SUMMARY

The sanitary control of threatened wild animals is of pivotal interest for their conservation. This task, however, is highly complex in wildlife/livestock systems. In this paper we report !ndings from a 2-year cross-sectional study of the epidemiology and attempted control of a Sarcoptes mite infestation in the threatened cheetah population in Masai Mara (Kenya), and discuss its interaction with sympatric wild (lion, wildebeest and Thomson's gazelle) and domestic (dog, cattle and sheep) animals. Sarcoptes scabiei was isolated from cheetahs, Thomson's gazelles, wildebeests, lions, cattle, goats and dogs; Psoroptes ovis, on the other hand, was only isolated from sheep. The prevalence study revealed 12·77% infection rates in cheetahs, 4·7% in dogs, 0·8% in Thomson's gazelles, 0·8% in sheep, 0·09% in cattle, and 0·09% in goats, while it opportunistically a"ected lions and wildebeest. Our study revealed that prevalence of Sarcoptes mite in cheetah population was not associated with the studied geographical blocks, animal sex or the presence of a"ected domestic animals. Cheetah infection with S. scabiei was associated with the climatic conditions (dry more than wet season) and the balancing between the total number of Thomson's gazelles and the prevalence of infected individuals. Apparently the high prevalence of mangy gazelles has a negative e"ect on cheetah; this negative e"ect was reduced when the number of healthy gazelles was increased. Treatment with injectable ivermectin of the clinically a"ected wild and domestic animals during the !rst year of this study was associated with much lower incidence of sarcoptic mange during the second year.

Key words: Acinonyx jubatus, Sarcoptes scabiei, Psoroptes ovis, wildlife/livestock boundary, parasite control, treatment.