

## SEX RATIO IN THE TICK *DERMACENTOR RETICULATUS* (FABR.) DURING THE SPRING AND AUTUMNAL ACTIVITY

In the 3-year period between 1968 and 1970 the annual activity of imagoes of the tick *Dermacentor reticulatus* was investigated in the locality Czerwone Bagno in SE Poland. Collections were made at one-week intervals. In 1968 active imagoes were found in the spring from 19 March to 29 May, in 1969 from 2 April to 29 May and in 1970 from 4 April to 12 June. In the autumn imagoes were encountered in the

increasing to the values lower than one third of all imagoes collected.

Assuming the equal duration of the period between the moulting of imagoes and the onset of their activity the high numbers of males in late summer to autumnal period may be explained either by their numerical predominance among the moulted imagoes or by earlier moulting of males. Our *D. reticulatus* populations

**Table 1.** Sex ratio of *Dermacentor reticulatus* in the first ten collections during the spring and autumn tick activity in the locality Czerwone Bagno in the years 1968-1970

Reference No. of collection	Spring					Autumn				
	♀♀		♂♂		Total	♀♀		♂♂		Total
	No.	%	No.	%		No.	%	No.	%	
1	91	57.6	67	42.4	158	2	10.5	17	89.5	19
2	469	53.3	412	46.7	881	18	26.1	51	73.9	69
3	697	56.0	547	44.0	1244	87	49.4	89	50.6	176
4	658	53.6	569	46.4	1227	111	45.7	132	54.3	243
5	775	62.7	460	37.3	1235	125	45.3	151	54.7	276
6	644	68.8	292	31.2	936	162	51.6	152	48.4	314
7	275	70.3	116	29.7	391	218	52.8	195	47.2	413
8	179	71.9	70	28.1	249	232	54.1	197	45.9	429
9	121	78.1	34	21.9	155	347	58.0	252	42.0	599
10	36	68.0	17	32.0	53	321	58.3	230	41.7	551

period between 13 August and 6 November (in 1970 only until 29 October).

While investigating the sex ratio in the ticks collected, it was observed that during early collections made in the autumn, i.e. in the period immediately after moulting of the new generation imagoes the males markedly predominated, but their percentage was all the time decreasing and towards the end of the year the females already started to predominate in the population (Table 1). This trend in sex ratio was ascertained in all three years of studies, different was only the duration of the period in which the males predominated. In 1968 they predominated during the first ten autumnal collections (until 15 October), in 1969 during five collections (until 10 September) and in 1970 only during two collections (until 20 August). On the other hand, in all spring collections except one the females predominated. The initial sex ratio corresponded roughly to the late autumnal ratios, with the passage of time the number of males was de-

cultured under natural conditions in south Moravia did not confirm these facts. We obtained a total of 134 ♂♂ and 175 ♀♀ (1 : 1.3) and males were observed having no tendency towards an earlier moulting. If we assume that a similar situation exists under conditions of the locality in Poland, the mentioned observations were probably caused by an earlier onset of male activity.

In the spring a considerable drop was regularly observed in the percentage of males in the number of imagoes collected. It may be admitted that the more rapid decrease of the relative number of males depended on their more rapid deaths. Our studies on the *D. reticulatus* colonies under natural conditions carried out for two years showed, however, a similar course of mortality in both sexes (Černý V. et al., Wiad. Parazytol., in press). We may assume that the results obtained in ticks placed in breeding boxes might not entirely apply to specimens unrestricted in their movements by the space