

Table 1 Tick collection and associated Rickettsia infection in study areas of Zanjan Province, Islamic Republic of Iran

Tick species	Study areas			Host animals			Total collected ticks	Total Rickettsia infection
	Lowlands	Plains	Highlands	Cattle	Sheep	Goat	N(%; 95% CI)	N(%; 95% CI)
<i>Dermacentor marginatus</i>	12	24	11	5	39	3	47 (8.90; 6.61-11.61)	6 (12.77; 4.83-25.74)
<i>Hyalomma aegyptium</i>	4	3	5	7	4	1	12 (2.27; 1.18-3.94)	0 (0.00)
<i>Hy. anatolicum</i>	37	59	25	58	62	1	121 (22.92; 19.40-26.74)	2 (1.65; 0.20-5.84)
<i>Hy. asiaticum</i>	10	25	18	17	36	0	53 (10.04; 7.61-12.92)	0 (0.00)
<i>Hy. detritum</i>	12	9	21	0	42	0	42 (7.95; 5.79-10.60)	2 (4.74; 0.58-16.16)
<i>Hy. dromedarii</i>	11	16	19	37	2	7	46 (8.71; 6.45-11.45)	2 (4.35; 0.53-14.84)
<i>Hy. marginatum</i>	33	23	19	22	52	1	75 (14.20; 11.34-17.48)	16 (21.33; 12.71-32.32)
<i>Hy. scupense</i>	5	4	3	12	0	0	12 (2.27; 1.18-3.94)	0 (0.00)
<i>Hy. schulzei</i>	2	6	3	6	0	5	11 (2.08; 1.04-3.70)	0 (0.00)
<i>Haemaphysalis sulcata</i>	6	5	10	0	21	0	21 (3.98; 2.48-6.02)	2 (9.52; 1.18-30.38)
<i>Rhipicephalus annulatus</i>	5	25	15	37	8	0	45 (8.52; 6.28-11.24)	0 (0.00)
<i>Rh. bursa</i>	9	21	13	18	25	0	43 (8.14; 5.96-10.81)	4 (9.30; 2.59-22.14)
Total N (%; 95% CI)	146 (27.65; 23.85-31.68)	220 (41.67; 37.42-46.00)	162 (30.68; 26.77-34.81)	219 (41.48; 37.24-45.81)	291 (55.11; 50.76-59.41)	18 (3.41; 2.03-5.33)	528 (100)	34 (6.44; 4.50-8.88)
Total Rickettsia Infection N(%; 95% CI)	28 (19.18; 13.14-26.51)	0 (0.00)	6 (3.70; 1.37-7.89)	4 (1.83; 0.50-4.61)	30 (10.31; 7.06-14.36)	0 (0.00)		