

## 6 Summary

### **Epidemiological survey on the distribution of sarcoptic mange in red foxes (*Vulpes vulpes*) in Baden-Württemberg**

The objective of this work was to determine the prevalence of mange in foxes of Baden-Württemberg. The pathological-anatomical findings of the dissection results (skin lesions) were compared with the serological results. Using an indirect ELISA test against antibodies of *Sarcoptes* mites, 2481 serum samples were examined from 2001-2003. Following the autopsies of 1555 foxes the pathological-anatomical findings of skin lesions were compared with the serological results of the same animals. Another sample of 926 foxes was only serologically examined. The serum samples were collected during a vaccination campaign against rabies and sent to the Office for Chemical and Veterinary Investigation in Heidelberg.

The sex ratio was favour of males with, respectively, 58% males and 42% females. Most of the foxes were adult (93%); only 7% were juvenile foxes.

Serologically, 3.0% (80) of the samples were positive, whereas 2.3% (56) displayed reactions within the threshold range. No differences were found between age and sex distribution of the serologically positive animals.

Four foxes originating from Memmingen (Bavaria) showing distinct signs of clinically patent mange reacted also strongly positive in the serological test.

The sample size varied considerably between the different districts. Sample sizes were highest in the northern part of Baden-Württemberg. The higher sample size in these areas also resulted in higher infection rates with *Sarcoptes* mites. Based on the clinical cases of mange from Memmingen and the number of sero-positive cases in Baden-Württemberg it is concluded that latent endemic foci of mange exist in the investigated area.