

Heavy metals in caudal scales of *Crocodylus moreletii* in the southern portion of the Selva Lacandona, Chiapas, Mexico

J. Manuel Aranda-Coello*^{1,2}, Oscar M. Mendoza-Velázquez² and Carlos Gutiérrez Olvera³

¹Natura y Ecosistemas Mexicanos A.C., Plaza San Jacinto 23-D, San Ángel, C. P. 01000 Ciudad de México, México (m.aranda.coello@gmail.com)

²Red Mesoamericana y del Caribe para la Conservación de Anfibios y Reptiles (MesoHerp) (mevo9611@gmail.com)

³Laboratorio de Bromatología y Toxicología, Departamento de Nutrición Animal y Bioquímica de la Facultad de Medicina Veterinaria y Zootecnia de la UNAM, Ciudad de México, México (guoc2804@unam.mx)

Abstract: Heavy metals are the main contaminants of aquifers due to their high toxicity, persistence, and mobility; they affect important hydraulic loads, such as lagoons and irrigation canals, and because of their physicochemical properties, they are not biodegradable and can become toxic to vertebrates and invertebrates. The objective of this study was to determine the presence of heavy metals in the population of *C. moreletii* inhabiting the southern portion of the Lacantún river in the Selva Lacandona. Samples of caudal scutes were collected by manual captures and with the support of Thompson-type loops from January 2018 to February 2019 in 23 km of the middle sub-basin of the Lacantún river in the Reserva de la Biosfera Montes Azules (REBIMA). Subsequently, the presence of heavy metals such as lead (Pb), cadmium (Cd), copper (Cu) and zinc (Zn) was determined using the atomic absorption spectrophotometry by flame technique; while for mercury (Hg) and arsenic (As) by atomic absorption spectrophotometry by hydride generation. The presence of five metals was detected: lead (Pb), cadmium (Cd), mercury (Hg), zinc (Zn) and copper (Cu) in the caudal scutes of *C. moreletii* and one metalloid: arsenic (As). With these results, we infer that the pollutants present in the *C. moreletii* scutes flowing at the three sites sampled are indicative of point sources of contamination for the southern border zone of the REBIMA within the complex known as Selva Lacandona.

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