



Figure S1. Distance genetic analyses Tree *R. sanguineus*. The evolutionary history was inferred using the Neighbor-Joining method. The optimal tree is shown. The percentage of replicate trees in which the associated taxa clustered together in the bootstrap test (1000 replicates) are shown next to the branches. The tree is drawn to scale, with branch lengths in the same units as those of the evolutionary distances used to infer the phylogenetic tree. The evolutionary distances were computed using the Kimura 2-parameter method and are in the units of the number of base substitutions per site. This analysis involved 17 nucleotide sequences. All ambiguous positions were removed for each sequence pair (pairwise deletion option). There were a total of 658 positions in the final dataset. Evolutionary analyses were conducted in MEGA11. Overall Mean distance: 0.06 +/- 0.01



0.10

Table S2. Regression analy

Effect of tick number, dog breed, dog age, infested site, dog sex on E. canis infection in individual dogs (infected and not): logistic regresion									
Efect	Breed	Anatomic site	STATUS	SEX	Estimator	Standard	DF	T value	Pr > ILI
Intercept					-0.5602	0.473	138	-1.18	0.283
Breed	Siberian Husky				0.1121	0.3527	138	0.32	0.7511
Breed	Labrador				0.1699	0.4223	138	0.4	0.6881
Breed	Mixed				-0.0238	0.2017	138	-0.12	0.9062
Breed	A. pitbull				0	-	-	-	-
Anatomic site		Abdomen			-2.7567	3.3401	138	-0.83	0.4106
Anatomic site		Armpit			0.4751	0	138	Infty	<.0001
Anatomic site		Head			0.2184	0	138	Infty	<.0001
Anatomic site		Neck			-0.2411	0.554	138	-0.44	0.6641
Anatomic site		Back			-0.1441	0.5013	138	-0.29	0.7741
Anatomic site		Ears			-0.1088	0.4788	138	-0.23	0.8207
Anatomic site		arms and legs			-0.257	0.6113	138	-0.42	0.6749
Anatomic site		Chest			0	-	-	-	-
Age			puppy		-0.00844	0.3665	138	-0.02	0.9817
Age			adult		0.2889	0.1741	138	1.66	0.0994
Age			old		0	-	-	-	-
Sex				0 female	-0.0079	0.1642	138	-0.05	0.9617
Sex				1 male	0	-	-	-	-
Total female ticks					0.04098	0.08339	138	0.49	0.6239
Total male ticks					-0.1319	0.07866	138	-1.68	0.0959
Engorged female					0.0271	0.09955	138	0.27	0.7858