

Salamandra algira spelaea (Beni Snassen fire salamander); new distributional records

DANIEL ESCORIZA

Institute of Aquatic Ecology, University of Girona. Campus Montilivi, 17071 Girona, Spain.
Author Email: daniel_escoriza@hotmail.com

Salamandra algira Bedriaga, 1883 is the only species of the genus *Salamandra* present in North Africa (Schleich et al., 1996). Its distribution extends from northern Morocco to northeastern Algeria (Escoriza & Ben Hassine, 2015). In this broad area of distribution there are several subspecies; *S. algira tingitana* in the Tingitana Peninsula (northern Morocco), *S. algira splendens* in the Middle Atlas and Rif mountains (northern Morocco), and *S. algira spelaea* in the Beni Snassen mountains (northeastern Morocco), being restricted the nominotypical form to northern Algeria (Ben Hassine et al., 2016).

The recently described *S. algira spelaea* (Escoriza & Comas, 2007) (Fig. 1), is phylogenetically closer to Algerian *S. algira algira* than to other subspecies in Morocco (Escoriza et al., 2006). It is likely to be scarce in the Beni Snassen massif due to arid conditions (Escoriza & Comas, 2007; Faouzi et al., 2015). During the winter-spring season, over a 5 year period (2009–2014), we performed several surveys in the mountains of Beni Snassen, to improve knowledge of the distribution and ecology of this rare salamander (Escoriza & Ben Hassine, 2014). The surveys were performed following brooks and also lifting stones and logs, with an effort of 1h/Km (Teixera et al., 2001).

In this short communication the first precise distributional records for *S. algira spelaea* in the Beni Snassen massif are presented. The results indicated a limited distribution, mostly located in the valley of Oued Beni Waklane (Fig. 2) where it occurs between 600–1300 m above sea level at coordinates 34.84°N, 2.26°W, 34.85°N, 2.23°W and 34.84°N, 2.21°W. Both adults and larvae were found, suggesting the presence of stable populations. The vegetation included forests mainly of evergreen oaks (*Quercus coccifera* and *Quercus ilex*; Fig. 3) and araars (*Tetraclinis articulata*), with a dense understory formed by *Arbutus unedo*, *Erica arborea*, *Pistacia lentiscus* and *Viburnum timus*. In these habitats *S. algira* breeds in small streams and fountains (Fig. 3) along with *Discoglossus pictus* and *Pelophylax saharicus*. The species was not observed in other areas of the massif, such as eastern and western parts. These areas are transitional towards the semi-arid conditions, dominated by xero-thermal shrub formations (*Ceratonia siliqua*, *Chamareops humilis*, *Olea europaea*) and perennial grasses (halfah grass).



Figure 1. Juvenile of *S. algira spelaea* (Ouartass, Morocco).

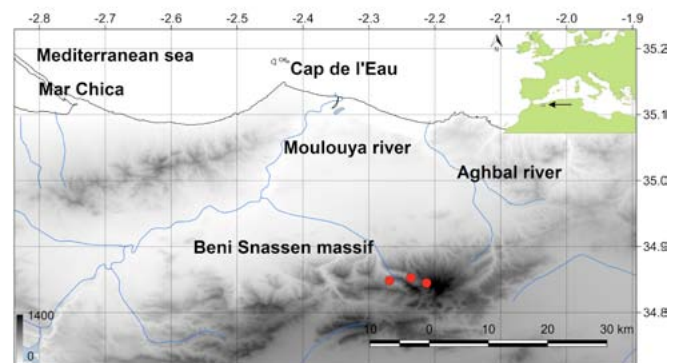


Figure 2. Map (A) of the region showing the distribution (red dots) of *S. algira spelaea* in the Beni Snassen Massif (northeastern Morocco).



Figure 3. Breeding habitat of *S. algira spelaea* in the Beni Snassen massif (northeastern Morocco).

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