Bioaccumulation of heavy metals in *Psammodromus algirus* from tailing-dam collapse in the Aznalcollar mine (SW Iberian Peninsula)

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In 1998, a tailing pond of the pyrite mine of Aznalcóllar (southwest Spain) collapsed, and 6 millions m3 of mud with high concentrations of heavy metals were spilled into the Guadiamar basin. After the spill, a restoration program began and the area was declared Protected Landscape: The Green Corridor of the Guadiamar River. From 1998 several studies are monitoring the contamination levels of the area, using as bioindicators several aquatic organisms as well as terrestrial organisms that feed on aquatic fauna. However, terrestrial organisms that have colonized recently the restored area also could be good bioindicators to demonstrate persistence of heavy metals in the ecosystem and their transmission across the food chains. In 2005 and 2006 we collected tail samples of 65 adult lizards *Psammodromus algirus* from three different localities: one site that was completely covered by the toxic mud, plus two control sites not affected by the spill, one located next to the pond and the other 20 km far to the pond. We analyzed contents of 14 heavy metals. Results showed higher concentrations in 12 out of the 14 elements analyzed in the samples of the contaminated locality. In this site, there were no sexual or annual differences, although heavy metal concentration increased with lizard size. As the area was restored after the accident, we discuss how heavy metals moved across the web chain up to the lizards. We claim for the use of this non-destructive technique in terrestrial reptiles to monitoring bioaccumulation of heavy metals in Mediterranean ecosystems.

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