

Table S1. List of bird host species and tick-occurrence cases extracted from publications. Bird species in **red** are rare vagrants or captive populations, they do not occur regularly in Europe.

	Bird species	Broad habitat category*	Soil level vs. Higher**	Ixodes arboricola					Ixodes frontalis					Ixodes ricinus					Haemaphysalis concinna					Hyalomma marginatum				
				Larva	Nymph	Female	Male	Total	Larva	Nymph	Female	Male	Total	Larva	Nymph	Female	Male	Total	Larva	Nymph	Female	Male	Total	Larva	Nymph	Female	Male	Total
1	Barn owl – Tyto alba	A	S	1				3			1												1	1			2	
	Boreal owl - Aegolius funereus				1			1																				
	Barn swallow – Hirundo rustica	A	H					1															1			1		
	Barred warbler – Sylvia nisoria	U	S											1	3		5						1					
	Bearded reedling – Panurus biarmicus	U	H												1		1											
	Black grouse – Tetrao tetrix	G	S											1	2		3											
	Black kite – Milvus migrans	A	H														1						1			1		
	Black redstart – Phoenicurus ochruros	G	S							1		2			4		4							1		1		
	Black stork – Ciconia nigra	W	S														1											
	Black-headed gull – Chroicocephalus ridibundus	W	S											1			1											
	Bluethroat – Luscinia svecica	U	S											4	9		13							2		3		
	Blyth's reed warbler – Acrocephalus dumetorum	U	S														1											
	Bohemian waxwing – Bombycilla garrulus	F	H														1											
	Booted eagle – Hieraaetus pennatus	A	H														1									1		
	Brambling – Fringilla montifringilla	G	S											4	4		9							1				
	Canada goose – Branta canadensis	G	S											2	2		4											
	Carrión crow – Corvus corone	G	S											1	1		2											
	Cetti's warbler – Cettia cetti	U	H							1			1	1	1		3											
	Chicken – Gallus gallus (domestic form)	G	S														1	1								1		
	Coal tit – Periparus ater	F	H		1				4				2	4	2		10											
	Collared flycatcher – Ficedula albicollis	F	H			2	2 x		7						1		2							1			1	
	Common blackbird – Turdus merula	G	S		1	3			6	15	19	10	2	48	55	64	6	1	138	1	4			7	2	4	6	
	Common buzzard – Buteo buteo	A	H								1			2		1		6								1	1	
	Common chaffinch – Fringilla coelebs	G	S							4	3	6		15	34	31	4		81					1	2	1	4	
	Common chiffchaff – Phylloscopus collybita	U	H							4	2			6	11	19			34					1			1	
	Common coot – Fulica atra	W	S															1										
	Common crane – Grus grus	G	S															1										
	Common cuckoo – Cuculus canorus	F	H															1										
	Common firecrest – Regulus ignicapilla	F	H									2		2		1		2										
	Common grasshopper warbler – Locustella naevia	U	H												1	2		5	1	1				2				
	Common house martin – Delichon urbicum	A	H															2										
	Common kestrel- Falco tinnunculus	A	H				1		1				1	3	1	1		3						1	1		3	
	Common kingfisher – Alcedo atthis	W	H										1					2									2	
	Common linnet – Carduelis cannabina	G	S											1	1	7		9										
	Common moorhen – Gallinula chloropus	W	S										1					1										
	Common nightingale – Luscinia megarhynchos	G	S								2	1		3	8	10		23	1	1				4	2	4	6	
	Common pheasant – Phasianus colchicus	G	S											1	3	4		7						1				
	Common quail – Coturnix coturnix	G	S													1		1										
	Common redpoll – Acanthis flammea	G	S												1	1		3										
	Common redstart – Phoenicurus phoenicurus	F	H		2	1			4			2		2	18	21		43						1		6	3	
Common reed bunting – Emberiza schoeniclus	G	S							1				1	3	4		8	1	1				2					
Common rosefinch – Carpodacus erythrínus	G	S												1	5		8											
Common starling – Sturnus vulgaris	G	S		4	4	4	1	18					2	13	16		35						1					
Common whitethroat – Sylvia communis	U	H								6	2		8	19	25	1	48							4		5		
Common wood pigeon – Columba palumbus	G	S		1				1					2										1			1		
Corn bunting – Emberiza calandra	G	S															1						1	1		1		
Corn crane – Crex crex	G	S												1	1		4											
Crested lark – Galerida cristata	G	S																						1	1	2		
Dunnock – Prunella modularis	U	S							1			3		4	23	30		56	3	1			5		1	1		
Eastern oliveaceous warbler – Iduna pallida	U	S																						1		1		
Eastern woodchat shrike - Lanius senator niloticus																								1		1		
Eurasian blackcap – Sylvia atricapilla	F	H							5	6	3		16	30	30		66	3	2				6	1	2	3		
Eurasian blue tit – Cyanistes caeruleus	F	H		6	10	5	1+x	28	6	1	5		13	13	11		31					1		2		2		
Eurasian bullfinch – Pyrrhula pyrrhula	G	S									2		2	4	8		14											
Eurasian collared dove – Streptopelia decaocto	G	S									4		4				1											
Eurasian curlew – Numenius arquata	W	S												2	1		3											
Eurasian eagle-owl – Bubo bubo	A	S												1	2		3							1	3	1		
Eurasian golden oriole – Oriolus oriolus	F	H												1	1		2			1			1					
Eurasian hoopoe – Upupa epops	G	S												1	2		3											

	Eurasian jay – <i>Garrulus glandarius</i>	F	H				1	1	1	5	8	12	24				1	1
	Eurasian magpie – <i>Pica pica</i>	G	S							1	1	2	2	10			1	
	Eurasian nuthatch – <i>Sitta europaea</i>	F	H	2	5	x	13			1	8	6	1	20			1	
	Eurasian oystercatcher – <i>Haematopus ostralegus</i>	G	S								1	1		2				
	Eurasian penduline tit – <i>Remiz pendulinus</i>	F	H	1			1											
	Eurasian pygmy owl – <i>Glaucidium passerinum</i>	A	H	1			1											
	Eurasian reed warbler – <i>Acrocephalus scirpaceus</i>	U	H				1	2	3	1	6	7	17	25	2	2	5	1 2 2 1 7
	Eurasian scops owl – <i>Otus scops</i>	F	H														1	1
	Eurasian siskin – <i>Carduelis spinus</i>	G	S		1		1				4	5		9				
	Eurasian sparrowhawk – <i>Accipiter nisus</i>	A	H							1	2	7		10				
	Eurasian stonechat – <i>Saxicola torquatus</i>	G	S											1			1	3
	Eurasian tree sparrow – <i>Passer montanus</i>	G	S				3		1	2	3	4		10		1	1	
	Eurasian treecreeper – <i>Certhia familiaris</i>	F	H	1			2			1	4	4		9				
	Eurasian woodcock – <i>Scolopax rusticola</i>	G	S									1		3		1		
	Eurasian wryneck – <i>Jynx torquilla</i>	G	S											1				
	European crested tit – <i>Lophophanes cristatus</i>	F	H								1	2		3				
	European golden plover – <i>Pluvialis apricaria</i>	G	S											1				
	European goldfinch – <i>Carduelis carduelis</i>	G	S						1	1		1		3				
	European green woodpecker – <i>Picus viridis</i>	F	H											1				
	European greenfinch – <i>Carduelis chloris</i>	G	S	1			1	3	4	8	7	12		23	1	1	3	1
	European herring gull – <i>Larus argentatus</i>	W	S									1		1				
	European honey buzzard – <i>Pernis apivorus</i>	G	S											1				
	European nightjar – <i>Caprimulgus europaeus</i>	G	S														1	1
	European pied flycatcher – <i>Ficedula hypoleuca</i>	F	H		2		4			1	5	4		11			1	1
	European robin – <i>Erithacus rubecula</i>	G	S	2	5		8	14	13	6	1	34	50	119	2	2	6	2 6 8
	European serin – <i>Serinus serinus</i>	G	S		1	1	2							5				
	European turtle dove – <i>Streptopelia turtur</i>	G	S														1	
	Fieldfare – <i>Turdus pilaris</i>	G	S					1			2	6	10	21				1
	Finsch's wheatear – <i>Oenanthe finschii</i>	G	S														1	1
	Garden warbler – <i>Sylvia borin</i>	U	H								3	12		18				
	Goldcrest – <i>Regulus regulus</i>	F	H						1	2	5	8		15				
	Golden eagle – <i>Aquila chrysaetos</i>	A	H										1	1				
	Great reed warbler – <i>Acrocephalus arundinaceus</i>	U	H									4		5			1	2
	Great spotted woodpecker – <i>Dendrocopos major</i>	F	H				1				2	2		5				
	Great tit – <i>Parus major</i>	F	H	11	18	8	x	44	8	4	4	17	35	85	1	2	5	1 2 3
	Greenish warbler – <i>Phylloscopus trochiloides</i>	U	H									1	2	3				
	Grey partridge – <i>Perdix perdix</i>	G	S								1	1	2	5				
	Grey wagtail – <i>Motacilla cinerea</i>	G	S							1	1	2		3				
1	Harris's hawk – <i>Parabuteo unicinctus</i>	G	S							1				1				
	Hawfinch – <i>Coccothraustes coccothraustes</i>	G	S								8	17		27	1	1	5	
	Hazel grouse – <i>Tetrastes bonasia</i>	G	S											1				
	Hooded crow – <i>Corvus cornix</i>	G	S											2				
	House sparrow – <i>Passer domesticus</i>	G	S				2	1	1	4	7	2	3	8			1	1
	Iberian chiffchaff – <i>Phylloscopus ibericus</i>	U	H									1		1				
	Iberian grey shrike – <i>Lanius meridionalis</i>	F	H														1	
	Icterine warbler – <i>Hippolais icterina</i>	F	H									5	7	13				
	Lesser kestrel – <i>Falco naumanni</i>	A	H														1	
	Lesser redpoll – <i>Carduelis cabaret</i>	G	S						2		2	1	3	4				
	Lesser whitethroat – <i>Sylvia curruca</i>	U	H									5	13	18			1	1
	Little owl – <i>Athene noctua</i>	A	H		1	1	3											1
	Long-eared owl – <i>Asio otus</i>	A	H						1	1	1	4		3				
	Long-tailed tit – <i>Aegithalos caudatus</i>	F	H	1			1			2	4			6				
	Mallard – <i>Anas platyrhynchos</i>	W	S											1				
	Marsh tit – <i>Poecile palustris</i>	F	H	2	1		5				1	3	6	11				
	Marsh warbler – <i>Acrocephalus palustris</i>	U	H									5	11	21	1	1	3	1 4
	Meadow pipit – <i>Anthus pratensis</i>	G	S									5	8	15				
	Melodious warbler – <i>Hippolais polyglotta</i>	F	H						1		1	1	1	2				
	Mew gull – <i>Larus canus</i>	W	S									1	2	3				
	Middle spotted woodpecker – <i>Dendrocytes medius</i>	F	H											2				
	Mistle thrush – <i>Turdus viscivorus</i>	F	H								2	4	4	11				2
	Northern goshawk – <i>Accipiter gentilis</i>	A	H	1			1							1			1	
	Northern lapwing – <i>Vanellus vanellus</i>	G	S										1	2				
1	Oriental turtle dove – <i>Streptopelia orientalis</i>	G	S											1				
	Ortolan bunting – <i>Emberiza hortulana</i>	G	S														1	
1	Pechora pipit – <i>Anthus gustavi</i>	G	S											1				

