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The management plan of Austropotamobius pallipes in Trentino

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The management plan for conservation of the crayfish Austropotamobius pallipes complex in Trentino, in the Eastern Italian Alps, is one of the outcomes of the European Project Life+T.E.N. The monitoring of the species and its habitats represent the first result of the management plan application. Two-hundred-twenty-four water bodies were surveyed in 2019-2021, and 79 of these resulted unsuitable for A. pallipes due to their environmental characteristics. In each remaining site, which were confirmed to be suitable, we georeferenced a 100 m transect, representative of the water body, where we recorded the main physical characteristics of the habitats, the physical-chemical parameters of water and, in streams, macrobenthos to calculate the Extended Biotic Index. The presence/absence of the species was evaluated along each transect and was detected/confirmed in 42 of them. Counts method was applied to 35 populations to measure the abundance calculated as CPUE. In 28 populations, all animals were collected and biometric data, sex, presence of visible infestations by parasites and pathogens were recorded, to assess the populations' structure and their conservation status. The main threats for the populations of A. pallipes we detected are represented by habitat alteration and the presence of the two invasive alien species Procambarus clarkii and Faxonius limosus in one and six water bodies, respectively. The populations status and the detected threats suggest a management strategy that increases the ecological conditions and connectivity of the aquatic habitats and ensures the control of the spread of alien species and their pathogens.

Keywords: management of autochthonous species, invasive alien species, *Aphanomyces astaci*, faunistic monitoring

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