

COMMENTARY

Evidence for a W chromosome polymorphism in “*Lacerta*” *mosorensis* not revealed by Capula in his note (*Italian Journal of Zoology* 72:93–96)

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In a note appeared on a recent issue of the *Italian Journal of Zoology*, Capula (2006) emphasized that they (Capula & Lapini 1991) were the first authors to describe the karyotype and to detect a ZZ/ZW sex chromosome system in “*Lacerta*” *mosorensis*. Capula noted in his commentary (2006) that Odierna and Arribas (2005) did not refer to Capula and Lapini’s 1991 paper. Indeed, our literature search was limited to the main and authoritative papers and databases on chromosomes of lacertid (Olmo et al. 1993) as well as of reptiles as a whole (Olmo & Signorino 2005), and did not locate Capula and Lapini (1991) which was published in *Rendiconti Lincei: Scienze Fisiche e Naturali* (indeed, this paper is wrongly referenced in Capula’s [2006] note, which stated it was published in *Atti della Accademia Nazionale dei Lincei*). Once we obtained a copy of Capula and Lapini’s paper (1991), we were surprised to find that Capula in his note neglected to refer to one important aspect of the taxonomy and evolution of this rare and threatened species. Capula omitted the fact that “*L.*” *mosorensis* seems to be polymorphic for the size of the W chromosome. In fact, in the females from Durmitor Mountains (Montenegro), studied by Odierna and Arribas (2005), W was as large as the elements of the last macrochromosome pair, while in the females from Prenj Mountains (Bosnia-Herzegovina), studied by Capula and Lapini (1991), W was sized as a microchromosome. Some aspects make this polymorphism interesting: firstly, the rock mountain lacertid has a patchy distribution with populations ranging between 450 and 1900 m.s.l. in Croatia, Bosnia-Herzegovina and Montenegro Mountains (Dzucic 1989; Crnobrnja-

Isailovic & Dzucic 1997); in this context, specimens from Prenj, as reported by Capula and Lapini (1991), represent a new population. Secondly, the ZZ/ZW sex chromosome system is almost universal among lacertid lizards and the morphology, content and distribution of DNA sequences of the W chromosome are taxonomically informative (Olmo et al. 1987; Olmo et al. 1993), for example, a difference in W size, as between two populations of “*L.*” *mosorensis*, has been found in populations referred to as different species, such as *L. viridis* and *L. trilineata* or in *L. kulzeri* complex (Olmo & Signorini 2005). Thirdly, differences in Z and W sex chromosomes might have played an important role in preventing or negatively affecting the chromosome pairing and segregation of the hybrids (e.g. John 1981; King 1993). All these considerations point to a possible diversification between populations of “*L.*” *mosorensis* and urge for additional karyological and other types of analyses on specimens from different populations of this species. In this connection, data from Carranza et al. (2004) (although they do not make it clear as to which population their specimens come from), are interesting: their specimens also display a notable molecular diversification, suggesting the existence of a real and deeper than the currently-assumed differentiation among different populations of this species.

References

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