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Conference Abstract

From records to traps and traces: towards an integrated surveillance of invasive crayfish in Flanders

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Abstract

Invasive crayfish are an increasing concern in European freshwater bodies, but surveillance relies often on opportunistic records and therefore remains fragmented. In Flanders, the *Craywatch* citizen science project was developed to address this gap by applying a standardized trapping protocol across a broad spatial scale, hence generating a baseline for invasive crayfish occurrence. In parallel, a multiplex eDNA ddPCR approach was developed to enable sensitive simultaneous detection of multiple crayfish species from water samples. Together, these initiatives illustrate how complementary monitoring tools could be combined into a more strategic surveillance framework. *Craywatch* demonstrated the value of citizen science for broad spatial coverage, rapid data collection and early warning, while eDNA offers added value for detecting species at low densities. This contribution reflects on the transition from ad hoc observations to standardized surveillance, and on how broad-scale volunteer-based sampling, targeted

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professional follow-up and molecular detection can be aligned in function of introduction risk, invasion stage and management. Using the Flemish case as an example, we discuss how monitoring could evolve from ad hoc monitoring towards citizen science and ultimately an integrated and adaptive invasive crayfish surveillance in Flanders.

Keywords

invasive crayfish, IAS surveillance, citizen science, eDNA

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