



15-min Count applied to rare species in Spain

Miguel L. Munguira
Spain BMS (BMS España)



Overview of data, Spain

31,889 butterflies & dragonflies were recorded mainly during 2021 and 2022

TOP 3 SPECIES, 15 min :

<i>Melanargia lachesis</i>	2,448
<i>Pyronia tithonus</i>	2,350
<i>Parnassius apollo</i>	2,013

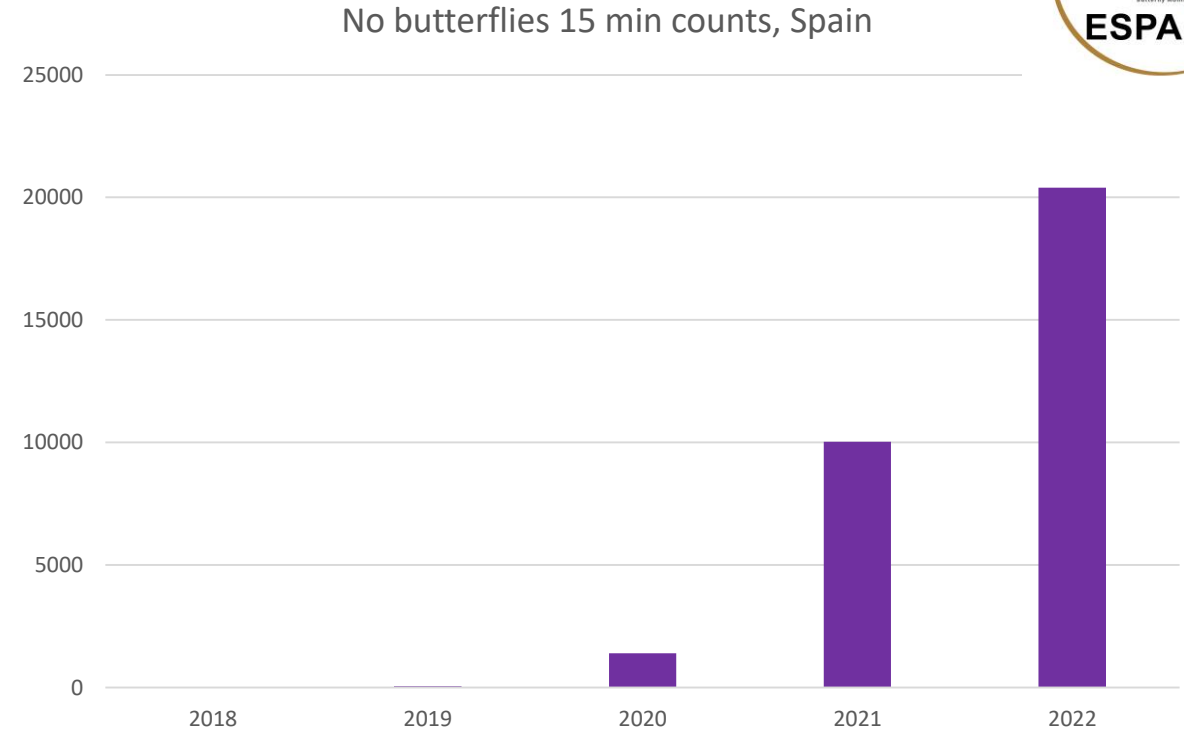


TOP 3 SPECIES, BMS (2022)

Melanargia lachesis
Pieris rapae
Colias crocea



Melanargia lachesis



Overview of data, Spain

Records are concentrated in two areas. 29% of records come from a single recorder: Demetrio Vidal.

Most people from Spain, but also some foreign visitors (11% recorders).



Overview of data, Spain

- 31,889 butterflies & dragonflies,
- 176 Butterfly species
- 64 recorders
- 31 rare & endemic species (3,298 specimens)

Endemic Species	15 min	BMS 2022-23
<i>Aricia morronensis</i>	130	57
<i>Cyclotrius webbianus</i>	0	3,587
<i>Erebia zapateri</i>	394	40
<i>Lycaena bleusei</i>	21	654
<i>Polyommatus fabressei</i>	291	230
<i>Lysandra caelestissima</i>	3	653



Applicability of 15 minute counts

- ▶ Records in hard-to-reach areas
- ▶ Monitoring endangered or protected species
- ▶ Butterfly samples in specific habitat types
- ▶ Occasional data

Kretania hesperica



Pyrgus sidae



Records in hard-to-reach areas

- ▶ High mountain areas
- ▶ Steppes or semi-deserts
- ▶ Islands (i.e., Macaronesian Is.)
- ▶ Areas with limited access



Monitoring endangered or protected species

- We can track the abundance of endangered or rare Butterfly species in particular habitats
- We can count single species or characterize the entire butterfly community



Monitoring endangered or protected species

Habitats Directive species

	15 min	BMS 2022-23
<i>Parnassius apollo</i>	2,013	201
<i>Phengaris nausithous</i>	252	3
<i>Euphydryas aurinia</i>	161	2,263
<i>Phengaris arion</i>	16	1
<i>Lopinga achine</i>	6	5
<i>Polyommatus golgus</i>	0	96

Parnassius nebrodensis (mnemosyne) & *Lycaena helle* have not been recorded with these methods



Monitoring endangered or protected species:

Example 1

Improving the conservation status
knowledge of the Lepidoptera of Community
Interest in Castilla & León: Fernando Jubete

“Estudio para la mejora del conocimiento del
estado de conservación de los lepidópteros
de interés comunitario en Castilla y León”



**Junta de
Castilla y León**

Consejería de Fomento y Medio Ambiente



- ▶ Target species: *Lopinga achine*,
Parnassius apollo, *Phengaris arion*,
Phengaris nausithous & *Euphydryas
aurinia*
- ▶ 195 tracks
- ▶ 7,612 butterflies counted
- ▶ 118 species recorded
- ▶ 368 records of target species

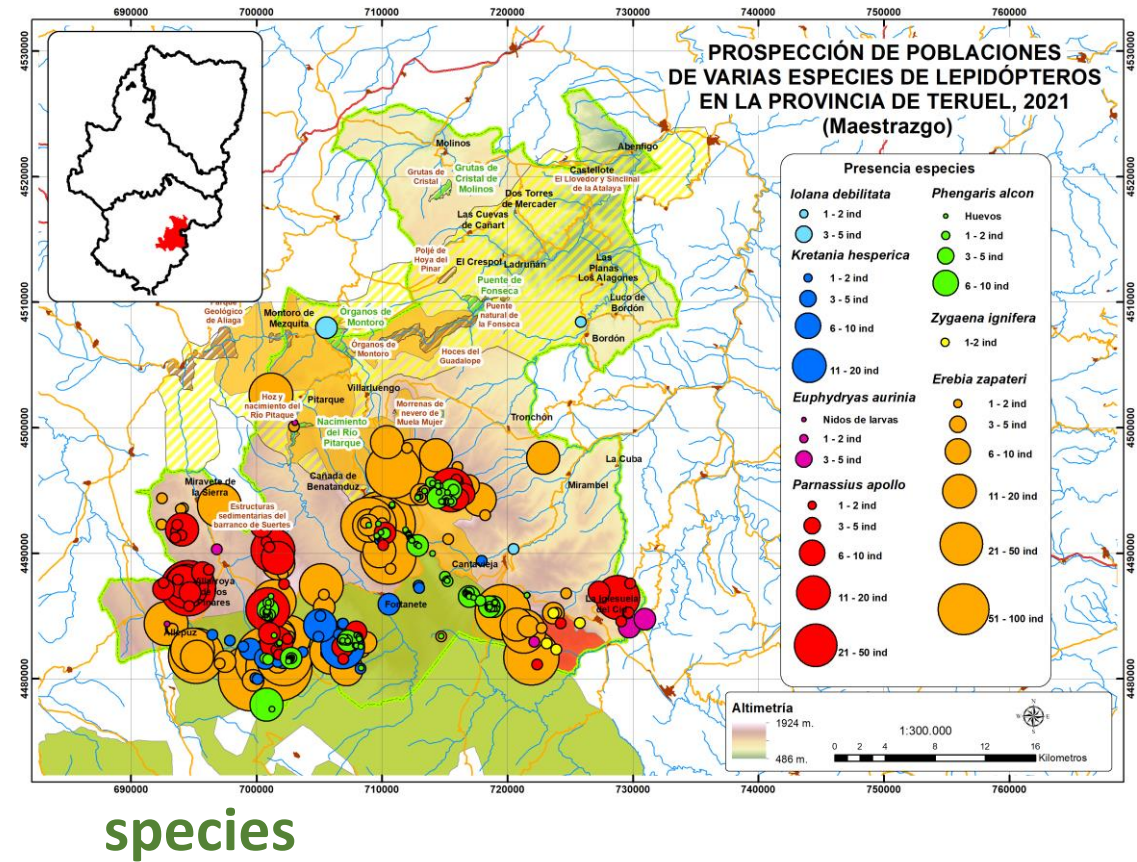
Monitoring endangered or protected species:

Example 2

Population census of several Lepidoptera species in the Province of Teruel

“Prospección de poblaciones de varias especies de lepidópteros en la Provincia de Teruel”

4 projects, 2018-2022, performed by Demetrio Vidal

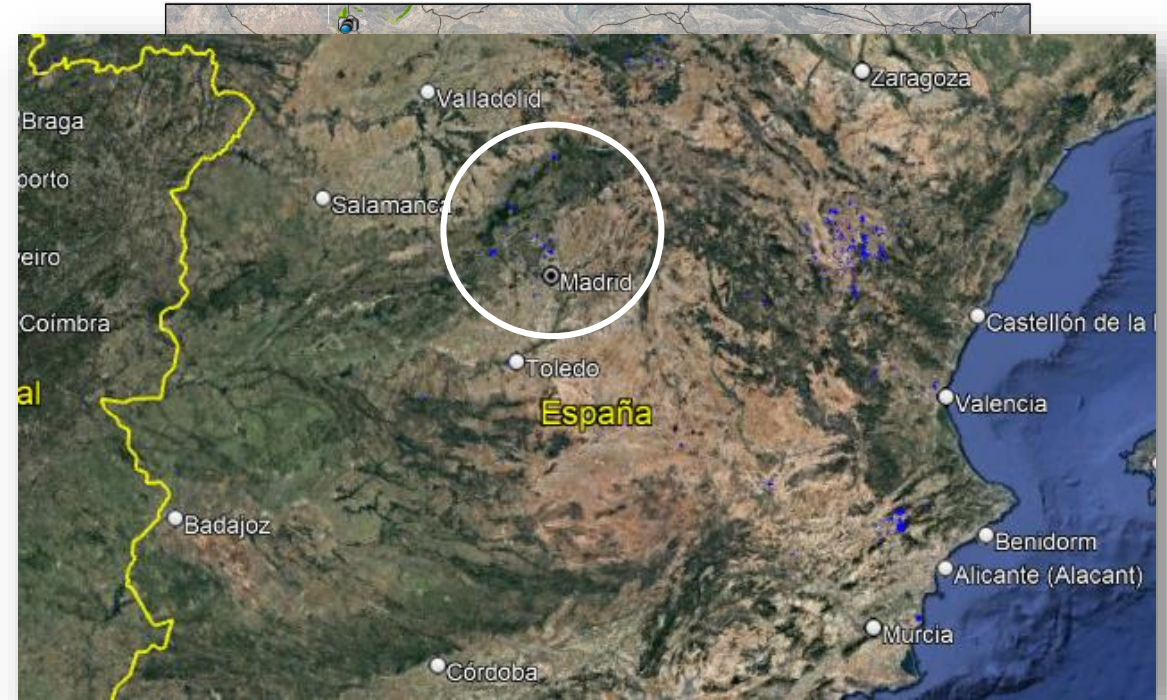


Map showing the
two áreas
covered by
Examples 1 and 2



Monitoring butterfly abundance and diversity in particular habitat types

- Inventories in protected areas
- Butterfly data for Impact Assessment studies
- Studies of target species in particular habitats. Example: apolo Butterfly in Sierra de Guadarrama National Park (Central Spain)



**Windmill Project in
Cabigordo, Teruel,
Aragón**



Compilation of occasional data

- ▶ Holiday trips & travel
- ▶ Record unusual abundances of species
- ▶ Recording the presence of interesting species



Spain

Miguel L. Munguira

Spain BMS (BMS España)

