

# FIRST RECORD OF BECHSTEIN'S BAT (*Myotis bechsteinii* KUHL, 1817) AT NORTH OF PORTUGAL AND NEW SPECIE FOR THE SITE OF COMUNITARY IMPORTANCE ALVÃO-MARÃO

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Bechstein's bat is a medium size *Myotis*, significantly different from other bat's species, has large and long ears (more than 18 mm), and the unique specie with a ear range superior to half of forearm length (ANT: 39-47 mm; O: 23-26mm). Separate ears on their base are a significant difference from individuals of genus *Plecotus*. This species has a shaped tragus, with inferior length than half of his ear range. Adults have quite long fur, which is pale to reddish brown on the dorsal surface and light grey on the ventral surface. The juveniles are light ashy-grey (Carro 2007). Spur is straight sometimes with a narrow edging of skin, wing membrane is inserted near the last toe (Figure 1) (Dietz y Helversen 2004) and last vertebra tail is free (Carro 2007).



Figure 1. View of wing membrane insertion in last toe.

Bechstein's bat world distribution reaches the Centre and West of Europe, Minor Asia until the North of Iran and Caucasus. In Iberian Peninsula was referenced in Galicia, Cantabria, Navarra, Aragón, La Rioja, Castilla-La Mancha, Castilla y León, Madrid, Extremadura and Andalucía, at Spain (Palomo *et al.* 2007); and in centre and south of Portugal, at Serra de Aire e Candeeiros, Serra de Montejunto and Serra de São Mamede (Cabral *et al.* 2006) (Figure 2).



Figure 2. Records of *Myotis bechsteini* in continental Portugal.

The Site of Community Importance (SCI) Alvão/Marão is part of Nature 2000 Network that intends to maintain or restore the state of favourable conservation, in the mediterranean biogeographic region. This Site has approximately 58,788 ha and includes the Alvão and Marão Mountains. It has clearly two distinct zones: the high lands - Marão (1,416 m) and Alvão (1,330 m) that includes the Alvão Natural Park (AINP) in the plateau of Lamas de Olo; and low zones - Ermelo, Ferrença and Régua, near Douro river, where the lowest point of the SCI is, with 50 m high, although most part of the area are above 500 m high. The site is in intermediate zone between Atlantic and Mediterranean climatic influence, with a large diversity of habitats. We can find native forest where galaico-portugues oak forests of *Quercus pyrenaica* and *Quercus robur* are predominant, agriculture areas mainly pastures, and a large hydrologic network, characteristic of mountain areas (Seixas *et al.* in press), that gives favourable condition to a large number of bats species.

About 1% of national territory included, SIC Alvão/Marão has 21 bat species indentified (Table 1), this figures represents approximately 90% of classified bat species in Portugal and more than 70% in Iberian Peninsula.

TABLE 1  
Species list of bats registered for the SCI Alvão/Marão.

Scientific name	Reference	Portugues Red book	Habitas Directive
<i>Rhinolophus ferrumequinum</i>	Bicho (1994)	VU	B-II B-IV
<i>Rhinolophus hipposideros</i>	Bicho (1994)	VU	B-II B-IV
<i>Rhinolophus euryale</i>	Cabral <i>et al.</i> (2008b)	CR	B-II B-IV
<i>Myotis bechsteini</i>	Bicho (1994)	EN	B-II B-IV
<i>Myotis myotis</i>	Bicho (1994)	VU	B-II B-IV
<i>Myotis blythii</i>	Rainho <i>et al.</i> (1998)	CR	B-II B-IV
<i>Myotis nattereri</i>	Bicho (1994)	VU	B-IV
<i>Myotis emarginatus</i>	Beckker <i>et al.</i> (2003)	DD	B-II B-IV
<i>Myotis mystacinus</i>	Bicho (1994)	DD	B-IV
<i>Myotis daubentonii</i>	Bicho (1994)	LC	B-IV
<i>Pipistrellus pipistrellus</i>	Bicho (1994)	LC	B-IV
<i>Pipistrellus kublii</i>	Bicho (1994)	LC	B-IV
<i>Pipistrellus pygmaeus</i>	Cabral <i>et al.</i> (2008a)	LC	B-IV
<i>Hypsugo savii</i>	Bicho (1994)	DD	B-IV
<i>Nyctalus leisleri</i>	Bicho (1994)	DD	B-IV
<i>Eptesicus serotinus</i>	Bicho (1994)	LC	B-IV
<i>Barbastella barbastellus</i>	Bicho (1994)	DD	B-II B-IV
<i>Plecotus auritus</i>	Beckker <i>et al.</i> (2004)	DD	B-IV
<i>Plecotus austriacus</i>	Beckker <i>et al.</i> (2004)	LC	B-IV
<i>Miniopterus schreibersi</i>	Bicho (1994)	VU	B-II B-IV
<i>Tadarida teniotis</i>	Bicho (1994)	DD	B-IV

Bat monitoring work field inside SIC Alvão/Marão area during wind farms interactions studies is on important knowledge source. In such away, the recovery of dead Bechstein's bat at October 1<sup>st</sup> of 2008 in mountains of Marão, next Olo river, 750 m high (CUTM 29SNF87) is due about looking for potential bat roosts around a wind farm.

The bat (preserved in the Laboratory of Applied Ecology of University of Trás-os-Montes and Alto Douro) was found inside an abandoned building, showing a slight state of decomposition, whoever doesn't seem victim of predation,

members were intact and apparently could died due to collision with the structure that supports the roof. Identification was carried out in laboratory, during the measurement of his characters. Most part of his fur has gone, but we could observe small pieces of grey fur in his womb. Sex was impossible to determinate, and weight wasn't relevant, once the most part of the body mass was lost. The means of the exemplar were Forearm: 40,27 mm, Ear: 27,41 mm and Targus: 14,48 mm. A free last vertebra tail was present and wing membrane was inserted next the last toe (Figure 1).

This is the first record of this specie in North of Portugal, once this species is not a migratory one and maximum distance recorded is 35 km (Palmeirim *et al.* 1999, Schlapp 1999, Carro 2007), the existence a Bechstien's bat population in the area is possible. This citation include the Bechstein's bat in the bat species of the Site Alvão/Marão list as a unique Endangered (EN) species.

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