

Poster Abstract

The distribution of crayfish and branchiobdellids in Vienna

Arthur PICHLER

Crayfish (Decapoda, Astacidae) are considered to be keystone species of freshwater systems due to manifold interactions with other species, as well as physical impact on their habitat. The loss of native crayfish populations and the migration of introduced crayfish can severely impair local biodiversity. Branchiobdellids (Annelida, Clitellata) which live exclusively on the carapace and in the gill cavity of crayfish, form a mutualistic and sometimes parasitic relationship with their hosts. The native stone crayfish (*Austropotamobius torrentium*) is threatened by habitat destruction and introduced species like the signal crayfish (*Pacifastacus leniusculus*), a carrier of the crayfish plague (*Aphanomyces astaci*). During this study, populations of the stone crayfish have been found in nineteen forest streams in the western part of Vienna, however the signal crayfish has spread to tributaries of the Wien river and the Liesing river within the last decade, resulting in the loss of autochthonous crayfish populations.

Freshwater crayfish and their branchiobdellid commensals are envisaged for future applications of barcoding and eDNA methods, which will give both further insight into the genetic diversity of native and invasive populations and provide a promising tool for monitoring and conservation.

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Address:

Arthur PICHLER MSc, Institut für Hydrobiologie, Gewässermanagement (IHG), Gregor-Mendel-Straße 33/DG, 1180 Vienna, Austria. E-Mail: Arthur.Pichler@wcl.ac.at

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Autor(en)/Author(s): Pichler Arthur

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