



BOOK OF ABSTRACTS

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EFFECT OF MERCURY ON WALL LIZARD (*Podarcis muralis*) POPULATIONS: CRANIAL MORPHOLOGY AND ALLOMETRY – PRELIMINARY RESULTS

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We estimated the effects of chronic mercury exposure on cranium morphology and post-natal development in the Common wall lizard, *Podarcis muralis* (Laurenti, 1768). We collected 45 specimens from the Šuplja stena mercury mine tailings and abandoned mine area. As a control group, we collected 39 specimens from the nearby rock quarry in Ripanj (less than 2 km away), in order to eliminate the possible effects of geographical variation. Both sampling localities are situated on the fringe of Avala mountain near Belgrade, Serbia. Patterns of shape of dorsal and ventral cranium were analysed using geometric morphometrics. Analysis of the sample liver tissues showed that mercury was present in both groups, but the concentration of mercury was significantly greater in population from the Šuplja stena mines. However, apparently high levels of mercury in the population from Šuplja stena had very little to no effect on cranial morphology. Juveniles and females from both localities had practically the same size and shape of the dorsal and ventral cranium. Only the ventral cranium shape of males showed slight differences between the localities, reflected in slightly longer maxillae and wider crania in males from Šuplja Stena. Sexual dimorphism pattern also remained constant in both localities. Although both populations were morphologically uniform, lizards from the Šulja stena mine had higher level of overall shape variance for both dorsal and ventral cranium. Both static and ontogenetic allometry were significant in both groups, and allometric trajectories did not differ between the localities. Cranial morphology and patterns of allometry are apparently well conserved in studied lizard populations, and remain stable regardless of the level of exposure to pollution. Further analyses should focus on subtler patterns of shape variation, including fluctuating asymmetry, and include populations exposed to various pollutants (lead, pesticides, etc.).