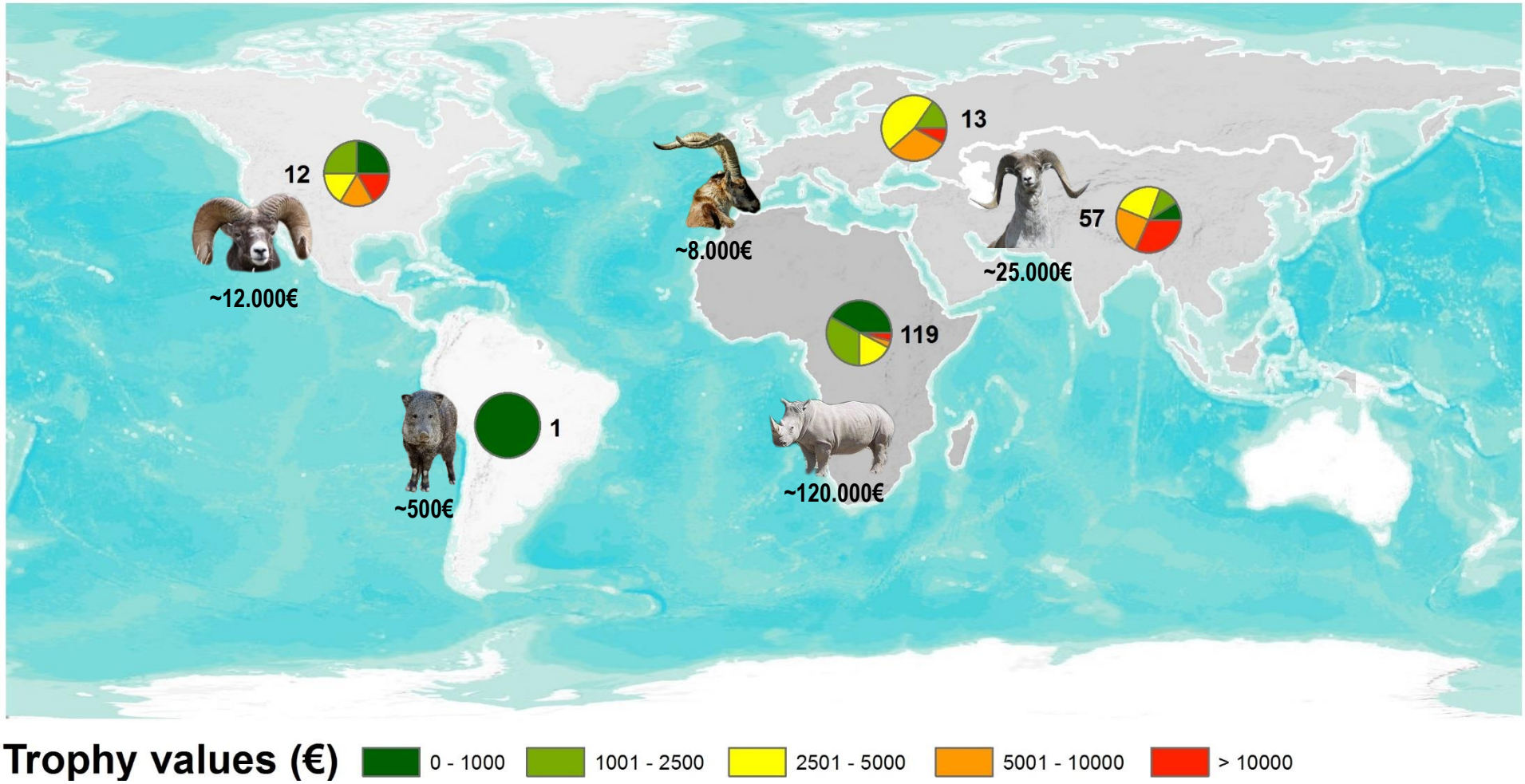
Pequeño de joven, pequeño de viejo

Ausencia de crecimiento compensatorio en los cuernos del macho montés

João Carvalho • Oihana Eizaguirre • Jesús M. Pérez • Gregorio Mentaberre • Santiago Lavín • Paulino Fandos • Jordi Ruiz Olmo • Xavier Olivé-Boix • Rita T. Torres • Carlos Fonseca • Nathalie Pettorelli • Emmanuel Serrano

Cofrentes - Muela de Cortes, Valencia – España
1 al 4 junio 2017

Introduction



Introduction

ORIGINAL ARTICLE

Intense selective hunting leads to artificial evolution in horn size

Gabriel Pigeon,[1,2] Marco Festa-Bianchet,[1] David W. Coltman[3] and Fanie Pelletier[1,2]

Changes in horn size of Stone's sheep over four decades correlate with trophy hunting pressure

Mathieu Douhard,[1,2,3] Marco Festa-Bianchet,[2] Fanie Pelletier,[2] Jean-Michel Gaillard,[1] and Christophe Bonenfant[1]

Management and Conservation

Decrease in Horn Size and Increase in Age of Trophy Sheep in Alberta Over 37 Years

SELECTIVE HARVESTING AND HABITAT LOSS PRODUCE LONG-TERM LIFE HISTORY CHANGES IN A MOUFLON POPULATION

Mathieu Garel,[1,2,5] Jean-Marc Cugnasse,[3] Daniel Maillard,[2] Jean-Michel Gaillard,[1] A. J. Mark Hewison,[4] and Dominique Dubray[2]

PERSPECTIVE

When does selective hunting select, how can we tell, and what should we do about it?

Marco FESTA-BIANCHET *Département de biologie, Université de Sherbrooke, Sherbrooke, Québec J1K 2R1, Canada. Email: m.festa@usherbrooke.ca*

Reduced horn size in two wild trophy-hunted species of Caprinae

Jesus M. Perez, Emmanuel Serrano, Monica Gonzalez-Candela, Luis Leon-Vizcaino, Gonzalo G. Barbera, Miguel A. de Simon, Paulino Fandos, Jose E. Granados, Ramon C. Soriguer & Marco Festa-Bianchet

Horn size is related to animal overall performance and is sensitive to direct and indirect external forcing factors, including food availability, climate variability, hunting pressure and genetic architecture.

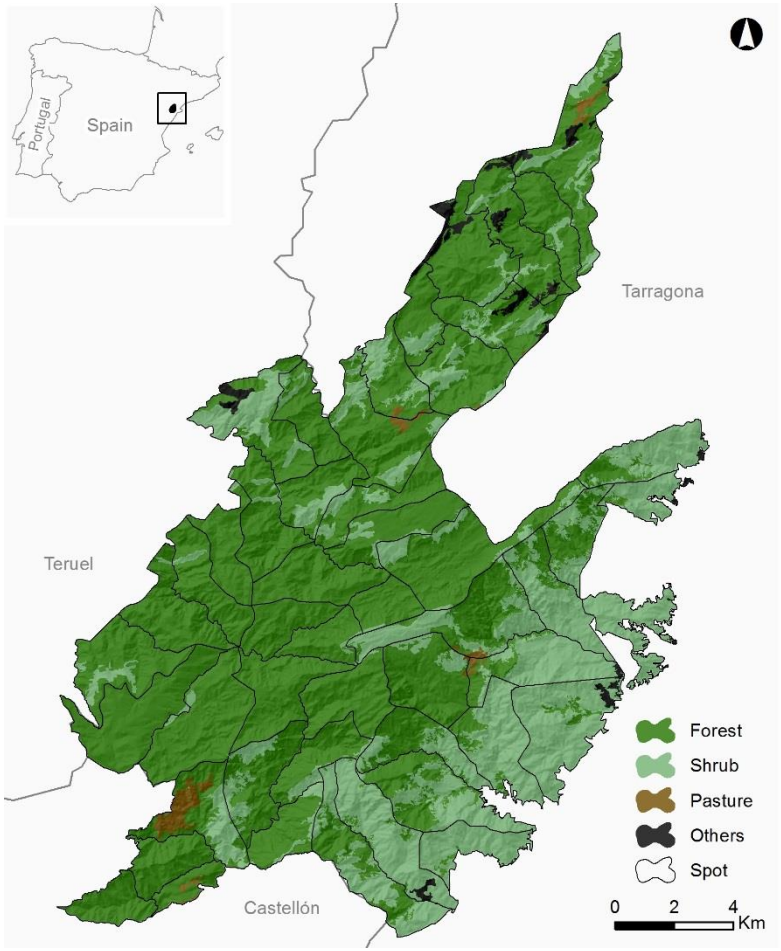
Hypothesis

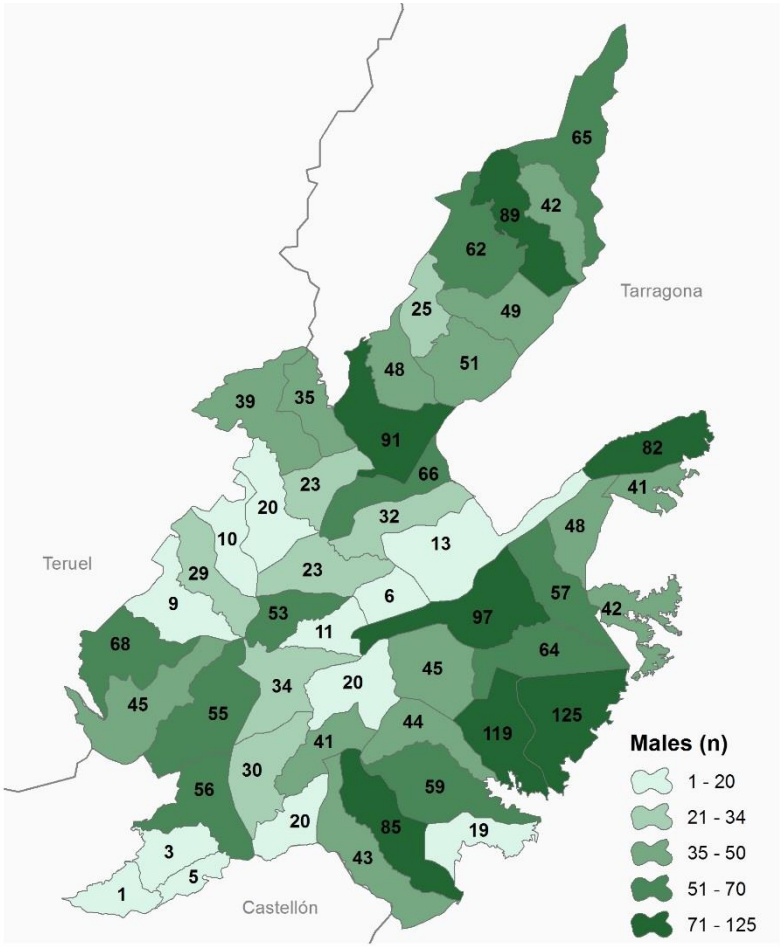
H1: We expect marked individual heterogeneities in horn size (**H1a**) and evident plasticity in horn growth patterns between sampling locations (**H1b**);

H2: The large variability in habitat characteristics found in our study area may allow for compensatory horn growth to occur in male ibex inhabiting specific locations.

Materials and methods

Study area and Iberian ibex sampling





N = **2,145** male ibexes (**24,615** annual horn growth segments) sampled at “Els Ports de Tortosa i Beseit” National Game Reserve over 21 years (from 1995 to 2016).

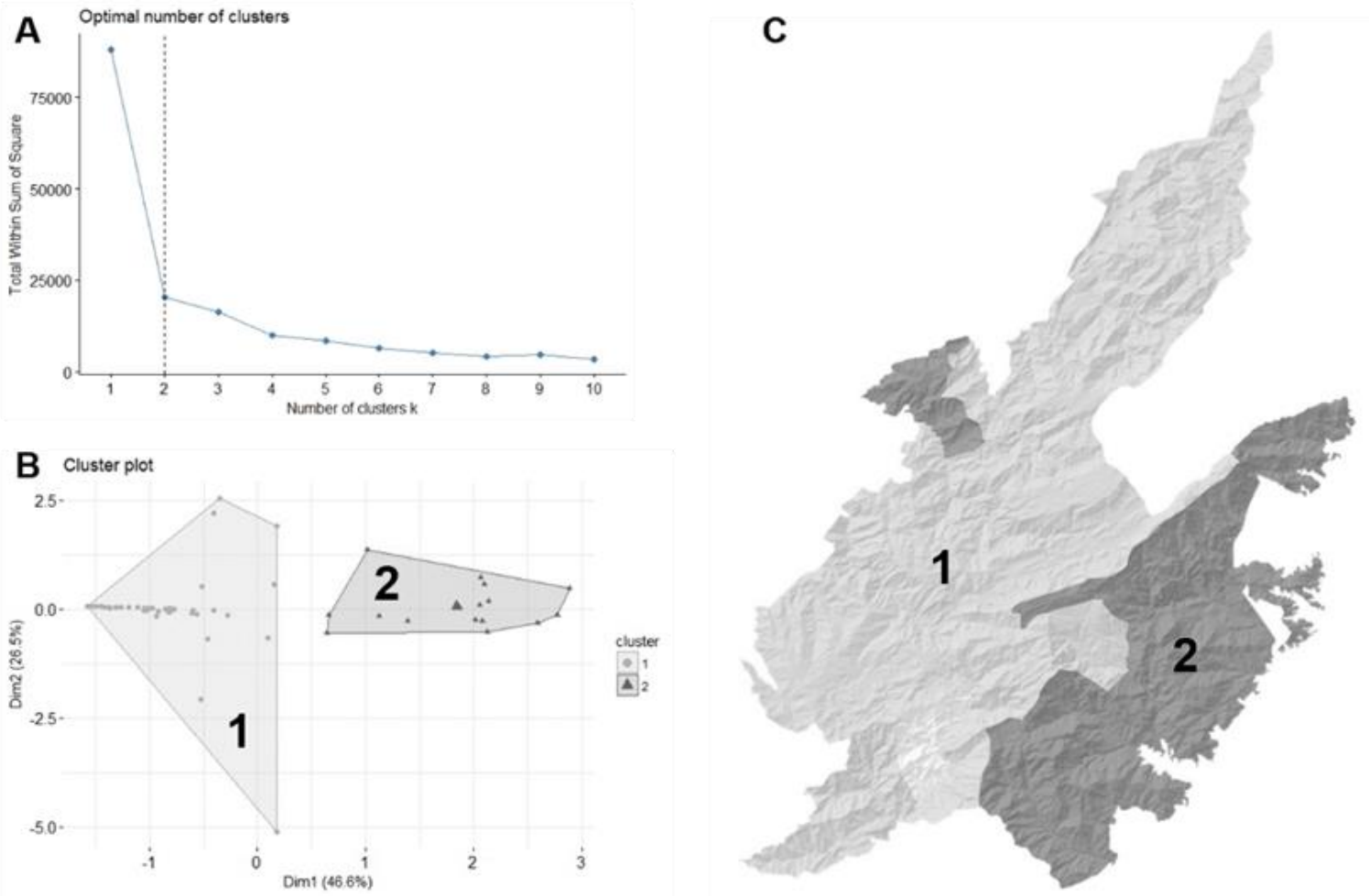
Statistical analysis

H1a and H1b: Mixed models with **annual segment length** (cm) as the response variable, and **male identity** (ID) as a random factor. **Age** (years), **cohort** and **habitat cluster** were included as fixed factors;

H2: Regression model between **log-transformed L2** and the **log-transformed L3-L6** (inflection point). Multiple regressions between subsequent horn growth segments (**L3-L2**, **L4-L3**, **L5-L4** and **L6-L5**). **Cohort** and **habitat cluster** were included as fixed factors.

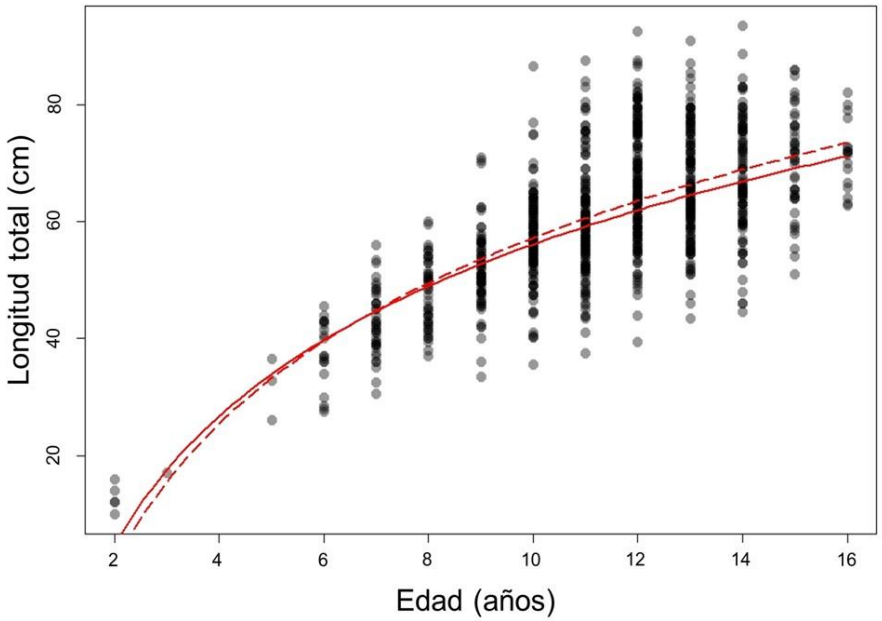
Results and discussion

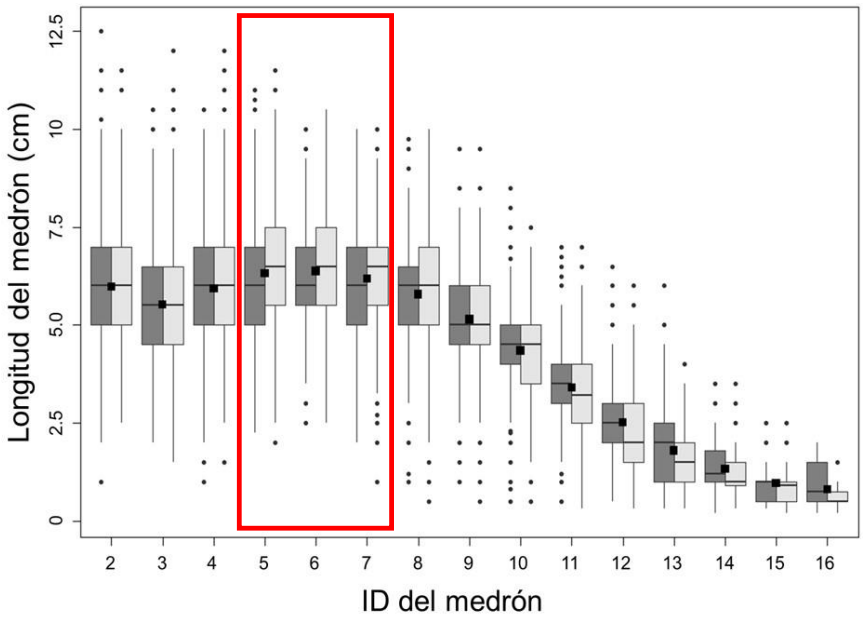
K-means cluster analysis



We identified **two** distinct clusters (A, B) that explain **73.11%** of the spot variability in terms of habitat characteristics (C).

Horn growth patterns



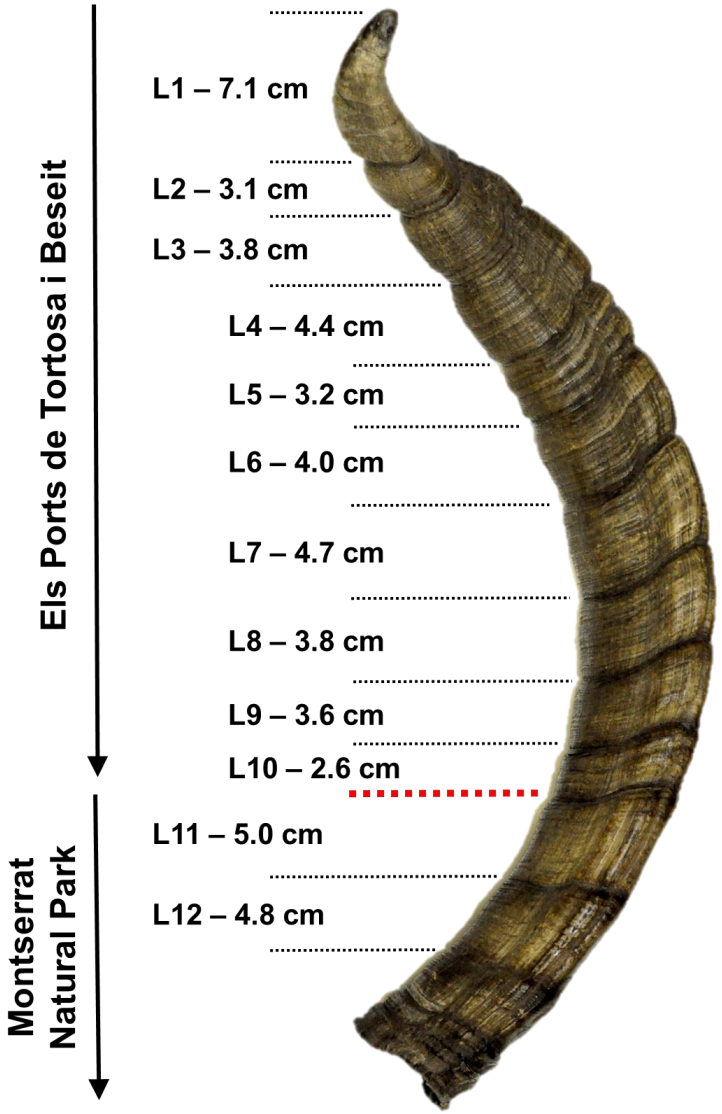


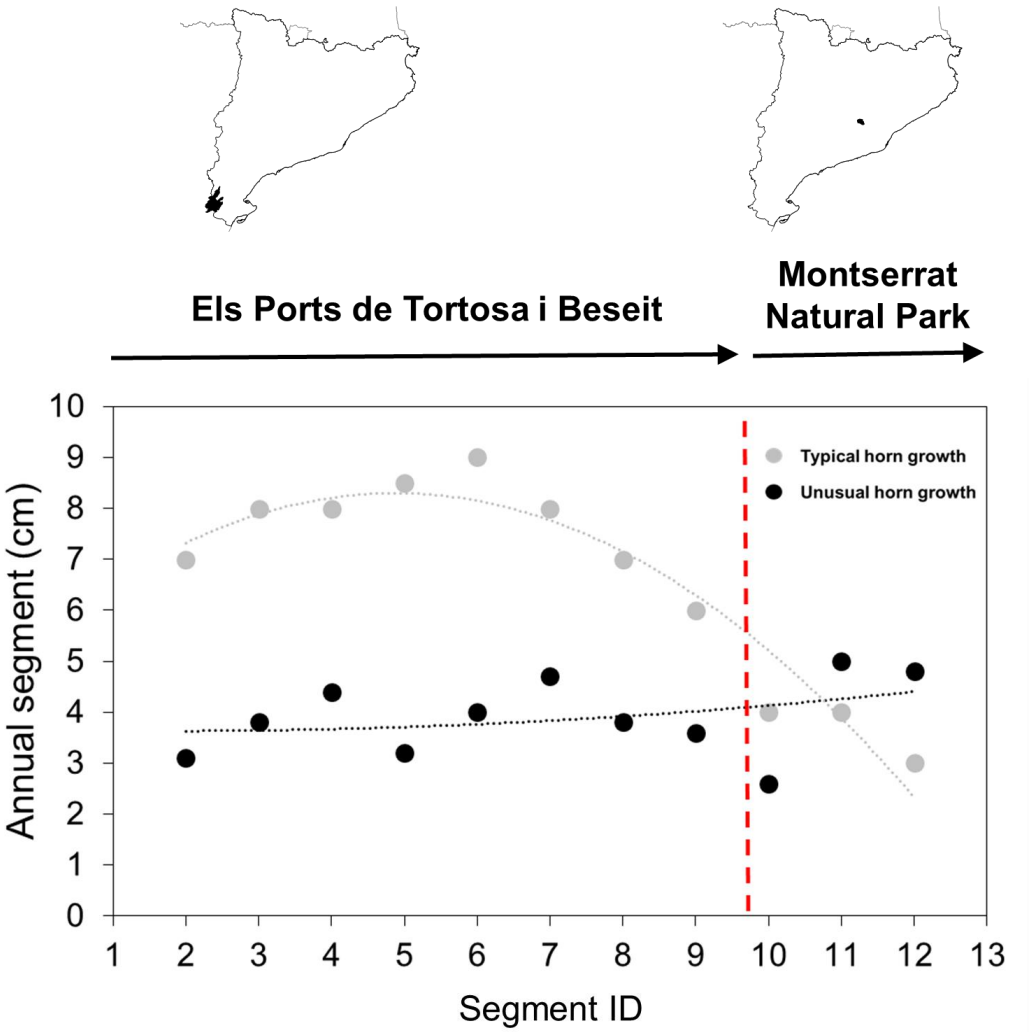
Among-individual variations accounted for 27.75% of observed differences in annuli length H1a ✔

The annual segments of males harvested in spots dominated by scrublands are significantly longer than the segments of males harvested in forest-dominated areas (β = 0.43, SE = 0.05, t = 9.23, P < 0.001)

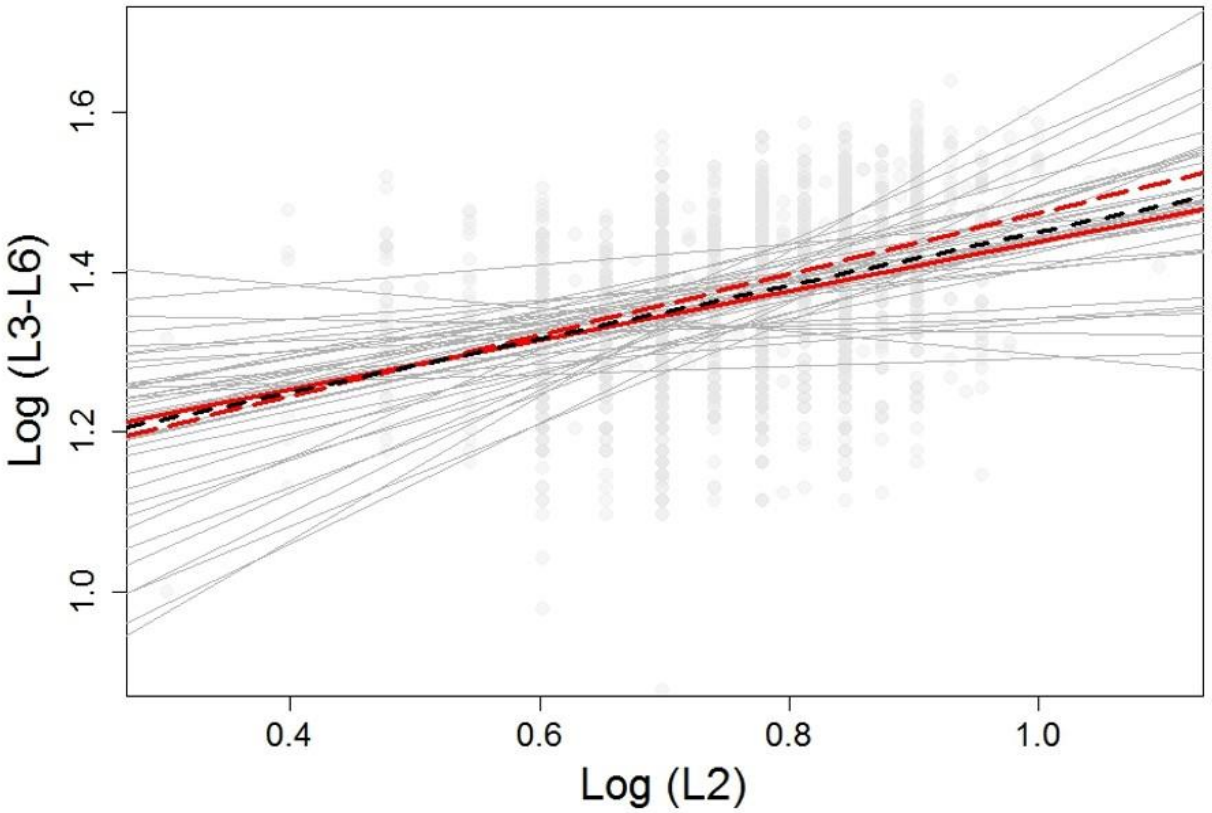
H1b ✔

Evidence for phenotypic plasticity

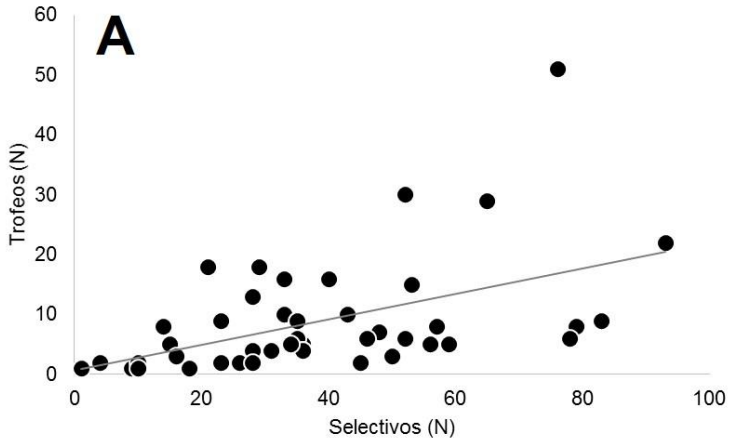




Compensatory horn growth

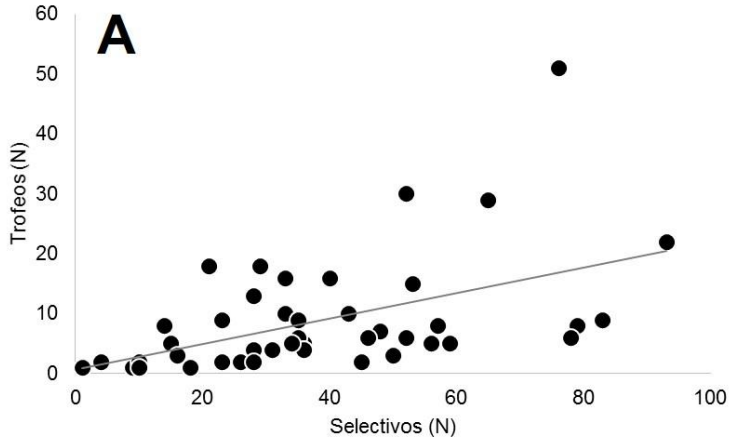


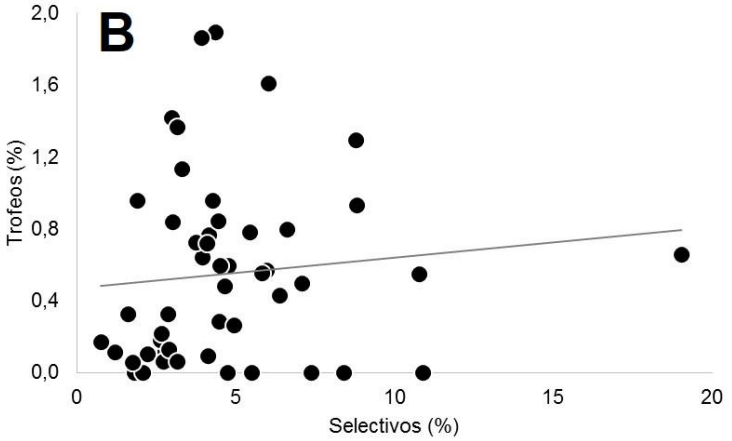
La longitud de L2 estuvo positivamente correlacionada con la longitud del cuerno entre L3 y L6 (β = 0.42, SE = 0.03, t = 13.55, P < 0.001. La relación de la longitud de los medrones subsecuentes fue también positiva.



Selective hunting?

(A) Relationship between the number of selective and trophy males.

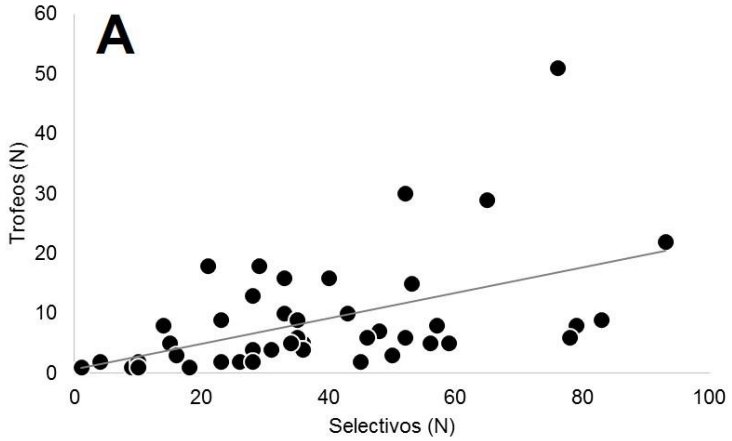


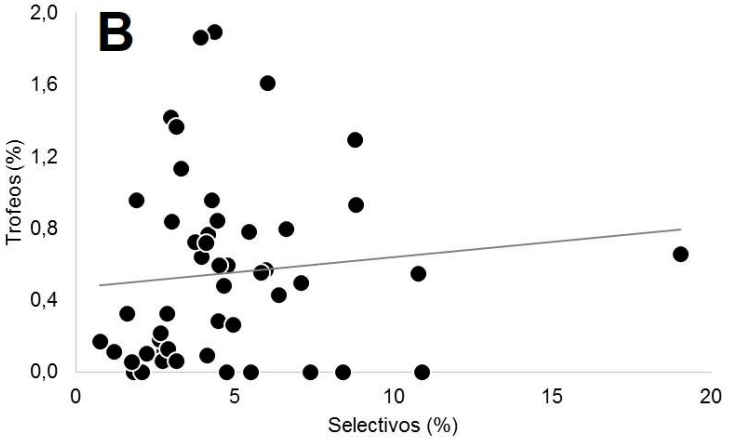


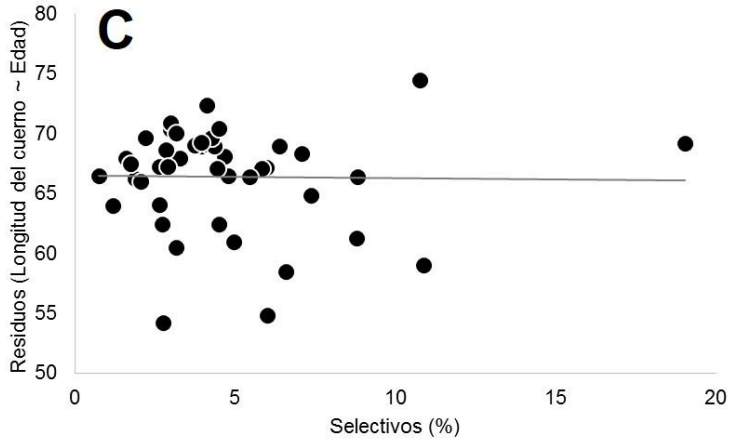
Selective hunting?

(A) Relationship between the number of selective and trophy males;

(B) Relationship between the percentage of selective and trophy males.







Selective hunting?

(A) Relationship between the number of selective and trophy males;

(B) Relationship between the percentage of selective and trophy males;

(C) Relationship between the percentage of selective males and the trophy size.