

First record of *Zamenis lineatus* (Camerano, 1891) (Serpentes Colubridae) in Ischia Island (Italy)

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ABSTRACT

With this work, we report for the first time the presence of the Italian Aesculapian snake *Zamenis lineatus* (Camerano, 1891) in Ischia island (Italy). Up to date, in this Mediterranean island, among ophidic species the presence of only *Hierophis carbonarius* (Bonaparte, 1833) has been reported; although, recently, the invasive species *Indotyphlops braminus* (Daudin, 1803) has been also detected. Further studies will be necessary to clarify whether the presence of *Zamenis lineatus* in Ischia island is autochthonous or whether is just an accidental observation due to a passive transport from the nearby coast of the Gulf of Naples.

KEY WORDS

Zamenis lineatus; Italian Aesculapian snake; Ischia.

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INTRODUCTION

Reptiles and amphibians in Campania (Italy) have been widely reported in the regional Atlas of amphibians and reptiles (Guarino et al., 2012). Subsequently, Raimondi et al. (2014) published a paper about the new distribution data of the Campania herpetofauna, expanding the results recorded in the aforementioned atlas (Guarino et al., 2012). Specifically, to date, regarding the Campania islands, only two manuscripts have been published (Nappi et al., 2007; Cipolla & Nappi., 2008). A very complete and comprehensive study about the herpetofauna of the Italian islands is reported in the National Atlas of Italy (Corti et al., 2006). In any case, in none of these publications the presence of the Italian Aesculapian snake *Zamenis lineatus* (Camerano, 1891) has been reported in Ischia Island, indicating for this island, the sole presence of *Hierophis carbonarius* (Bonaparte, 1833) (Mezzasalma et al., 2015).

MATERIALS AND METHODS

Ischia is a volcanic and mountainous island in the Tyrrhenian Sea that lies at the northern end of the Gulf of Naples, about 30 kilometers from the city of Naples (Paolino et al., 2019). On 7th December 2019, one of the authors (R.S.) found a carcass of a specimen of *Zamenis lineatus*, victim of road traffic (Figs. 1, 2). The site where the observation was made is close to the “Bosco di Zaro”, in the north-western side of the Ischia island, on the border between the municipalities of Forio and Lacco Ameno (40°45.4340'N - 13°52.5040'E), at an altitude of 87.9 meters above sea level. The site of the current observation is mainly characterized by lava soil and holm oaks (*Quercus ilex*). The total length of the snake was of 45 cm; the coloration of the livery and of the iris, as well as the the pattern of the blotches of the head were indicative of the classic phenotype (Salvi et al., 2017).

RESULTS AND DISCUSSION

Systematics

Classis REPTILIA Laurenti, 1768
 Ordo SQUAMATA Opperl, 1811
 Subordo SERPENTES Linnaeus, 1758
 Familia COLUBRIDAE Opperl, 1811
 Genus *Zamenis* Wagler, 1830

Zamenis lineatus (Camerano, 1891)

According to the geomorphology, the Campania Region presents all the possible Apennine and Mediterranean biotopes (Raimondi et al., 2014) and this aspect allows for a considerable biodiversity. Besides, the high humidity and temperature stability create an ideal habitat for the survival and reproduction of the herpetological species, and at the same

time, justifying also the presence of invasive species, as *Indotyphlops braminus* (Daudin, 1803) has been recently detected in this little island (Paolino et al., 2019).

The Italian Aesculapian snake *Zamenis lineatus* is an endemic snake of the southern Italy, including Sicily; however, its precise distribution in the different Italian regions is not precisely known (Razzetti & Zanghellini, 2006; Venchi & Luiselli, 2011). Up to date, the northern limit of this species is constituted by Morolo in the province of Frosinone (Corsetti & Romano, 2008). In Campania, this species has been also reported in the metropolitan area of Naples (Raimondi et al., 2014) and, if the hypothesis of a passive transport for anthropic reasons will be confirmed, from this area could come the specimen that we found in Ischia. However, it cannot be excluded that this specimen may be part of a stable population on the island, which moreover could fall within the natural distribution area of this species, as also reported in the distribution maps of the recent guide of Amphibians and Reptiles of Italy (Di Nicola et al., 2019).



Figure 1. Particular of the specimen found in Ischia (Italy); the eyes are characterized by a round pupil, with the typical orange-reddish color of the iris. Figure 2. Ventral part of the same specimen, which shows a lighter color at the level of the head, becoming uniformly darker, greyish and marbled at the level of the trunk and tail.

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