Migratory passage of the Aquatic Warbler along the Cantabrian coast

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Migratory passage of the Aquatic Warbler along the Cantabrian coast

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BACKGROUND

- The Bay of Biscay is a primary passage region for the species in autumn.
- Former studies suggest stopover in the Bay of Biscay in Spain.
- After the confirmation that NW/Atlantic French coast had major role as a stopover region, a question arised:
  - What about the coast of N Spain?
  - Do the Cantabrian wetlands play a key role for the species?

AIMS

After intensive studies carried out in this Century, this talk aims to:

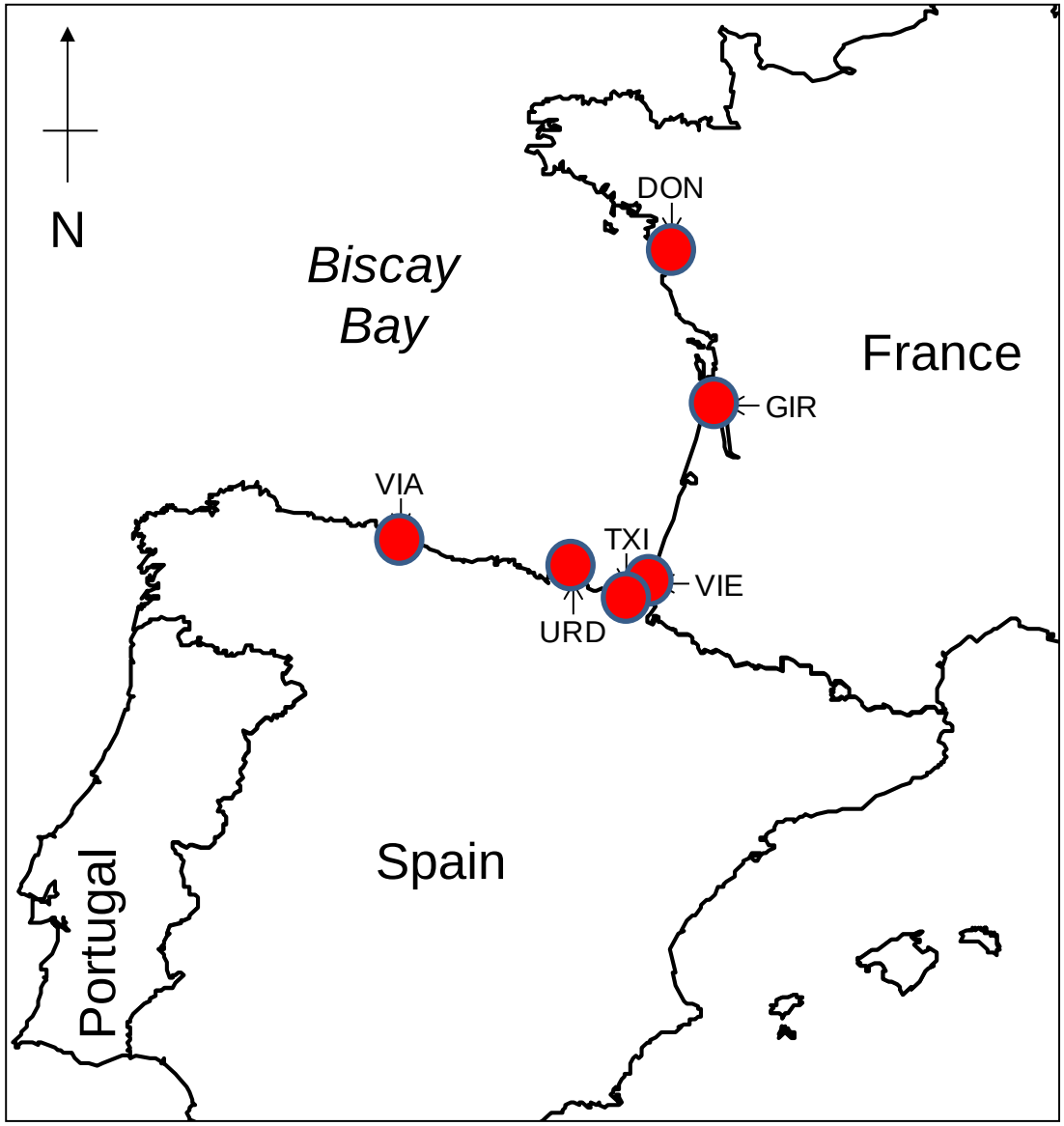
- Summarise the currently existing knowledge fot the AW in the Bay of Biscay.
- Evaluate the role of the Cantabrian wetlands for the AW.

METHODS

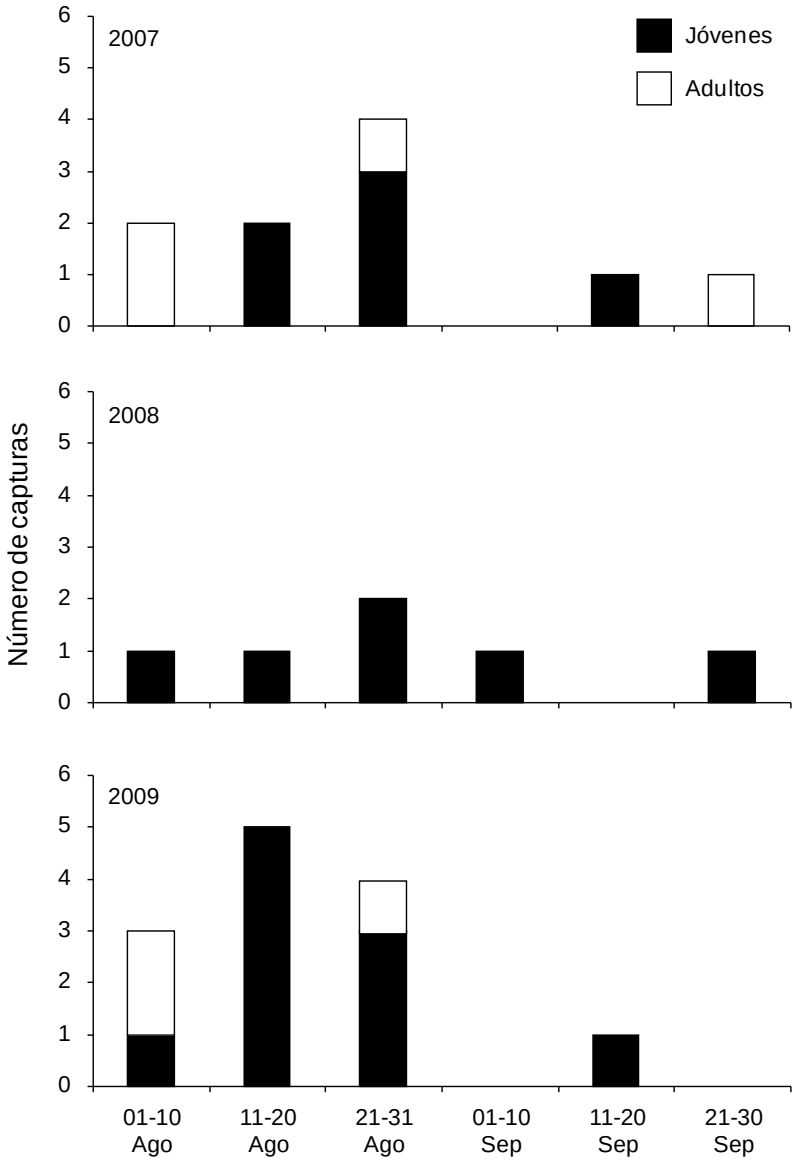
Two main data sources:

- Stopover ecology studies from Txingudi, with comparison with other sites across Cantabrian wetlands.
- A simultaneous sampling campaign done in 2011.

METHODS



RESULTS - TXINGUDI



RESULTS - TXINGUDI

- Population structure:
  - Txingudi: 76% juveniles.
  - NW Iberia/Portugal: 40-50%.
- Fuel deposition rate:
  - Txingudi: 0.1 g/d (similar to other sites of Spain).
  - France: 0.3 g/d
- Stopover duration:
  - Txingudi: 5.0 days (similar to other sites of Spain: <1 week).

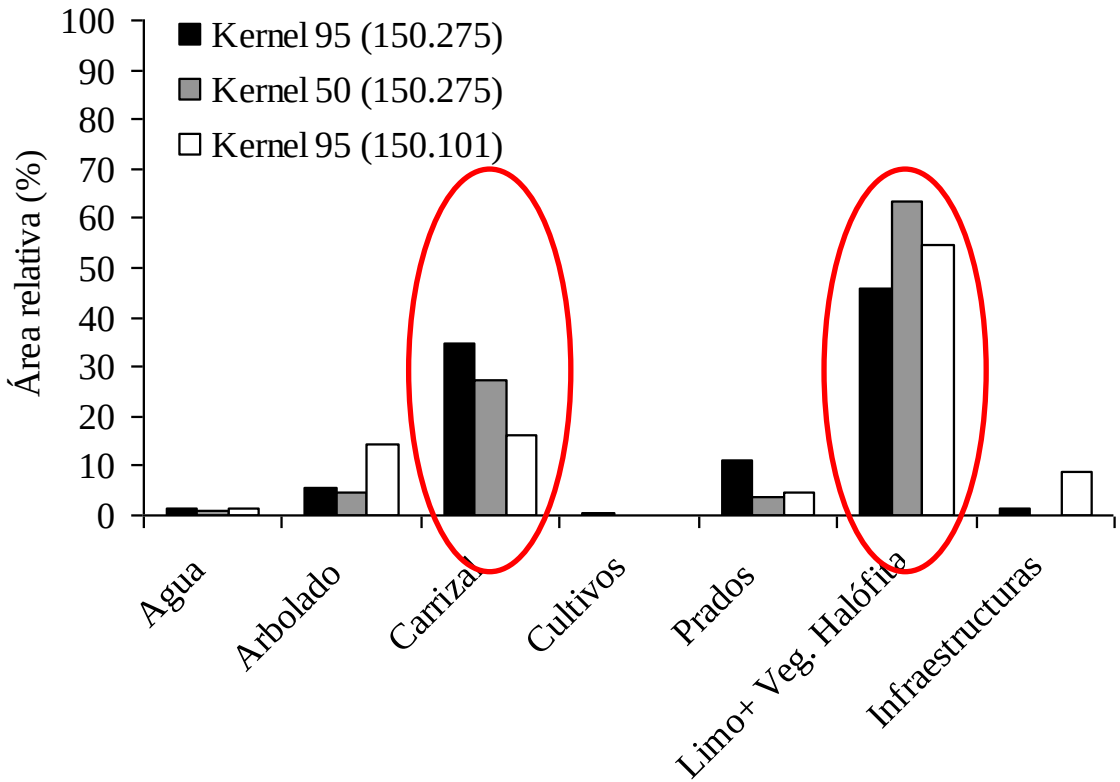
RESULTS - TXINGUDI

- Body condition:

Zone	Region	Juveniles		Adults	
		Mass (g)	Fat	Mass (g)	Fat
Txingudi	N Spain	11,1 ± 0,4 (N = 22)	1,8 ± 0,3 (N = 22)	11,9 ± 0,3 (N = 6)	3,0 ± 0,3 (N = 6)
Salburua	N Spain	10,9 ± 0,2 (N = 26)		10,9 ± 0,3 (N = 10)	
Miño	NW Spain	13,8 ± 0,8 (N = 7)	5,1 ± 0,3 (N = 9)	14,0 ± 1,1 (N = 9)	4,9 ± 0,8 (N = 11)
Valcavado	NW Spain	11,6 ± 0,3 (N = 10)		12,9 ± 0,5 (N = 17)	

RESULTS - TXINGUDI

- Habitat use:



RESULTS - TXINGUDI

- Habitat use:

RESULTS - TXINGUDI

- Comparison Txingudi with a good stopover site in SW France (Villefranque):

	Days with captures	Days with no captures	Statistics	df	p-values
TXINGUDI					
Rain	46.4%	27.0%	$\chi^2 = 4.262$	1	0.036
Tailwind (± SE)	0.6 ± 0.5 m/s	0.1 ± 0.3 m/s	t = 0.772	178	0.441
SW FRANCE					
Rain	40.0%	36.8%	$\chi^2 = 0.372$	1	0.347
Tailwind (± SE)	0.9 ± 0.3 m/s	-0.1 ± 0.5 m/s	t = 1.477	94.955	0.118

RESULTS - OVERALL

Site	Captures/ 100 m	% AW	ACROLA index
DON	1.8	1.0	0.30
GIR	1.3	3.7	1.11
VIE	0.3	4.2	1.26
TXI	<0.1	0.5	0.15
URD	0.2	2.8	0.84
VIA	0.1	2.1	0.63

CONCLUSIONS

- Passage peaks in Aug.
- Absolute numbers: Ib. Cantabrian < SW France < NW France.
- Acrola index: Ib. Cantabrian ≈ NW France < SW France.
- Proportion of juveniles: East Cantabrian > West Cantabrian.
- Body condition: East Cantabrian < West Cantabrian.
- Stopover duration: Cantabrian ≈ other zones in Iberia/France.
- Fuelling rate: Cantabrian ≈ rest of Iberia < France.

CONCLUSIONS

So...

- The Cantabrian wetlands host AW in autumn, in smaller numbers than other inland sites like La Nava or along the coast of France.
- Small surface of optimal habitat, but notice the role of humid meadows close to wetlands.
- Adults tend to show a more western passage, suggesting direct sea-crossing from NW France.
- Overall, small/moderate fuelling rates, which together with previous evidence, suggest a moderate importance of the Cantabrian wetlands for the species.
- Higher value (1) under bad weather and (2) for juveniles, especially in E Cantabrian.


THANK YOU!
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