Observations of crayfish plague infections in commercially important narrow-clawed crayfish populations in Turkey

We studied the presence of possible Aphanomyces astaci infections in eight Turkish narrow-clawed crayfish (Astacus leptodactylus) populations by analyzing the prevalence and genotypes of the disease agent A. astaci. The qPCR analyses revealed A. astaci infection in seven of the studied eight populations, with the agent level A2 or higher. The agent levels among the infected populations varied from A0 to A5, i.e., from negative to high level of infection, based on qPCR ranking. Based on the sequencing of the chitinase gene and the mitochondrial ribosomal rrsS and rrlL subunits, we detected both A (As) and B (PsI) haplogroups of A. astaci in our samples, with each of the studied populations being carriers of only one haplotype. The results confirm previous detections of A. astaci in Turkish narrow-clawed crayfish populations and reveal, that both A and B haplogroup A. astaci carriers exist widely in A. leptodactylus populations of Turkey.