

Figure 1. *Daphnia magna* can be resurrected from historical time periods by collecting ephippia (i.e., resting eggs) that have accumulated in lake sediments over the years. These resting eggs are part of the species' life cycle and are produced through sexual reproduction when environmental conditions become adverse. Upon hatching, however, individuals develop as females and reproduce asexually under favourable conditions, allowing researchers to maintain identical genotypes in laboratory conditions. This unique system enables the recovery of genomic information from different historical genotypes, as well as transcriptomic data by exposing the same clonal line to contrasting environmental conditions. Thanks to these characteristics, *Daphnia* has become a powerful model organism widely used in bioremediation, ecotoxicology, and biomedical research.

*Figure cited in the book chapter: Resurrection Ecology reimagined: leveraging Daphnia for evolutionary insights, environmental monitoring, and bioremediation, Cuenca-Cambronero, et al., (under review).*

*Figure credit: Maria Cuenca*

