

Investigations on the serological detection of sarcoptic mange in red foxes in Berlin

6.Summary

The aim of the presented thesis was to analyse the sarcoptic mange of the red fox (*Vulpes vulpes*) in the urban area of Berlin.

From 1456 red foxes sent to the Institut für Lebensmittel, Arzneimittel und Tierseuchen (ILAT) during the examination period between 1996 and 1999 within the vaccination campaign against rabies 1025 sera were available.

In the own investigations the findings at necropsy concerning to the clinical picture of mange were compared to the results of the detection of antibodies against *Sarcoptes*-mites

The „cut-off“ was established with 118 sera from clinical healthy silver foxes. The positive sera were taken from 198 clinically diseased red foxes.

While 19,3 % of the foxes had clinical mange, the amount of the seropositives amounted to 43,6 %. Only 7,5 % of the animals with clinical mange did not show any antibodies against *Sarcoptes*-mites.

While the cases of clinical mange as well as the percentage of the seropositives among the adult foxes were doubling over the years, the findings of clinical mange and antibodies against *Sarcoptes*-mites among the juvenile foxes almost remained constant during the examination period.

In contrast to that, splitted into quarters, a rise of the clinical and serological proof of mange was noted among the young foxes, whereas the incidence of mange and seropositives among the adult foxes nearly remained at the same level.

Concerning to the incidence of clinical mange and the proof of antibodies against *Sarcoptes*-mites with regard to origin and age of the foxes, the large outskirt districts which have bigger forest areas like Zehlendorf, Spandau, Köpenick, Reinickendorf and Pankow showed the highest population densities and thus the highest infestation rates. The percentage of the animals that were serologically positive was almost double of the ones that showed clinical pictures.