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Scientific note

Is the Sardinian grass snake (*Natrix natrix cetti*) an active hunter in underground environments?

(Serpentes, Colubridae)

Enrico Lunghi, Cristian Mascia, Manuela Mulargia & Claudia Corti

Natrix natrix cetti is endemic to Sardinia (Italy) (Vanni & Cimmaruta 2010). Information on the biology of this species is scarce. On several occasions (January 2016, September 2016 and twice in May 2017) we documented the underground activity of *N. natrix cetti* (Fig. 1). Snakes were observed in four caves located in four different Sardinian districts: Monte Albo (15 m from cave entrance), Supramonte (5.4 m), Sulcis-Inglesiente (75 m), Ogliastra (12 m). Caves were sub-horizontal and thus, snakes' presence was not considered accidental (Culver & Pipan 2009). *N. natrix cetti* is supposed to be one of the potential predators of the Sardinian *Hydromantes*, a group of terrestrial salamanders able to inhabit all year round underground environments (Lanza et al. 2006, Lunghi et al. 2015). Indeed, individuals of *N. natrix cetti* were found in caves inhabited by Sardinian cave salamanders (Lanza et al. 2006) where they likely entered looking for prey.

Cave predators may play an important role in underground ecosystems, being one of the major carriers of allochthonous organic matter (Culver & Pipan 2009). Understanding the role of *N. natrix cetti* in the underground food web may add useful information for the conservation of hypogean ecosystems (Culver & Pipan 2009), along with data on the dietary habits of this critically endangered snake. Furthermore, in case *Hydromantes* turned out to be a significant part of the diet of *N. natrix cetti*, it is of great importance to investigate the relationship occurring between *N. natrix cetti* and the threatened cave salamanders.

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Fig. 1. *Natrix natrix cetti* ♀ found in a horizontal mine 75 m far from the entrance.

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Enrico Lunghi (corresponding author), Department of Biogeography, University of Trier, Trier, Germany; and Natural History Museum of University of Florence, Zoological Section "La Specola", Firenze, Italy; and Natural Oasis, Prato, Italy; e-mail: enrico.arti@gmail.com

Cristian Mascia, Sardegna Foreste – Fo.Re.S.T.A.S., Gairo, Italy
Manuela Mulargia, CEAS Santa Lucia, Siniscola, Italy

Claudia Corti, Natural History Museum of University of Florence, Zoological Section "La Specola", Firenze, Italy

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Autor(en)/Author(s): Lunghi Enrico, Mascia Cristian, Mulargia Manuela, Corti Claudia

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