

ABNORMAL INFESTATION OF THE COMMON VOLE (*MICROTUS ARVALIS*) WITH *IXODES RICINUS* NYMPHS

Table 1. Infestation of small terrestrial mammals with the tick *Ixodes ricinus* in June 1981

Host	% of hosts represented	Incidence of infestation %		Mean infestation per infested host	
		L	N	L	N
<i>Sorex araneus</i>	7.7	50.0	0.0	6.0	0.0
<i>Mus musculus</i>	3.8	0.0	0.0	0.0	0.0
<i>Apodemus sylvaticus</i>	23.1	83.3	83.3	24.5	1.6
<i>Microtus arvalis</i>	65.4	70.6	58.8	5.9	10.4

In the years when the population density of small terrestrial mammals is normal they are mostly parasitized by larvae of ticks, only a small percentage of larvae feeding on birds. The main hosts of nymphs in nature are birds. The case when small mammals served as main blood source of nymphs, was observed in the Tribeč Mts. at the Žirany locality (Nosek J. et al., Parasit. Hung. 6: 239—246, 1973). Whenever the population density of birds in the biotope observed is low for different reasons (intensive cattle grazing, removal of shrubs or trees etc.), they may be substituted by some species of insectivores or rodents. This substitution takes place primarily at sites, where the original biotope of nymph hosts has been modified by man's interference. Such a modified biotope was observed by us in 1981 at the Marcelová locality in the Danube lowland. The original biotope, an apricot tree orchard, surrounded by mixed acacia forest from three sides and by a pasture from one side, the habitat of ticks *Dermacentor marginatus*, *Ixodes ricinus* and *Haemaphysalis concinna*, was transformed into a corn field.

In June 1981, while trapping small terrestrial mammals, we found a higher infestation of the common vole with *I. ricinus* nymphs. Fifty

nymphs and two larvae were collected from one vole individual. For comparison we present the species composition and the tick infestation of individual hosts captured at this locality at the time when we observed an increased tick infestation of *M. arvalis* (Table 1). In the period of trapping the incidence of infestation was 73.8 % and the mean infestation per infested host 15.5.

In 1982 the incidence of infestation in small terrestrial mammals was 55.9 %, the mean infestation per infested host being 3.3. On the other hand in 1981 the incidence of infestation amounted to 30.8 % and the mean infestation per infested host was 11.0. The higher incidence of infestation in 1982 was due to the reduction of the small mammal population (the ratio of animals trapped in 1981 to those captured in 1981 was 18 : 7).

J. LYSÝ, J. NOSEK and O. KOŽUCH

Institute of Experimental
Biology and Ecology, Slovak
Academy of Sciences and
Institute of Virology, Slovak
Academy of Sciences, Bratislava