

LIFE-CYCLE EFFECTS OF SEDIMENT-ASSOCIATED URANIUM ON *CHIRONOMUS RIPARIUS* (DIPTERA: CHIRONOMIDAE).

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In aquatic ecosystems, sediments function as reservoir for many of the more persistent chemicals that are introduced into surface waters. Sediments provide a habitat for various benthic macroinvertebrates, which are exposed to sediment-associated chemicals both directly and via food intake. These chemicals may be directly toxic to benthic macroinvertebrates and can be integrated into food chain. Benthic macroinvertebrates play an important role in the ecosystem structure and functioning. In particular, they represent an important component of aquatic food chains. Among the non biologically essential metals, data concerning uranium fate and effects on freshwater benthic invertebrates are sparse. The present study aimed to estimate effects of a chronic uranium exposure on life-cycle traits of *Chironomus riparius*. To achieve this goal, (i) first instar larvae were exposed to a series of concentrations of uranium *via* the sediment, and (ii) a number of developmental (*e.g.* growth) and reproductive (*e.g.* emergence, fecundity, viability) endpoints, through parental and into F1 generations, were evaluated. Within the framework of ecological risk assessment, these data will help the derivation of a sediment guideline value for uranium that does not currently exist in France or elsewhere due to a lack of toxicity data.