

840 to 2942 m. Andorra has a high mountain Mediterranean climate, characterized by cold temperatures in winter (mean monthly temperature in January  $-2^{\circ}\text{C}$ ) and mild temperatures in summer (mean monthly temperature in July  $19^{\circ}\text{C}$ ), although extreme peaks of  $-20^{\circ}\text{C}$  at Ransol and  $39^{\circ}\text{C}$  at Les Escaldes have been registered (Vilà-Valentí and Martín-Vide 1997). Although the ant fauna of France (Casevitz-Weulersse and Galkowski 2009) and Spain (Gómez 2012) are now relatively well known, the ant fauna of Andorra did not so far raise the interest of ant taxonomists. Except for some studies published in the grey literature or some scattered data collected during occasional samplings by Santschi (1919), Rösler (1937), Collingwood and Yarrow (1969), or Espadaler (1997) and Espadaler et al. (2008), there is little information available on the ant fauna of Andorra and no ant checklists for this country have been published to date. This paper presents a list of the ant species of Andorra based on a review of the literature and on material collected during several sampling campaigns conducted in Andorra since 2005.

## Methods

A preliminary checklist was assembled from a thorough and comprehensive review of the literature and from the information given by several databases available on the Internet (e.g. FORMIS 2011: [www.ars.usda.gov/saa/cmave/ifahi/formis](http://www.ars.usda.gov/saa/cmave/ifahi/formis), ScienceDirect: [www.sciencedirect.com](http://www.sciencedirect.com), Google Scholar: [www.scholar.google.com](http://www.scholar.google.com), etc.) using searching requests such as “Andorra + Formicidae”. This first checklist was compared with the material we collected during several sampling campaigns conducted in the last 8 years in different parts of Andorra: low and high altitude grasslands, low and high altitude forests, anthropized areas, etc. Ants were searched on the ground and on vegetation; potential nesting sites were also inspected: dead wood, underneath of stones / bark, grass stems, acorns. Ants were collected by hand and were placed in plastic vials filled with  $90^{\circ}$  ethanol. Once in the laboratory, they were sorted and identified to the species level. All the material collected was identified by Dr. Xavier Espadaler. As no identification keys exist for the ants of Andorra, keys created for other European countries (e.g. Czechowski et al. 2012, Seifert 2007) and for the taxonomic revisions of some ant genera (Seifert 1988, 1992, 2000, 2007) were used. Most of the material we collected is stored in the personal collection of Dr. Xavier Espadaler at the Department of Animal Biology, Plant Biology and Ecology, Autonomous University of Barcelona, Spain.

The final checklist was assembled based on every taxonomical/biodiversity papers related to Andorra as well as on other papers referring to data collected in Andorra (e.g. phylogeographical studies) and on the material collected by ourselves. The species list we present is arranged in alphabetic order by subfamily, genus and species. Nomenclature was checked following Bolton (2012). Only species with unambiguous taxonomic determinations were considered in the final checklist.