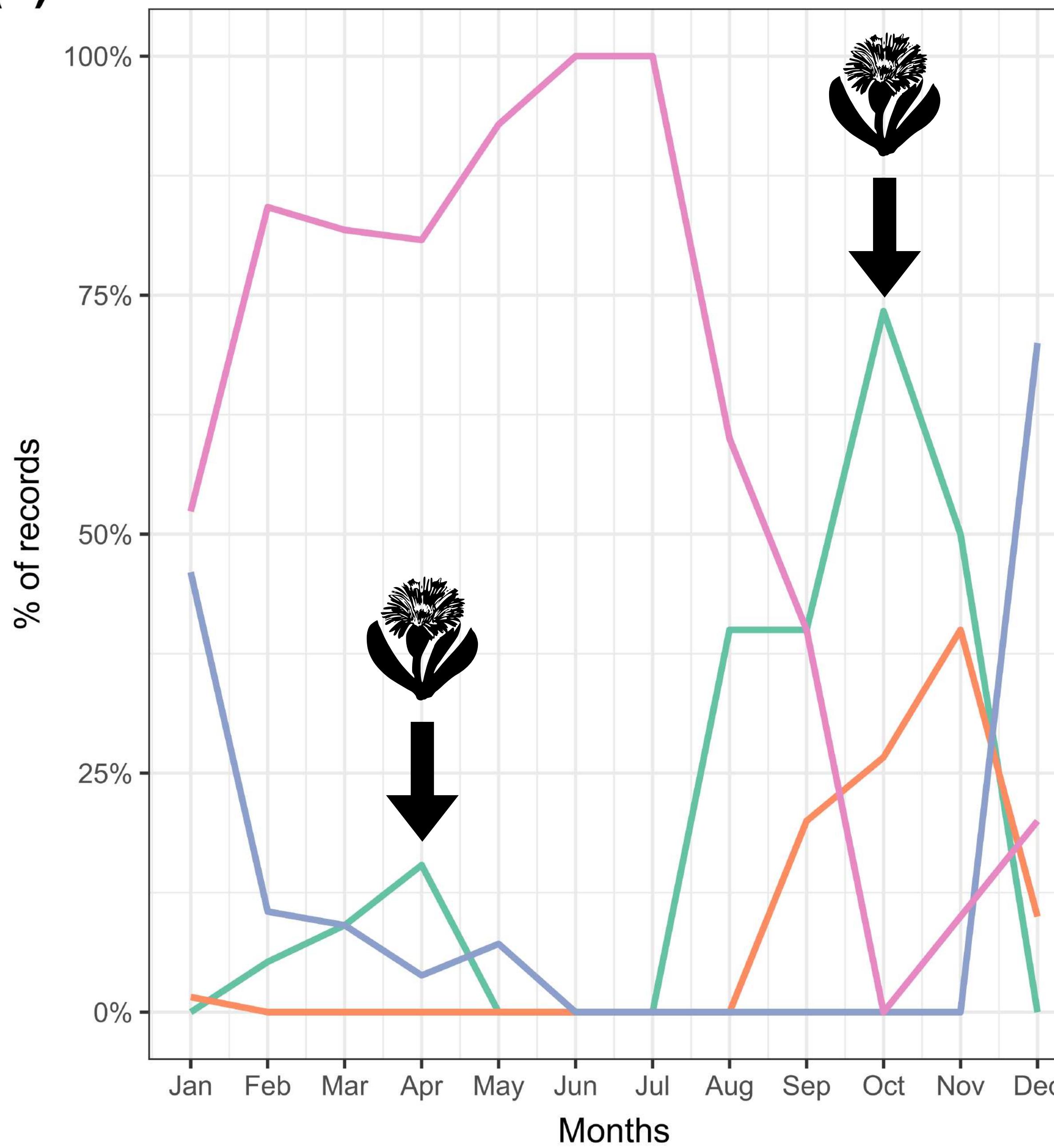
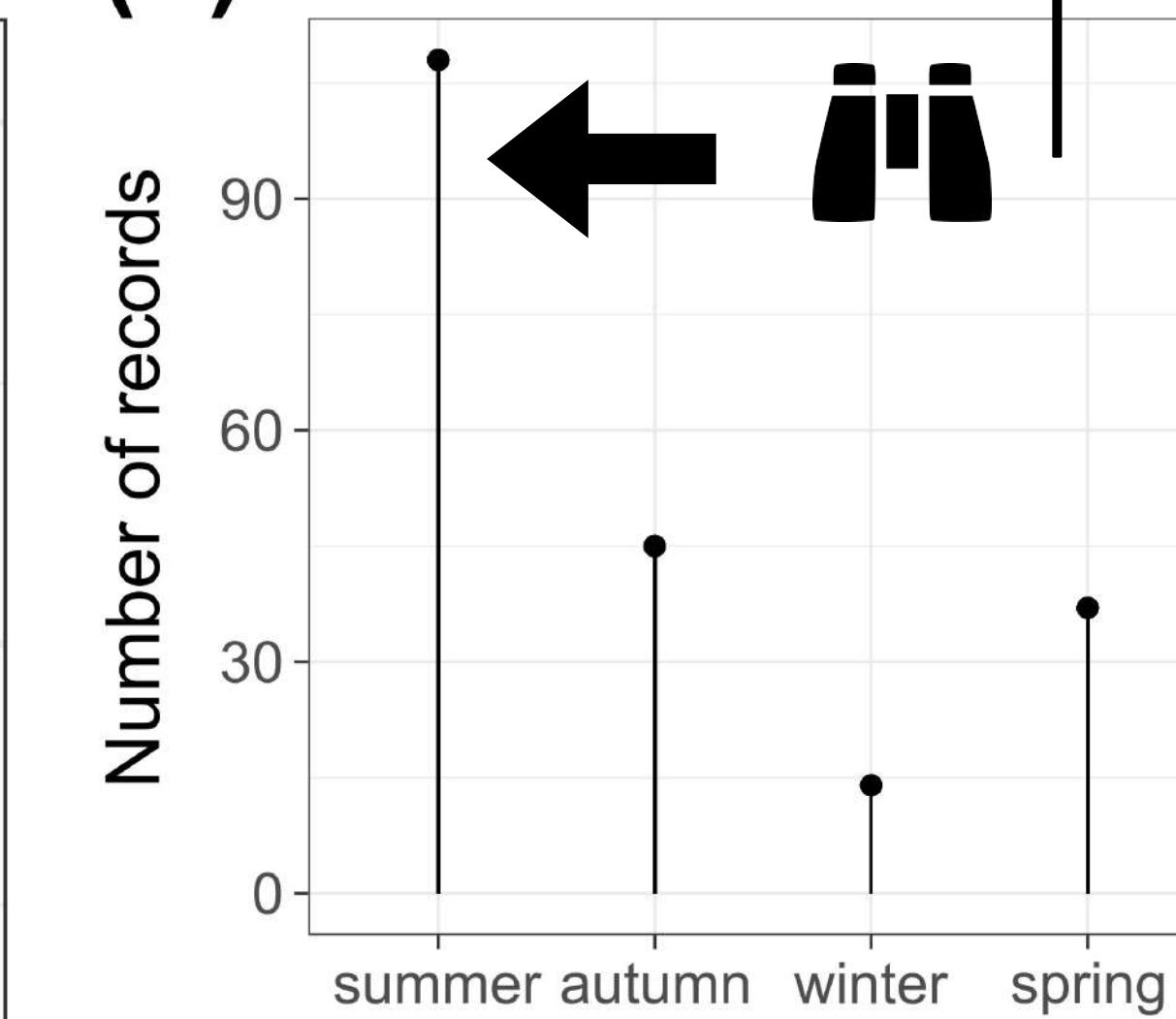


Presencia de infraestructura humana



@mattzarrr

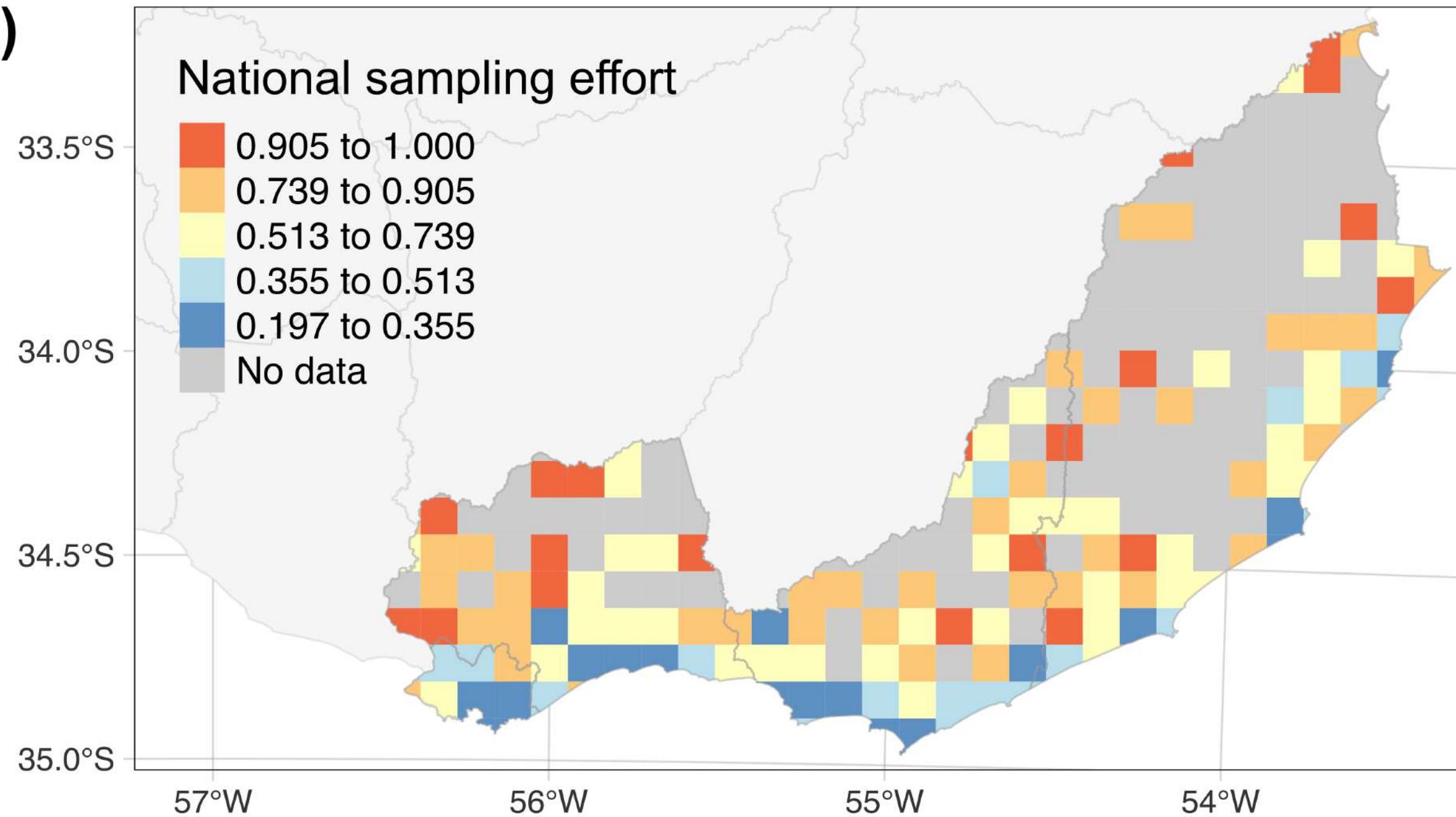


**(a)****(b)**

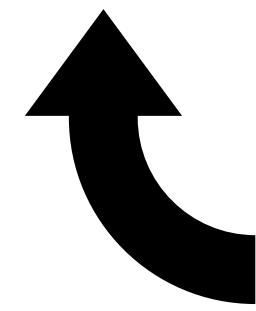
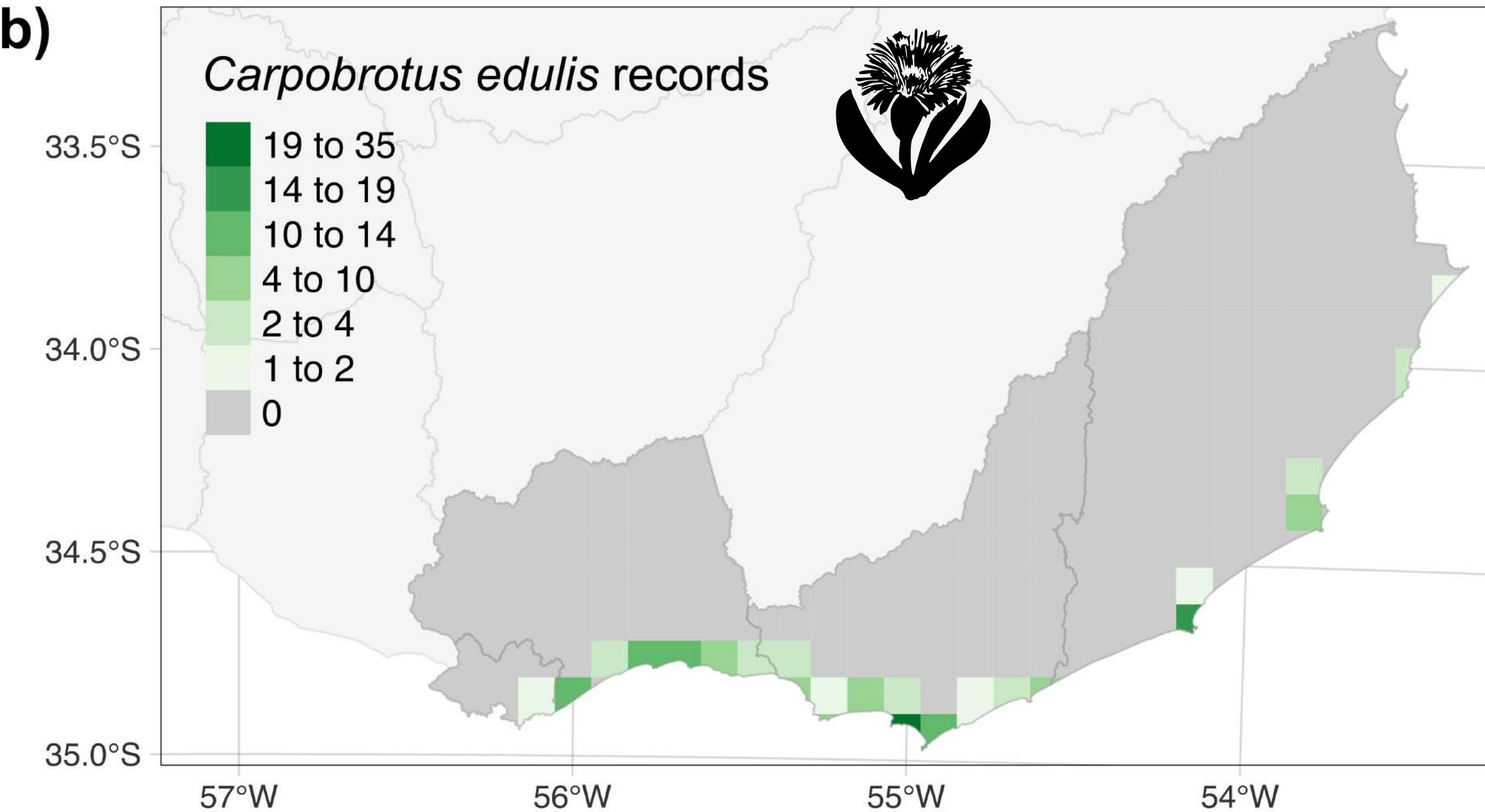
### Phenology

- flowering
- flowering/flower budding
- fruiting
- no evidence of flowering/fruiting

(a)



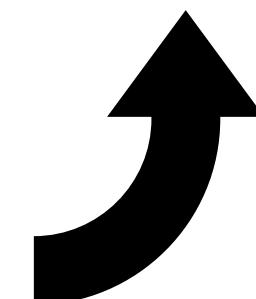
(b)

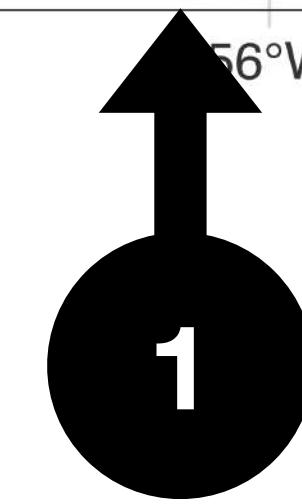
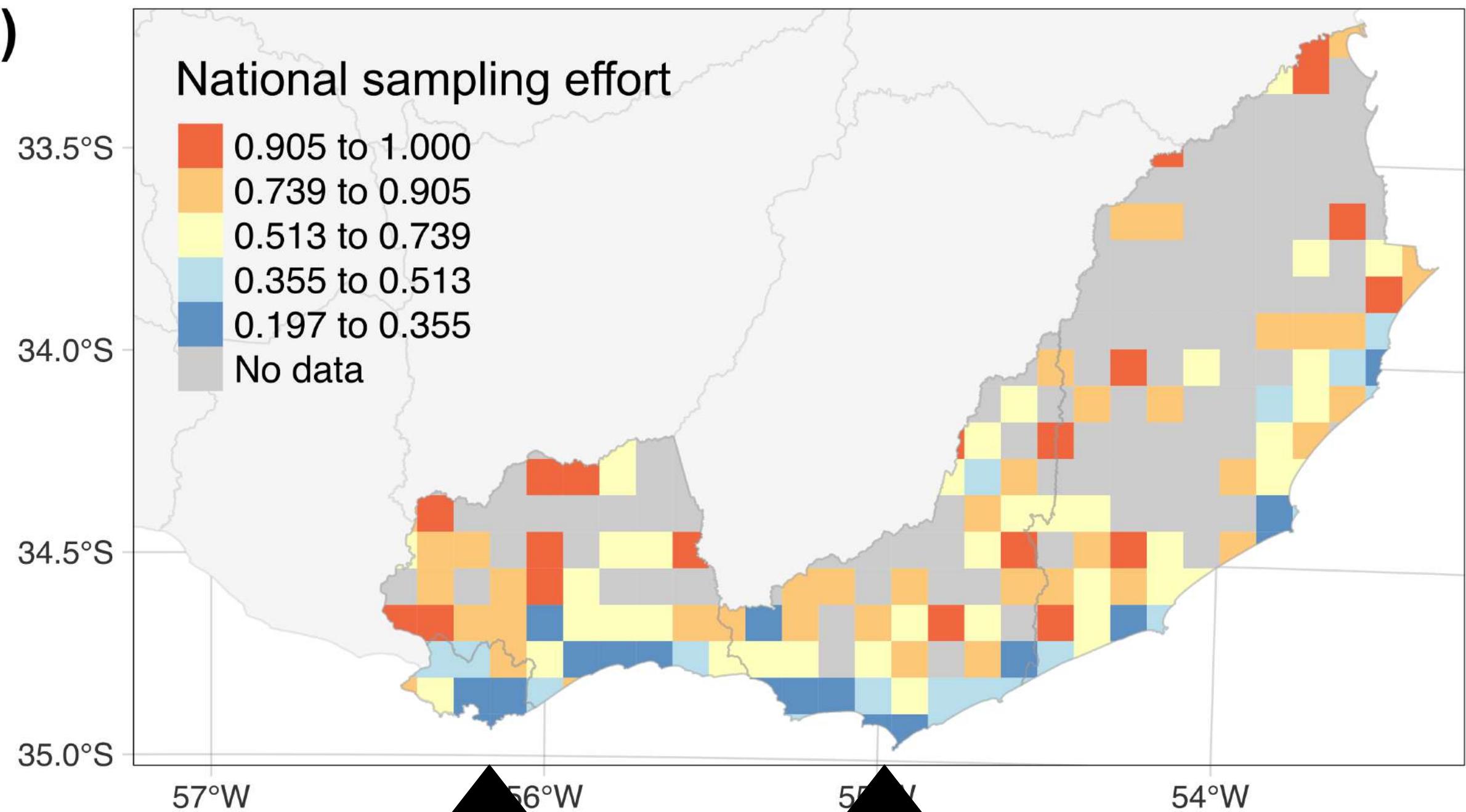


Esfuerzo de muestreo



Cantidad de registros de Carpobrotus

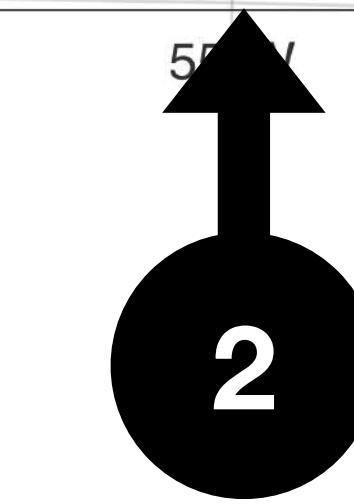


**(a)**

1



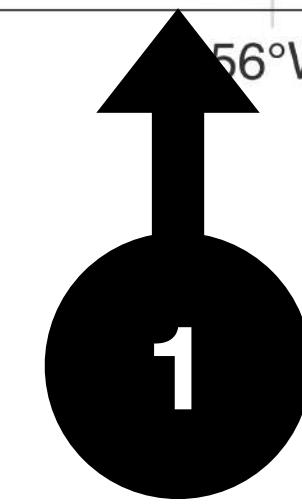
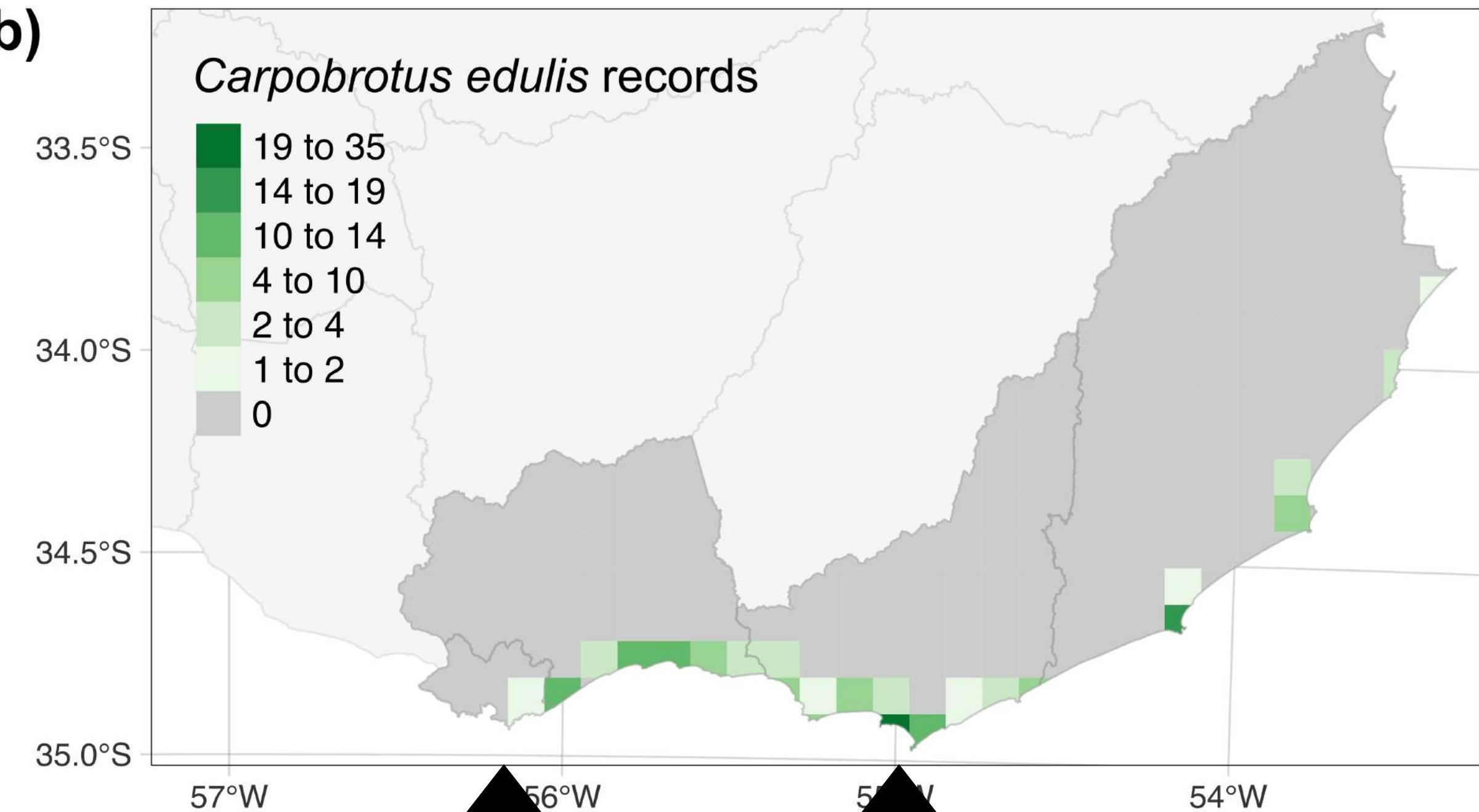
Montevideo



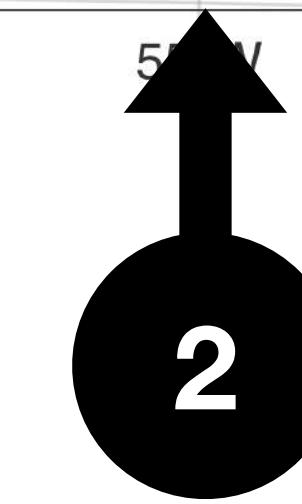
2



Maldonado

**(b)**

1



2

INVASION NOTE

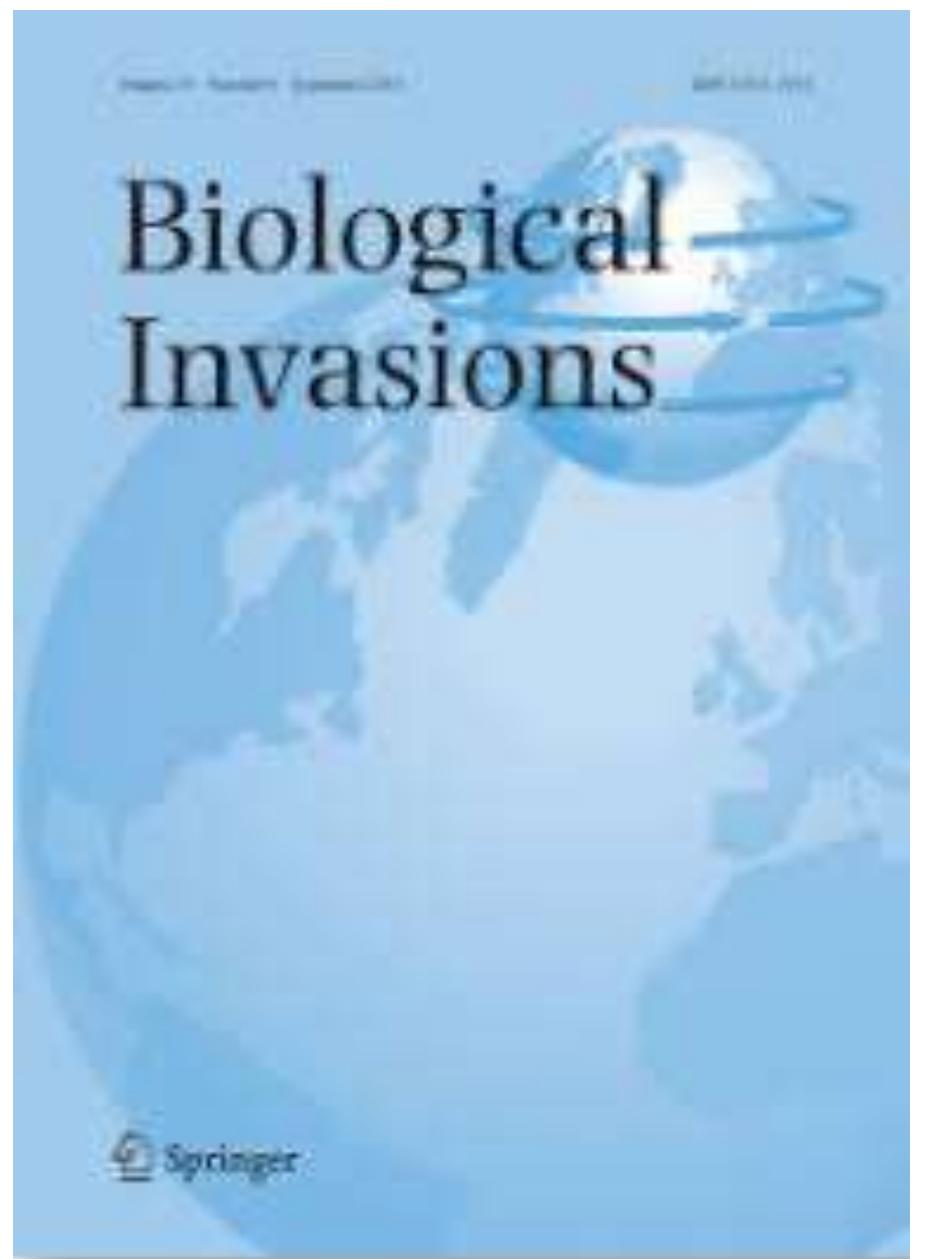


## Status of the invasion of *Carpobrotus edulis* in Uruguay based on citizen science records

Florencia Grattarola<sup>ID</sup> ·

Lucía Rodríguez-Tricot<sup>ID</sup> · Matías Zarucki<sup>ID</sup> ·

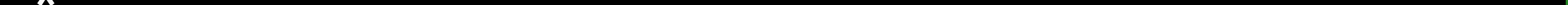
Gabriel Laufer<sup>ID</sup>



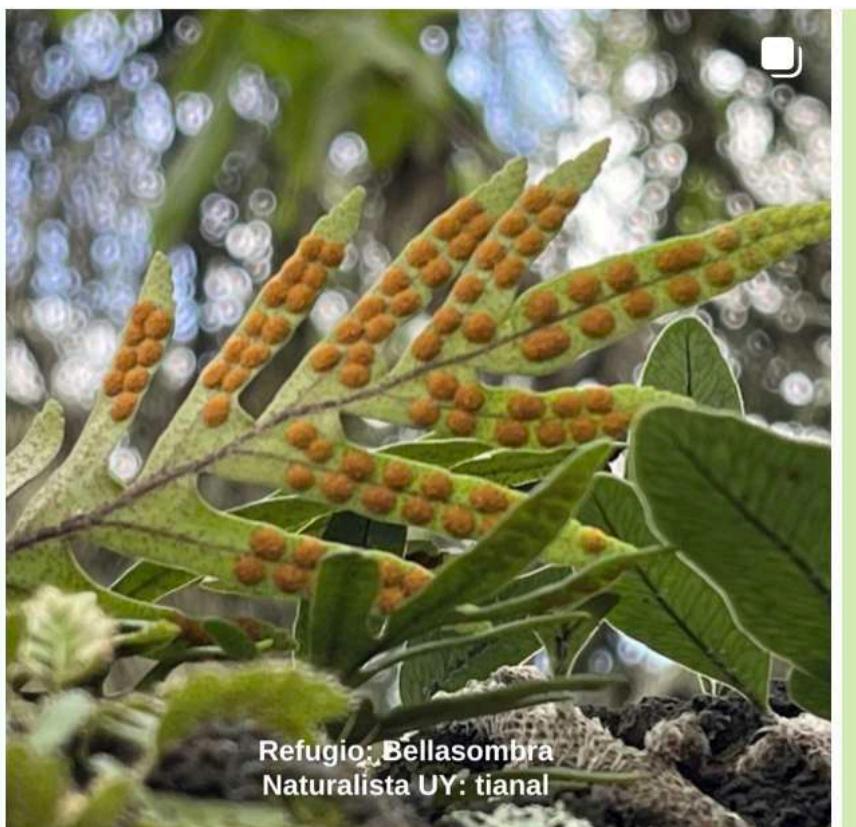
<https://doi.org/10.1007/s10530-023-03242-w>



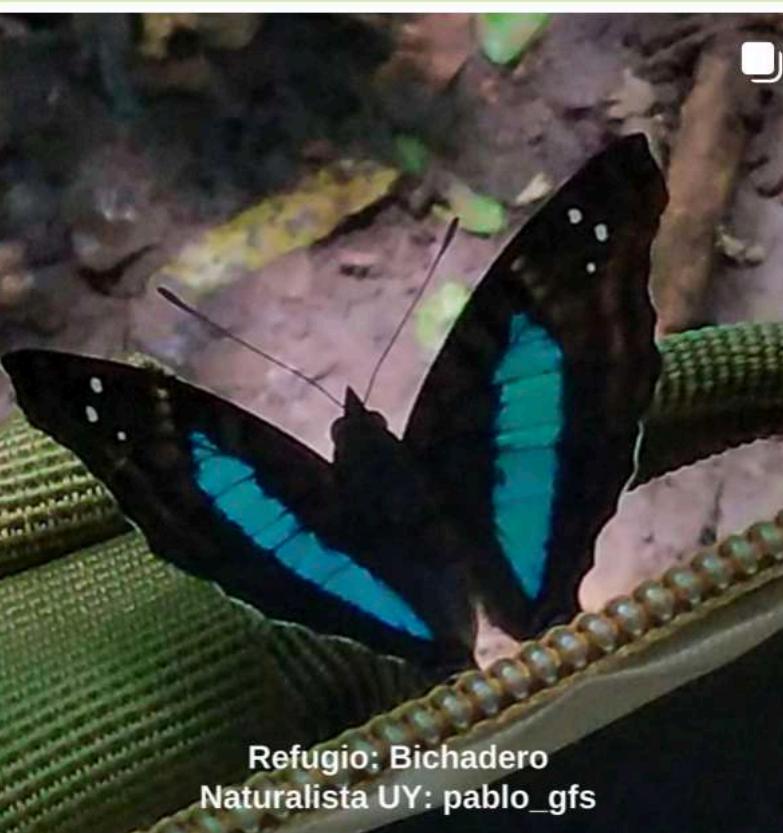
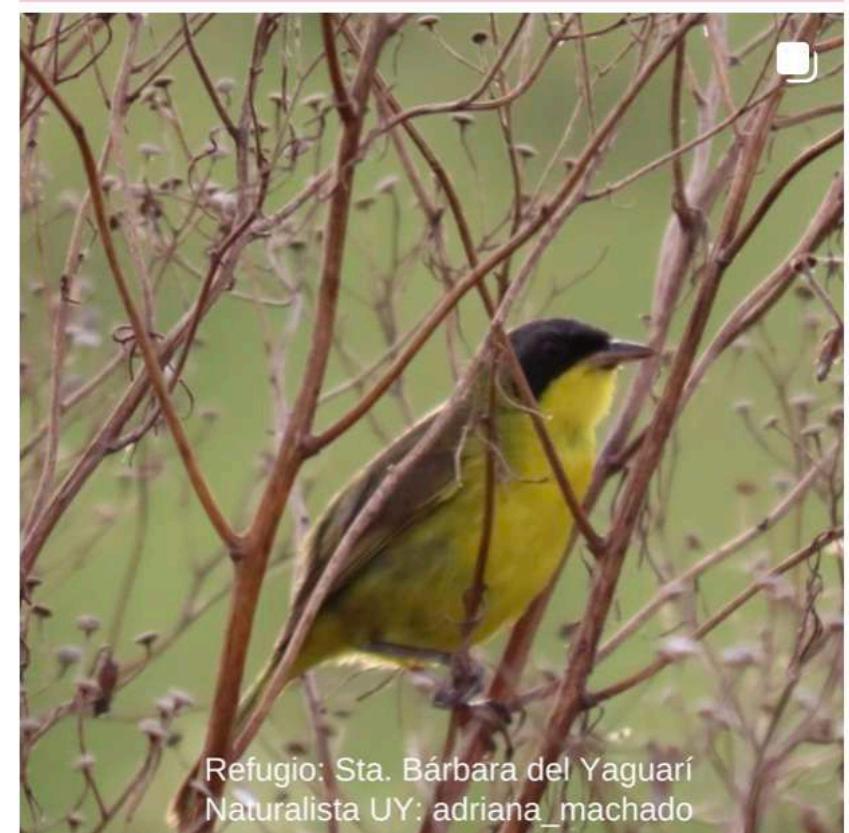
Destaque a quienes ayudan a sostener NaturalistaUY, ¡mujeres!



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de la Red de  
Refugios  
*en*  
NaturalistaUY

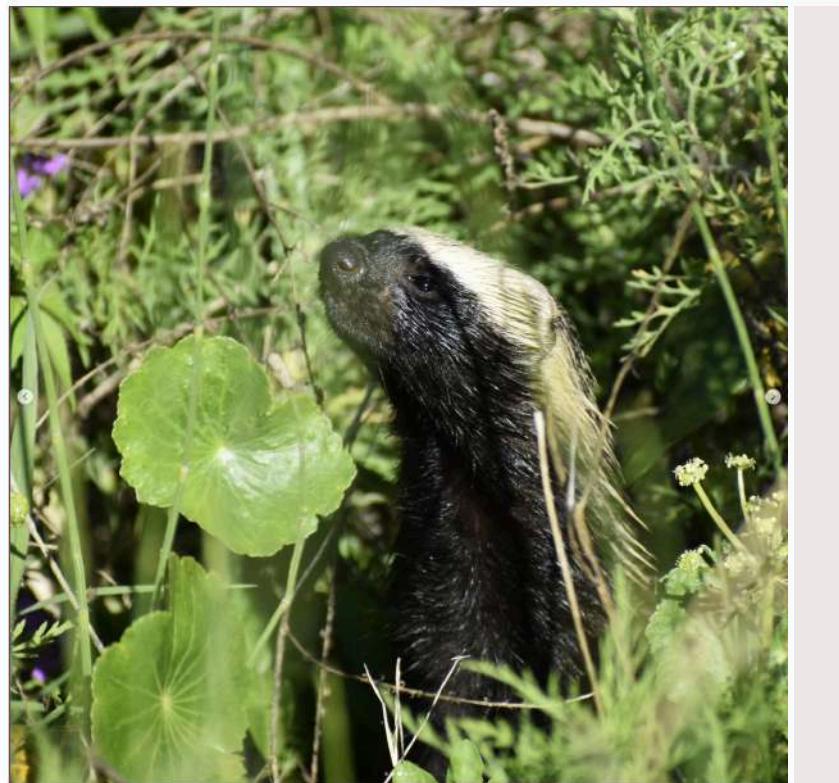
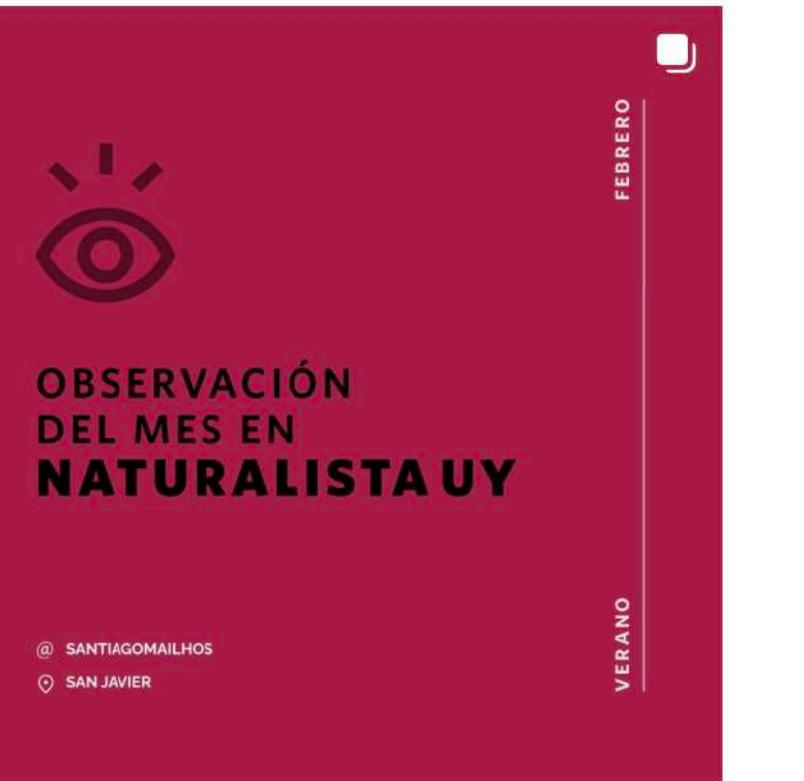
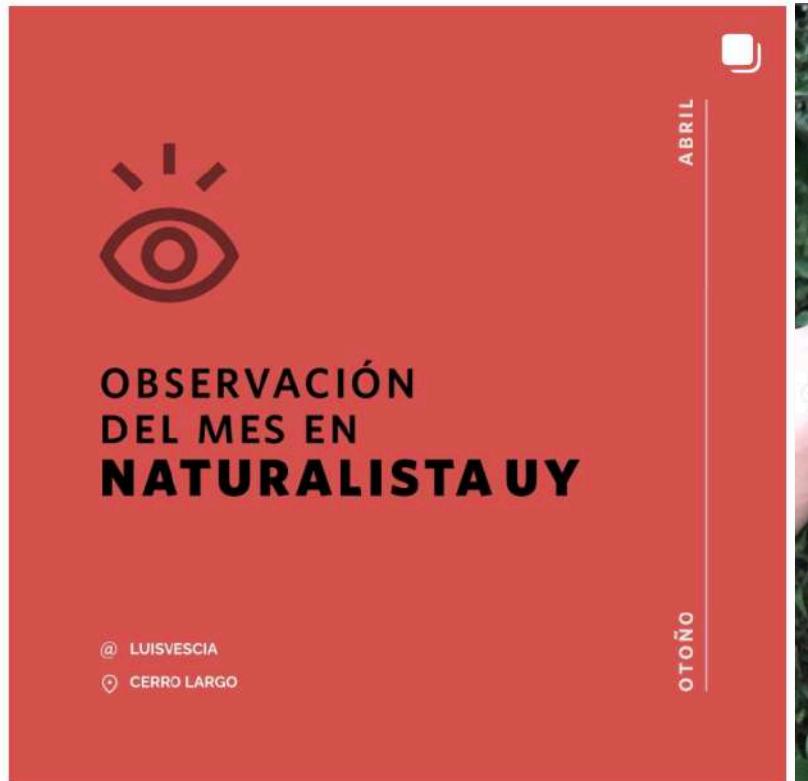


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Magdalena Carabio Foti





## Lucía Rodríguez-Tricot



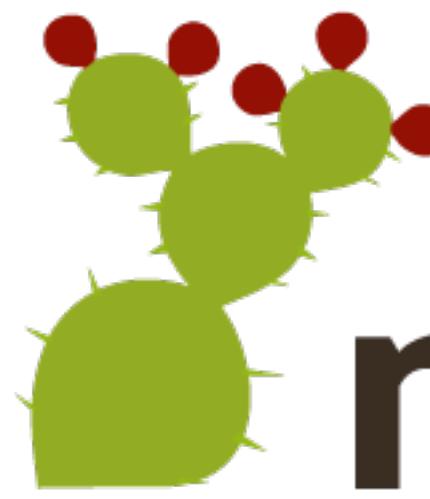


# Área Protegida Monte “María Mercedes Machín”



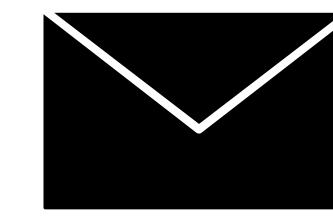
<https://www.naturalista.uy/projects/biodiversidad-de-cerro-de-piedra-refugios-de-vida-silvestre>

# ¡Gracias!

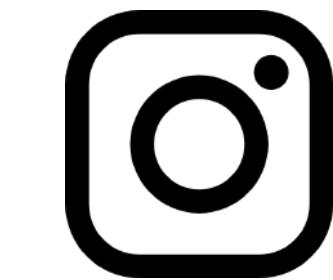


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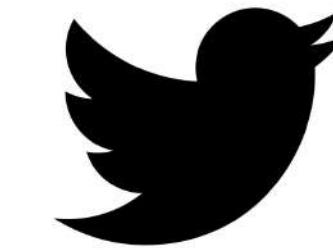
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