

Invasive marbled crayfish found in Narva power plant cooling canal

June 8 2018



These marbled crayfish were caught from the cooling canal of Narva power plant. Credit: Mari-Liis Koemets

The dangerous invasive marbled crayfish has developed a significant population in Estonia in the cooling canal of the Narva power plant. The

danger of the species is that males are not required for reproduction; all crayfish are female and capable of reproducing every few months.

Scientist Fabio Ercoli, who discovered marbled crayfish last autumn in the cooling [canal](#) of the Narva power plant, was test-fishing in the same area on 31 May with researchers Katrin Kaldre and Margo Hurt from Chair of Aquaculture, and noted that unfortunately, the dangerous [invasive species](#) has settled well in the [water](#) body.

In the near future, scientists are going to study whether the aggressive marble crayfish, being potentially dangerous to the Estonian European crayfish, only live in the canal with water temperatures higher than the natural background levels, or whether some specimens have reached Narva reservoir, as well.

Ercoli is studying the invasive species of Finland and Estonia (mainly the Chinese sleeper and the black goby) and their impact on food chains in the context of climate change. He was looking for freshwater gobies in the cooling canal of Narva power plant, too. As he had no time to examine the samples taken at the end of last September, they were deep-frozen. Last Christmas, he had time to defrost the samples and discovered among the caught specimens six marble crayfish. This species has been discovered in the wild in a dozen European countries; however, this is the first confirmation in Estonia.

Due to its characteristic appearance and resilience, marble crayfish is a highly valued aquarium fish in zoo shops. According to Ercoli, the reason for the escape of an alien species into nature could be humans. "One day, somebody probably bought a nice crayfish for their aquarium. But soon the aquarium was packed with crayfish, the owner got fed up with them, and instead of killing them, released them into the wild," he says.

The tests taken by Katrin Kaldre, who is about to defend her doctoral thesis based on research results on invasive crayfish species, show that marble crayfish is an extremely adaptable species that can also live in cool waters. Thus, it cannot be entirely excluded that crayfish might also be found further from the warm water canal. All this must be thoroughly studied, and it is still too early for guesswork, Ercoli says. For the time being, the dynamics of the canal [crayfish](#) population are under examination.

Climatic changes and invasive species are the two main changes in terrestrial and aquatic ecosystems, Ercoli explains. The rise in air and water temperature hasn't yet been enough to cause the death of traditional fauna and flora in the northern latitudes or the spread of invasive [species](#), but scientists are keeping an eye on food webs based on organic matter and their energy sources.

Provided by Estonian Research Council

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