

Myxosporea in turtles and pathological changes caused by their occurrence

6. Summary

The aim of this PhD thesis was to find out something about the occurrence of Myxosporea in turtles and to describe the consequences of a infection for the individual. I wanted to find out, what was best diagnostic method for Myxosporea in turtles from the tested ones.

84 turtles of different species, origin, sex and age were examined for the occurrence of Myxosporea. On the one hand preparations were evaluated as wet mounts and Giemsa-stained samples and on the other hand histological specimens were stained with haematoxylin- eosin, Ziehl- Neelsen and May- Gruenwald- Giemsa. Raster electron micrographs were also taken.

These examinations had the following results:

Myxosporea- infections in turtles seem to be more common than thought before, because 54,7 % of the examined turtles were infected. Thinking of the little number of samples and a possible preselection the dates point to more often infections of adult male animals. *Graptemys* and *Chrysemys* seem to be more often infected than other examined chelonian genera. There seems to be a connection between the infection with trematodes and the infection with myxosporean parasites.

Three different myxosporean parasites were found and all of them belong to the genus *Myxidium*. These are *Myxidium chelonarum*, *Myxidium americanum* and *Myxidium rhinoclemmysi* sp.nov.. The last one will be first described by MUTSCHMANN and NEUBERT, 2006. Until now no description of the occurrence of myxosporean vegetative stages in the serosa of the intestine, wall of the urinary bladder and gonads of turtles was done. Myxosporean infections of turtles seem not to leave the host unaffected, as mentioned in the gross of literature. There are mild signs of inflammation (pseudoeosinophily and melanocyts) around the vegetative stages. Through the occluding of the renal tubules a tubulonephrose with settle of conglomerations could be possibly caused.

When myxosporean infections are suspected in turtles, a May- Gruenwald- Giemsa stained preparation should be done, because this was the best method for the Myxosporea- detection from the tested ones.