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# Infektionen mit Blutparasiten aus der Familie der Spirorchiidae bei *Emys orbicularis* in Deutschland – auch eine potentielle Bedrohung für die letzten einheimischen Vorkommen der Art?

## *Infections with blood flukes of the family Spirorchiidae in Emys orbicularis in Germany – a possible threat for the last autochthon populations of the species?*

### Abstract

Blood flukes of the family Spirorchiidae are commonly known from many species of freshwater turtles worldwide. However their (turtle) host-species specificity and the intermediate hosts of their larvae (miracidia, cercaria) are mostly unknown and are the subject of intensive research in the U.S. and Australia, including also some of the endangered Asian turtle species. In Europe parasitological studies focussing on blood flukes of turtles are either very old or very scarce, therefore it may not be surprising that the diagnosis of an infection with these parasites is easily overlooked during standard veterinary examination. Here we report about the recent occurrence of heavy infections with blood flukes probably caused by cf. *Spirhapalum polesianum* (EJSMONT, 1927) in two German captive breeding groups of *Emys orbicularis*, as revealed by autopsy and histopathology. A detailed histopathological description is provided including 9 colour plates. Because the turtles from one of the breeding groups had also contact to North American freshwater turtles a cross infection with (allochthon) parasite species known from the latter cannot be fully excluded at the moment and should be the focus of future investigations including molecular biology. Therefore, our observations should alert veterinarians, wildlife managers and turtle breeders to pay more attention to that type of infections. In addition, we would argue for an intensification of research activities focusing on the distribution of blood flukes of freshwater turtles in Germany and their possible intermediate hosts in order to protect our only and very endangered wild populations of *E. orbicularis* in Germany as well as those in neighbouring European countries. The so far obtained data are discussed in view of the most recent literature and in addition we acknowledge also information kindly provided by Prof. V.V. TKACH and A.D. MIHALCA.

### Key words

Testudines, Emydidae, *Emys orbicularis*, Plathelminthes, Trematoda, Digenea, Spirorchiidae, *Spirhapalum polesianum*, parasites, blood flukes, Germany

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