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Supplementary material S5.

Full model results of exploratory analyses testing the correlations between rodent characteristics (density, larval and nymphal burden), the density of questing *Ixodes ricinus* nymphs (DON), and the density of infected nymphs (DIN) for *Borrelia afzelii*, *Borrelia miyamotoi* and *Candidatus Neoehrlichia mikurensis*. We did not include nymphal burden in the analyses for Wood mouse (*Apodemus sylvaticus*) as nymphal burden was correlated with larval burden in this species (LMM: $\beta = 0.6$, $p = 0.006$).

Models for DON and DIN were generalized linear mixed models with a negative binomial distribution and log link function with a random intercept per vegetation type nested within year. The average relative humidity measured in the vegetation while drag sampling for ticks was taken into account as a covariate in the models of DON and DIN. As rodent densities, larval burdens and nymphal burdens were over-dispersed, we \log_{10} transformed these parameters to approximate normality. As nymphal burden contained zero estimates, we added the lowest measured positive number (0.01) to circumvent problems with the transformation. Values given are estimates of the standardized correlation coefficient. Significant coefficient estimates are presented in bold, * for $p < 0.05$, ** for $p < 0.01$, *** for $p < 0.001$.

Table S5.1. Model outcomes for the correlation between Bank vole (*Myodes glareolus*) density, larval and nymphal burden with DON and DIN.

Model	Intercept	Log ₁₀ Density	Log ₁₀ Larval burden	Log ₁₀ Nymphal burden	Humidity
DON	3.32	0.23	1.30***	-	0.013
DIN <i>B. afzelii</i>	7.10***	-0.17	1.50***	-0.017	-0.092*
DIN <i>B. miyamotoi</i>	3.00	-0.039	1.20*	0.088	-0.042
DIN <i>Ca. N. mikurensis</i>	4.38	0.38	2.05***	0.064	-0.050

Table S5.2. Model outcomes for the correlation between Wood mouse density and larval burden with DON and DIN.

Model	Intercept	Log ₁₀ Density	Log ₁₀ Larval burden	Humidity
DON	4.46	-0.023	1.51***	-0.0062
DIN <i>B. afzelii</i>	9.22**	-0.64	1.16*	-0.13**
DIN <i>B. miyamotoi</i>	5.49	-0.37	0.97*	-0.081
DIN <i>Ca. N. mikurensis</i>	8.50**	-0.72	1.82**	-0.11*