

***Metrioptera brachyptera* (Linnaeus, 1761) – a new species
for Spain (Orthoptera, Tettigoniidae)**

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As a Palaearctic species, the bog bush-cricket *Metrioptera brachyptera* (Fig. 1) is widespread throughout large parts of Europe. However, it is missing in the extreme south of Europe and in south-western Europe (DETZEL 1998, JANSEN 2003, KLEUKERS et al. 2004). Only for the French part of the Pyrenees a few isolated populations are known (e.g. DEFAULT et al. 2009; PONIATOWSKI et al. 2012).

During a field trip in August 2012, we observed a population on the Spanish side of the Pyrenees. It is currently the only known locality of the species in Spain. The population has already been discovered in 2004 (GÖHLER 2005), however, until yet the observation has not been published.

The locality was a subalpine dwarf shrub heath (*Juniperion nanae*) in the Anayet skiing region in 1770 m a.s.l. (Culibillas; 42°46'38.11"N, 0°24'58.21"W). Characteristic plant species were *Calluna vulgaris* (dominant) and *Juniperus communis* ssp. *alpine* (Fig. 2). At the site the *Juniperion nanae* stands formed mosaics with *Nardion* grasslands (e.g. *Meum athamanticum*, *Nardus stricta* and *Succisa pratensis*) and *Rhododendro-Vaccinion* dwarf shrub communities (e.g. *Rhododendron ferrugineum* and *Vaccinium myrtillus*).

Within the subalpine dwarf shrub heath *M. brachyptera* occurred together with *Arcyptera fusca*, *Chorthippus biguttulus*, *Ch. parallelus*, *Decticus verrucivorus*, *Podisma pedestris*, *Stauroderus scalaris*, *Stenobothrus lineatus* and *S. nigromaculatus*. In addition, GÖHLER (2005) observed *Gomphocerus sibiricus*, *Myrmeleotettix maculatus*, *Psophus stridulus* and *Stenobothrus stigmaticus* as co-occurring species on their two study plots at the locality. The plots were situated in two low-growing stands of the *Rhododendro-Vaccinion* dominated by *Rhododendron ferrugineum* and *Vaccinium myrtillus* at 1770 and 1860 m a.s.l. The mean cover of dwarf shrubs and bare ground was 40% and 25%, respectively. On both sites the mean density of *M. brachyptera* was relatively low with 0.5 individuals/10 m².

The occurrence of *M. brachyptera* at the locality most likely reflects a trade-off between sufficient moisture on the one hand and warm microclimatic conditions on the other hand: Eggs of *M. brachyptera* are known to have high humidity demands (INGRISCH 1979, PONIATOWSKI & FARTMANN 2010). In addition, *M. brachyptera* depends on a relatively warm microclimate (RÖBER 1951, HARZ 1957, PONIATOWSKI & FARTMANN 2007). However, potential sites fulfilling these requirements seem to be rare at the southern slope of the Pyrenees especially due to the generally low precipitation. At the locality in the subalpine zone, in contrast, precipitation is relatively high.



Fig. 1: Male of a Spanish *Metrioptera brachyptera*.



Fig. 2: Subalpine dwarf shrub heath in the Anayet skiing region (1770 m a.s.l.) as a typical habitat of *M. brachyptera* in the Pyrenees.

Here coolclimatic conditions seem to limit the occurrence of *M. brachyptera*. Consequently, *M. brachyptera* occurred in habitats with a relatively high cover of bare ground and, hence, a warm microclimate. As comparable heath stands occur in the vicinity of the Anayet skiing region there might be further *M. brachyptera* populations in the Spanish Pyrenees.

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