

PCR, Real-Time PCR and molecular characteristic of *Toxoplasma gondii* isolates from wild aquatic birds: preliminary analysis

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Toxoplasma gondii infects many species of warm-blooded animals, including humans and birds; however, most research on the parasite has focused on humans and mammals. Little is known of the prevalence and distribution of *T. gondii* genotypes in free-ranging aquatic birds.

The aim of the study was to detect the presence of *T. gondii* DNA in heart tissue of wild aquatic birds and genotype the isolated parasites. Specific identification of *T. gondii* was performed with the use of PCR and Real-time PCR assays based on the *T. gondii* B1 gene. Positive samples were genotyped using PCR/RFLP analysis of the *T. gondii* SAG2 gene. The results of PCR and Real-time PCR showed the presence of *T. gondii* DNA in five species of aquatic birds, including those that are protected. Genotyping at the SAG2 locus indicated *T. gondii* genotype I or II.

These results could be an indication of water contamination by *T. gondii* oocysts, which has implications for public health. Moreover, identification of the parasite in some protected bird species suggests that the screening of birds for *T. gondii* should be taken into account in wild bird conservation programs.