

**Observations on copulating pairs of *Zamenis longissimus* (Laurenti, 1768), *Podarcis siculus* (Rafinesque, 1810), *Podarcis muralis* (Laurenti, 1768) and *Podarcis melisellensis* (Braun, 1877) in Croatia**

**Opazanja parenja jedinki *Zamenis longissimus* (Laurenti, 1768), *Podarcis siculus* (Rafinesque, 1810), *Podarcis muralis* (Laurenti, 1768) i *Podarcis melisellensis* (Braun, 1877) u Hrvatskoj**

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Copulating acts of snakes and lizards in nature are not so often encountered, and research is mostly based on captive specimens (TOKARZ, 1999). Unlike Grass snakes, *Natrix natrix* (Linnaeus, 1758), where individuals form mating congregations during the mating season, Aesculapian snakes, *Zamenis longissimus* (Laurenti, 1768) copulate in pairs (KREINER, 2007). One mating couple of Aesculapian snakes was observed by the authors in Vugrovec (Zagreb, 25.05.2008., X: 5515507, Y: 5084158) (Fig. 2). Most lizards have a polygynous social system, as recorded in *Anolis sagrei* (Duméril & Bibron, 1837) (TOKARZ, 1998). Mating behaviour varies, like evolved forced copulation in *Ctenophorus maculosus* (Mitchell, 1948) (OLSSON, 1995). Conventional mating behaviour in lizards includes the male inflicting narrow V-shaped bite marks on the dorsal and ventral part of the female's abdomen, just anterior of her hind legs (ANDERSON & VITT, 1990). In some species, males produce a copulatory plug that adheres firmly inside the female's cloaca and blocks both oviducts, as recorded in Iberian rock lizards, *Iberolacerta monticola* (Boulenger, 1905) (MOREIRA & BIRKHEAD, 2003; MOREIRA & BIRKHEAD, 2004). The authors recorded one mating couple of *Podarcis melisellensis* (Braun, 1877) on the island of Žirje (02.05.2009., X: 5554711, Y: 4832567), one

couple of *Podarcis muralis* (Laurenti, 1768) at Ružica Grad (Papuk Mt., 30.03.2008., X: 5723871, Y: 5044707) and one couple of *Podarcis siculus* (Rafinesque, 1810) in Rovinj (12.06.2011., X: 5393043, Y: 4992655) (Fig. 1). **c**

Figure 1.: Mating of **(a)** *P. melisellensis* (Photo: B. Lauš), **(b)** *P. siculus* (Photo: M. Zadavec), **(c)** *P. muralis* (Photo: D. Jelić)

Slika 1. Parenje **(a)** *P. melisellensis* (Fotografija: B. Lauš), **(b)** *P. siculus* (Fotografija: M. Zadavec), **(c)** *P. muralis* (Fotografija: D. Jelić)

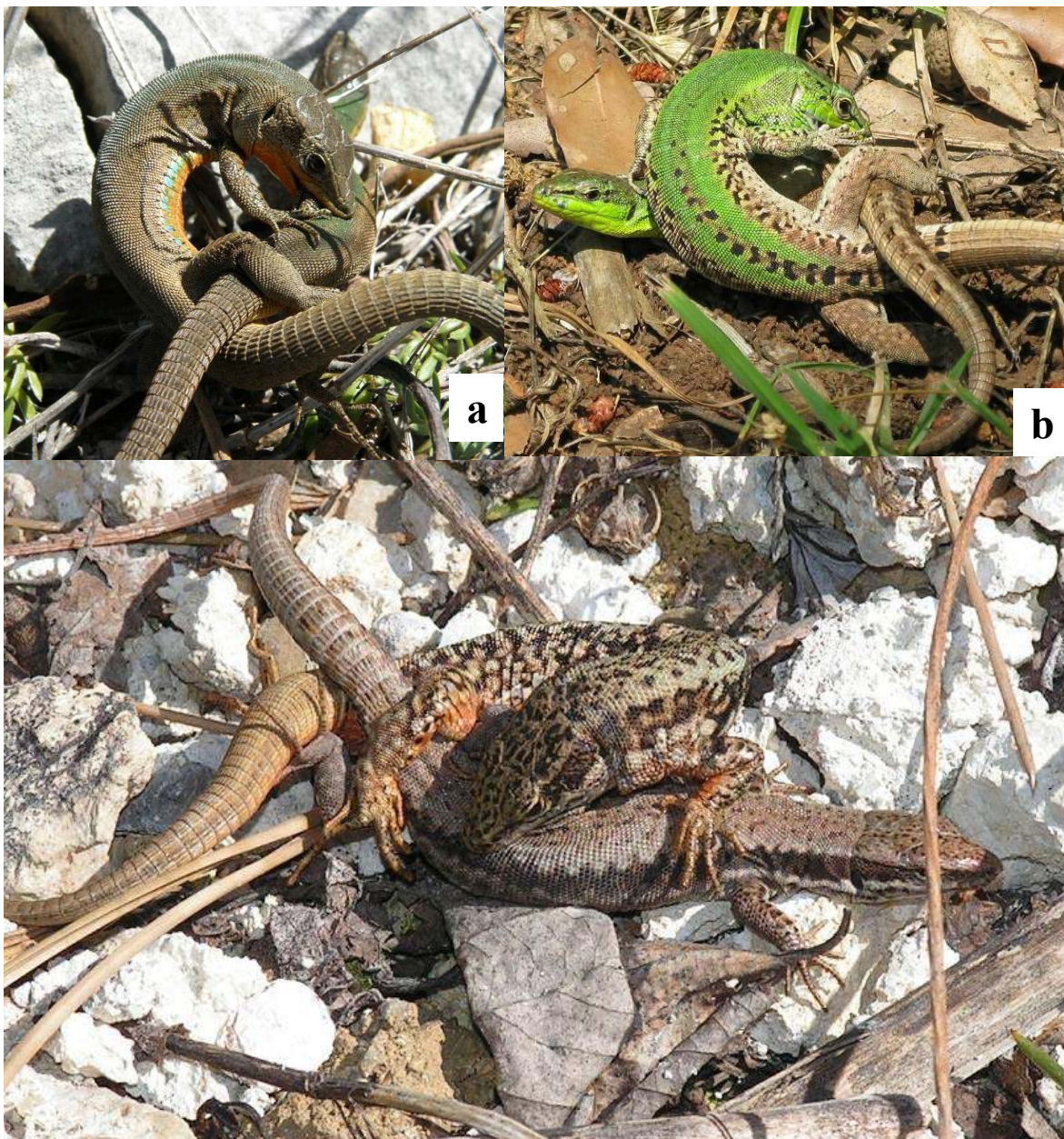






Figure 2.: Mating of *Z. longissimus*: (a) overview, (b,c) details (Photos: M. Zadavec)

Slika 2.: Parenje *Z. longissimus*: (a) odozgo, (b,c) detalji (Fotografije: M. Zadavec)

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