From Jaguars to Bears
Working in Conservation from Different Points of View

Noa González Borrajo
@unconejoenelbolsillo
Who am I?

Where am I from?

Mountains

“Rias”

Octopus

GALICIA
Northwest of Spain

Way of Saint James

Pipes
My studies and career

- Biology
- Msc in conservation
- Msc in education

But, what after the msc?

Researching

Do you have to know that you want to be a researcher since you are young? Or not?

Volunteer in Australia
My studies and career

Finally... PhD!

Marking behaviour and spatial ecology of the big American felids
PhD!
Marking behaviour and spatial ecology of the big American felids

Field work
- Collecting samples (mainly scats)
- Gps collars

Laboratory work
- Genetics.
  To identify species, sex and individuals.

Data analysis and writing
You all know what is this!
Field work

México - Sinaloa

México - Yucatán

Belice

Brasil – San Paulo
Necessary equipment

Mary Poppins Backpack
Hat
Water
GPS
Umbrella
Machete ¿?
Notepad and pencil
Notepad and pencil
and pencil
Signs we could find along the survey:

- Scats
- Scrapes
- Footprints
- Others
¿How did we preserve the scats?

Urine cans or small plastic bags

WITH
Silica or Ethanol

¡Very important!! A clear label

Number of sample + name + date
### Genetics in the lab

- Each column is a scat

<table>
<thead>
<tr>
<th>Species</th>
<th>Jag</th>
<th>Oc</th>
<th>Puma</th>
</tr>
</thead>
<tbody>
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<td></td>
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</table>
Genetics in the lab

4 repetitions of each sample

SEX
The study in which we based our protocol

MOLECULAR DIAGNOSTICS AND DNA TAXONOMY
Identification of Neotropical felid faeces using RCP-PCR

S. ROQUES,* B. ADRADOS,*, C. CHAVEZ,† C. KELLER,‡ W. E. MAGNUSSON,‡ F. PALOMARES* and J. A. GODOY*
*Department of Conservation Biology, Estación Biológica de Doñana, CSIC, Calle America Vespuccio s/n, 41092 Sevilla, Spain,
†Laboratorio Ecología y Conservación de Fauna Silvestre, Instituto de Ecología, UNAM, 04510 Mexico D.F., Mexico, ‡Department of Ecology, INPA, Manaus 69000, Brazil

Combining camera-trapping and noninvasive genetic data in a spatial capture-recapture framework improves density estimates for the jaguar

Rahel Sollmann a,b,*, Natália Mundim Törres a,c, Mariana Malzoni Furtado a,d, Anah Tereza de Almeida Jácomo a, Francisco Palomares e, Severine Roques e, Leandro Silveira a
You all know what is this… 😊

**Spatial ecology of jaguars, pumas, and ocelots: a review of the state of knowledge**

Noa GONZALEZ-BORRAJO* Department of Conservation Biology, Doñana Biological Station, CSIC, E-41092 Seville, Spain. Email: noagonzalez@ebd.csic.es
José Vicente LOPEZ-BAO Research Unit of Biodiversity (UOICICIP), Oviedo University, Mieres, 33600, Spain and Grimso Wildlife Research Station, Swedish University of Agricultural Sciences, 73091, Riddarhyttan, Sweden. Email: ju.lopezbao@gmail.com
Francisco PALOMARES Department of Conservation Biology, Doñana Biological Station, CSIC, E-41092 Seville, Spain. Email: fpaloma@ebd.csic.es

**Scraping marking behaviour of the largest Neotropical felids**

Francisco Palomares¹, Noa González-Borrajo¹, Cuauhtémoc Chávez², Yamel Rubio¹, Luciano M. Verdade³, Rocío Monsa³, Bart Harmsen⁴, Beqona Adrados⁴ and Marina Zanin⁶

¹ Department of Conservation Biology, Estación Biológica de Doñana, CSIC, Seville, Seville, España
² Universidad Autónoma Metropolitana-Unidad Lerma, Lerma, Estado de México, México
³ Escuela de Biología, Universidad Autónoma de Sinaloa, Sinaloa, México
⁴ Núcleo Laboratorial de Ecología Evolutiva Aplicada, Universidade de São Paulo, CENA, Piracicaba, São Paulo, Brazil
⁵ Panthera, New York, United States of America
⁶ Departamento de Biología, Universidade Federal do Espírito Santo, Vitória, Espírito Santo, Brazil
A example of what we did with the data

» To represent the signs in a map to have an idea of what was happening
But... after the PhD, what?

Is it the end of the world??

Loving and hating researching
I decided to try a Social approach in my life

- Dog training
- Animal assisted therapy
- Environmental education

This time allowed me to learn how to work with other collectives and to understand the conservation from a more human point of view.
But finally, I decided to focus more in the environmental education approach, which allowed me to know the Asturias Bear Foundation.
Environmental education in schools and hospitals about the Yew tree.
And now???
ASTURIAS BEAR FOUNDATION

www.osodeasturias.es

Fundación Oso de Asturias

- Project management
- Environmental educator
- Field work
- Researching
- Funding
NGO founded in 1992 to fight for the Cantabrian Brown bear conservation.

- We develop different activities to promote the respect and the coexistence with the Brown bear and other animals in the rural areas and Natural spaces.
Where are we?

We are in a small town called Proaza, 25 minutes from Oviedo, in Asturias (north of Spain). We are near two Natural parks: Somiedo and Las Ubiñas.
A Little history

- Their mother is killed in 1989 by a poacher.
- They are a symbol of the fighting against poaching and the Brown bear conservation in the Cantabrian Mountains.

Paca y Tola, two cubs of Brown bear that arrive to our place in 1996
SUBFAMILIA URSINAE

Familia URSIDAE

Brown Bear

Ursus arctos
» Brown bear distribution.

Europe, Asia, North America (west) and north of Africa in the past.
Cantabrian Brown Bear

The population

Almost extinct in the 70s.
Nowadays 2 different populations:

Cantabrian Mountains

+ 

The Pyrenees
CONCLUSIONS

• Fight for what you want, but it is important to know what you want; however, what you want can change over time.
• There will be hard moments, but you have to know where is the limit.
• Sometimes you need to “reset” and change your point of view.
• Working in conservation is not an easy task.
• Try to enjoy what you do
¡¡¡THANK YOU!!!