

— Histological analysis of thelohaniasis in white-clawed crayfish —

From 2004 to 2006, a parasitological survey aimed at the detection of the microsporidian parasite *Thelohania contejeani* Henneguy was carried out on 177 wild white-clawed crayfish (*Austropotamobius pallipes* complex) captured in six streams and rivers of the province of Belluno in north-eastern Italy. Microscopical examination of the skeletal muscles, and histological analysis applying different histochemical stains to full transverse and sagittal sections of the cephalothorax and abdomen were carried out. Transmission electron microscopy (TEM) was also conducted on the parasites recovered during the survey. Out of 177 crayfish examined, *Thelohania contejeani* (Microsporidia, Thelohaniidae) was present in only one crayfish from the Vena d'oro creek. The parasite was detected in the skeletal muscles in several developmental stages, including mature spores, which represented the most common stage recovered. Sporophorous vesicles were also present. Histological examination revealed that the fibres of the skeletal, cardiac and intestinal muscles were filled with spores. Melanin infiltrations were focally present in the infected striated muscles. The gill phagocytic nephrocytes were engulfed by small masses of spores. Among the staining techniques applied, Crossman's trichrome stain represented the most effective method of detecting *T. contejeani*.

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